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## Nanjing Micro One Electronics Inc. Operation Summarization

Nanjing Micro One Electronics Inc. is a High-Tech Enterprises headquartered in Nanjing, specialized in the development of ASIC chips since founding in 1999. The business covers the R&D and marketing of ASIC chips and a variety of ASIC chips-based electronic products used in information home appliance, wireless and digital communication, network technology and other areas.

We specialize in the development and marketing of power management products. The main products include Step-Up DC/DC、Step-Down DC/DC、LDO、LED Driver、Charge Pump etc. Which supply the solutions for electronic equipment in the main chips and related devices to provide high-quality and stable power supply solutions.

In 2000, we had been first identified as high-tech enterprises by national integrated circuit design corporation and provincial and municipal high-tech corporation, achieved a significant breakthrough in team building、 product development、 quality control、 customer service areas.

In 2002, we had past the ISO9001/2000 Quality Management System, to guarantee the best products and powerful technological support for clients. We have consistently adhered to use customer requirements is our pursuit goals, according to the customer's request for designing and developing products, we guarantee to provide quality technical support and comprehensive product platform to increase customer competitive advantage!

We inherit pioneering and innovative, elaborate design, leading technology, customer satisfaction, complete system, continual improvement to improve our quality policy, and we are committed to establish reciprocal and long-term relationships with customers sostenuto. Concentration and specialty are our business philosophy, Since Micro One founding, we have focused on the development of designing capabilities for analogue integrated circuit. Based on developing own core technologies, following the specialization mixed digital-analog working, pursuing to run a specialized analogue integrated circuit design IC company.



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## Voltage Regulator (LDO)

Series	Iout	Input Voltage	Output Voltage	Accurate	Supply Current	PSRR (1KHZ)	Packaging	Status
ME6201	100mA	~18V	3.0~5.0V	±2%	3uA	60dB	TO-92/SOT-89	Available
ME6206	300mA	~6.5V	1.2~5.0V	±2%	8uA	50dB	SOT23/SOT89	Available
ME6211	500mA	~6.5V	1.2-5.0V	±2%	50uA	75dB	SOT23-5L/DFN	Available
ME6219	300mA	~6.5V	1.2-5.0V	±2%	65uA	62dB	SOT23-5L	Available
ME1084	5A	~25V	3.3-12V	±2%	5mA	50dB	TO220/TO263	2010/Q1
ME1085	3A	~25V	3.3-12V	±2%	5mA	50dB	TO220/TO263	2010/Q1
ME1117	800mA	~20V	1.25-12V	±2%	2mA	50dB	SOT223/TO252	2010/Q1
ME3206	300mA	~6.5V	1.2-5.0V	±2%	16uA	50dB	SOT23-5L	Available
ME6401	400mA	~6.5V	1.2-5.0V	±2%	90uA	70dB	SOT23-6L	Available
ME6203	100mA	~24V	3.0-5.0V	±3%	10uA	60dB	SOT89/TO92	2010/Q1
ME6207	800mA	~6.5V	1.5-5.5V	±2%	80uA	70dB	SOT89	2010/Q1

## Step-Up DC/DC Converter

Series	Control Mode	Input Voltage	Output	Accurate	Supply Current	Frequency (HZ)	Efficiency	Packaging	Status
MEXX1C	PFM	0.9-6.5V	2.0~7.0V	±2.5%	6uA	100K	85%	SOT23/SOT89	Available
MEXX1D	PFM	0.9-6.5V	2.0~7.0V	±2.5%	9uA	180K	85%	SOT23/SOT89	Available
ME2100	PFM	0.9-6.5V	2.0~7.0V	±2.5%	6uA	100K	85%	SOT23/SOT89	Available
ME2108	PFM	0.9-6.5V	2.0~7.0V	±2.5%	9uA	180K	85%	SOT23/SOT89/	Available
ME2109	PFM/PWM	0.9-6.5V	2.0~6.5V	±2.5%	35uA	300K	88%	SOT23-5L	Available

## Step-Down DC/DC Converter

Series	Control Mode	Input Voltage	Output Current	Accurate	Supply Current	Frequency (HZ)	Efficiency	Packaging	Status
ME3101	PFM/PWM	0.9-6.5V	500mA	±2%	1uA	1.2M	94%	SOT23-5L	Available
ME3116	PWM	<40V	3000mA	±4%	80uA	150K	73%	TO220/TO263	2010/Q3

## LED Driver

Series	Input Voltage	Output	Frequency(HZ)	Accurate	Output Response	Efficiency	Packaging	Status
ME2106	0.9-6.5V	0-500mA	300K	±10%	-	85%	SOT89-5	Available
ME2206	0.9-6.5V	350-750mA	1M	±5%	-	92%	SOT23-6L	Available
ME2209	2.5-21V	2.5V	1M	±2.5%	-	87%	SOT23-6L	2010/Q2
ME2601	4.5-5.5V	5-90mA	25M	±3%	200ns	-	SOP24/SSOP24	2010/Q3
ME2604	4.5-5.5V	3-45mA	25M	±3%	300ns	-	SOP24/SSOP24	2010/Q1
MEL71XX	2.7~6.0V	350mA	-	-	-	-	SOT-89/TO-252	Available

## AC/DC Converter

Series	Input Voltage	Output Voltage	Supply Current	Output Current	Frequency	Packaging	Status
ME8100	85~265VAC	5V	0.7mA	800mA	65K	SOT23/TO92	2010/Q1
ME8108	85~265VAC	5.1V	0.9mA	750mA	50K	SOIC8/SOP	2010/Q2
ME8203	85~265VAC	2.5V	2.8mA	600mA	61K	DIP8	2010/Q2
ME8263	85~265VAC	-	1.4mA	-	65K	SOT23-6/SOP8	2010/Q2

### Power MOSFET

Series	Channel	Vds	Vgs	Id	Rds(on)	Packaging	Status
MEM2301	P	-20V	-8V	-3.1A	100mΩ	SOT23	Available
MEM2303	P	-30V	-12V	-4.3A	50mΩ	SOT23	Available
MEM2307	P	-30V	-20V	-4.3A	78mΩ	SOT23	Available
MEM2309	P	-30V	-20V	-6A	53mΩ	SOP8	Available
MEM23011	Double P	-30V	-20V	-6A	53mΩ	SOP8	Available
MEM2302	N	20V	8V	3A	29mΩ	SOT23	Available
MEM2306	Double N	20V	10V	5A	23mΩ	SOP8	Available
MEM2310	N	30V	12V	5.7A	32mΩ	SOT23	Available
MEM8205	Double N	20V	12V	6A	21mΩ	SOT23-6	Available
MEM2318	Double N	20V	12V	6A	19mΩ	TSSOP8	Available

### Audio Power Amplifier

Series	Operation Voltage	Shutdown Current	PSRR f=1KHZ)	THD+N (f=1KHZ)	Efficiency	Packaging	Status
ME5890	2.5~5.5V	0.1uA	62dB	0.1%		SMD/MSOP/SOIC/ LLP	2010/Q2
ME5990	2.5~5.5V	0.1uA	62dB	0.2%		LLP/CSP/ITL/TSSOP/MSOP	2010/Q1
ME5103	2.8~5.5V	0.5uA	62dB	0.3%	90%	MSOP8-8/CSP-9	2010/Q3

### Voltage Detector

Series	Detect voltage	Input Voltage	Output Current	Accurate	Supply Current	Channel	Packaging	Status
ME2801	Detect Voltage 2.1~4.4V	0.7~10.0V	10mA	±1%	1uA	CMOS	SOT-23	Available
ME2802	Detect Voltage 2.1~4.4V	0.7~10.0V	10mA	±1%	1uA	NMOS	SOT-23	Available
ME4054	Charge Voltage 4.2V	4.25~6.5V	800mA	±1%	25uA	-	SOT-23	Available

### Charger Manager

Series	Detect voltage	OutputCurrent	Accurate	Supply Current	Packaging	Status
ME4054	Charge Voltage 4.2V	800mA	±1%	25uA	SOT-23-5L	Available

### Charge Pump

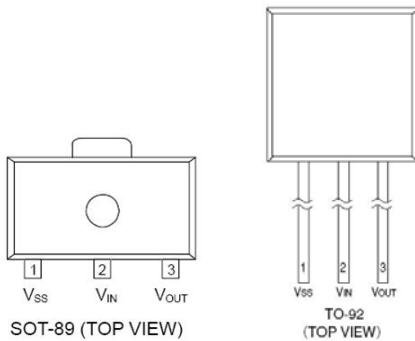
Series	Input Voltage	Output	Supply Current	Efficiency	Packaging	Status
ME7660	2.5V~10V	-2.5V~ -10V	40uA	98%	SOP-8/DIP-8	Available

## ME6201 Series

### Description:

The ME6201 are highly precise, low laser trimming technologies. The ME6201 provides large currents & high voltage. The ME6201 consists of a current limiter circuit. voltage is selectable in 0.1V steps between 3.0V ~ 5.0V.

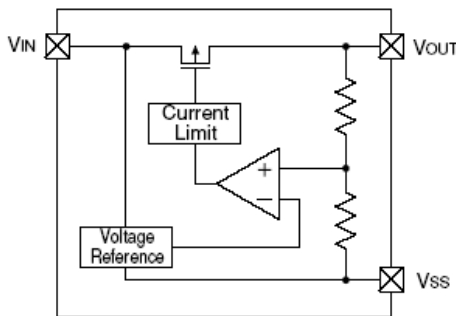
### Pin Configuration:



### Feature:

- Input Voltage: up to 18V
- Output Voltage Range: 3.0V to 5.0V
- Output Current: 100mA (V<sub>IN</sub>=5.3V, V<sub>OUT</sub>=3.3V)
- Package: SOT-89, TO-92
- Low Power Consumption: 3 $\mu$ A ( TYP.)
- High PSRR: 60dB(1KHZ)
- High Accurate:  $\pm$  2%
- Thermal Shutdown Protection

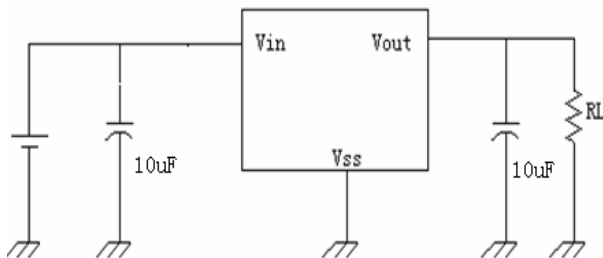
### Functional Block Diagram:



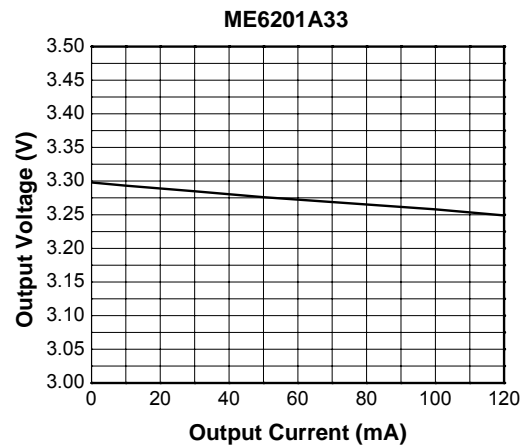
### Application:

- Cordless phones, wireless communication equipment
- Electronic Balance
- Portable games & Toys
- Reference voltage
- Battery powered equipment
- Ammeter

### Typical Application Circuit:



### Typical Performance Characteristics:

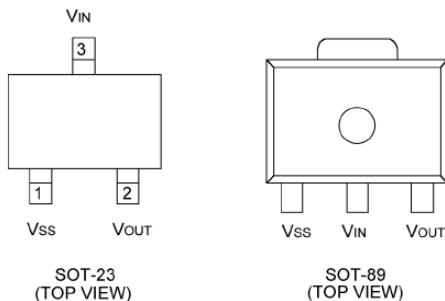


## ME6206 Series

### Description:

The ME6206 series are highly precise, low power consumption, positive voltage regulators manufactured using CMOS and laser trimming technologies. The series provides large currents with a significantly small dropout voltage. The series is compatible with low ESR ceramic capacitors. The current limiter's foldback circuit also operates as a short protect for the output current limiter and the output pin.

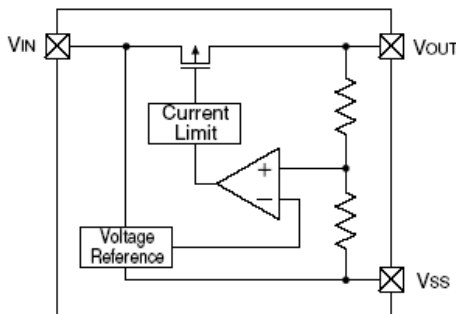
### Pin Configuration:



### Feature:

- Input Voltage: up to 6.5V
- Output Voltage Range: 1.5V to 5.0V
- Output Current: 300mA (e.g.: Vin=4.3V, Vout=3.3V)
- Typical 300mA Current Limit
- Package: SOT-23, SOT-89
- Low Power Consumption: 8uA ( TYP.)
- Low Dropout: 200mV @90mA and 400mV @ 200mA
- High PSRR: 50dB(1KHZ)
- High Accurate: ± 2%
- Thermal Shutdown Protection

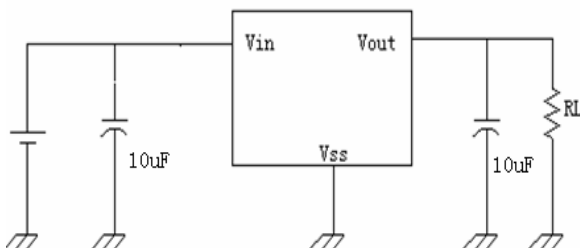
### Functional Block Diagram:



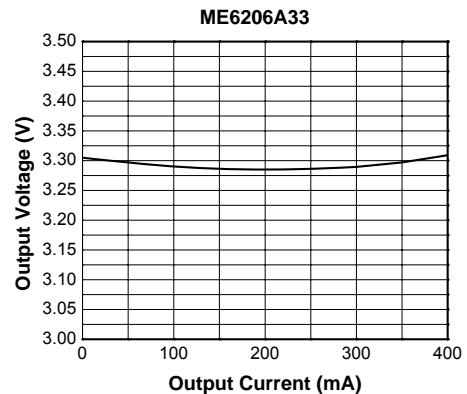
### Application:

- Battery powered equipment
- MP3/MP4
- Mobile phones
- Cameras, Video systems

### Typical Application Circuit:



### Typical Performance Characteristics:



## ME6211 Series

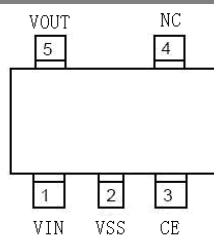
### Description:

The ME6211 series are highly accurate, low noise, CMOS LDO Voltage Regulators. Offering low output noise, high ripple rejection ratio, low dropout and very fast turn-on times.

### Feature:

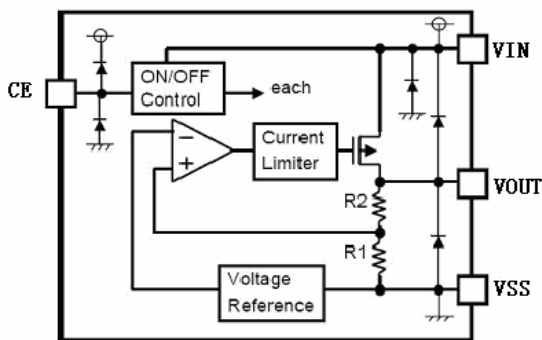
- Input Voltage: up to 6.5V
- Output Voltage Range: 1.2V to 5.0V
- Output Current: 500mA (e.g.:  $V_{in}=5V, V_{out}=3.3V$ )
- Package: SOT-23-5L, SOT-89, DFN6L
- Low Power Consumption: 50uA ( TYP.)
- Low Dropout: 100mV @ 100mA
- High PSRR: 75dB(1KHZ)(e.g.:ME6211C33)
- High Accurate:  $\pm 2\%$
- With Enable Function
- Thermal Shutdown Protection

### Pin Configuration:



SOT-25 (TOP VIEW)

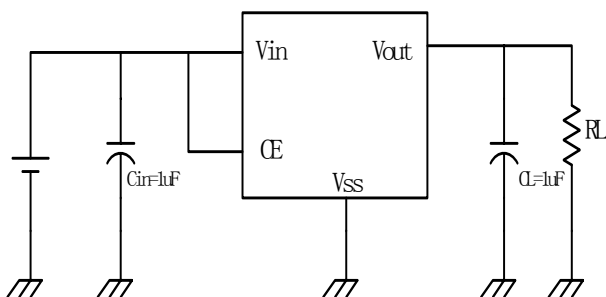
### Functional Block Diagram:



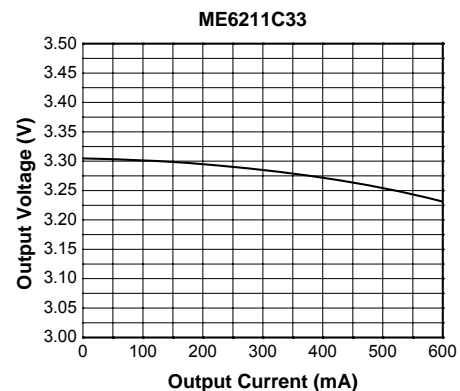
### Application:

- Mobile phones
- MP3/MP4
- Cordless phones, radio communication equipment
- Portable games
- Cameras, Video cameras
- Reference voltage sources
- Battery powered equipment

### Typical Application Circuit:



### Typical Performance Characteristics:



## ME6219 Series

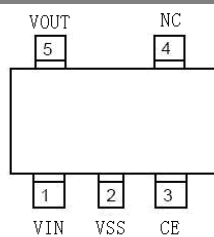
### Description:

The ME6219 series are CMOS precise, low power consumption; positive voltage regulators designed for portable applications with low quiescent current and dropout voltage.

### Feature:

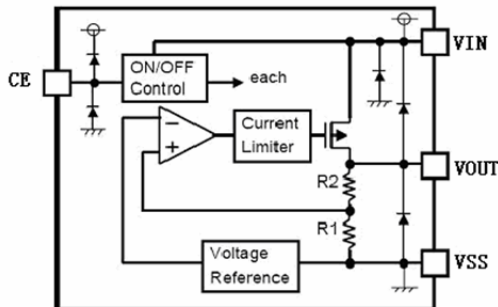
- Input Voltage: up to 6.5V
- Output Voltage Range: 1.2V to 5.0V
- Output Current: 300mA (e.g.:  $V_{in}=4.3V, V_{out}=3.3V$ )
- Typical 350mA Current Limit
- Low Power Consumption: 65 $\mu$ A (TYP.)
- Low Dropout: 150mV @ 100mA
- High PSRR: 62dB(1KHZ)
- High Accurate:  $\pm 2\%$
- With Enable Function
- Thermal Shutdown Protection
- Package: SOT-23-5L

### Pin Configuration:



SOT-23 (TOP VIEW)

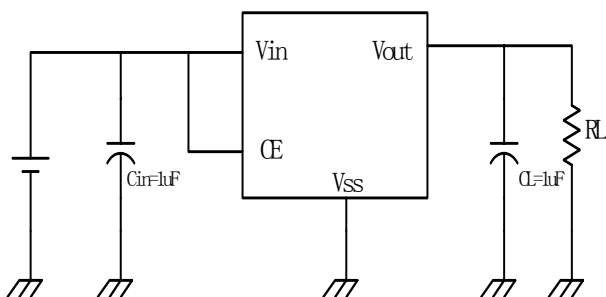
### Functional Block Diagram:



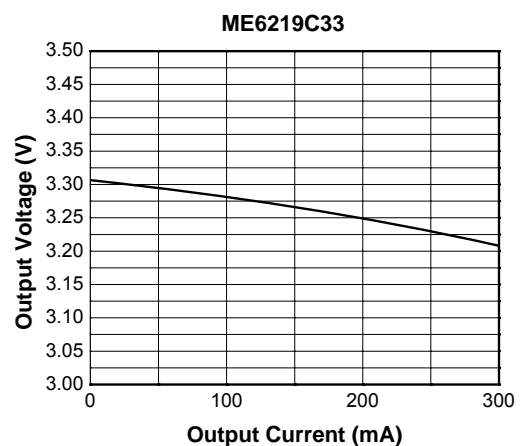
### Application:

- Mobile phones
- MP3/MP4
- Cordless phones, radio communication equipment
- Portable games
- Cameras, Video cameras
- Reference voltage sources
- Battery powered equipment

### Typical Application Circuit:



### Typical Performance Characteristics:



## ME1084 Series

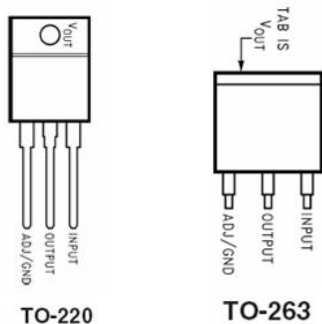
### Description:

The ME1084 is a series of low dropout voltage regulators with a dropout of 1.5V at 5A of Load current. The ME1084 is available in three fixed voltages, 3.3V, 5.0V, and 12V etc. It offers current limiting and thermal shutdown.

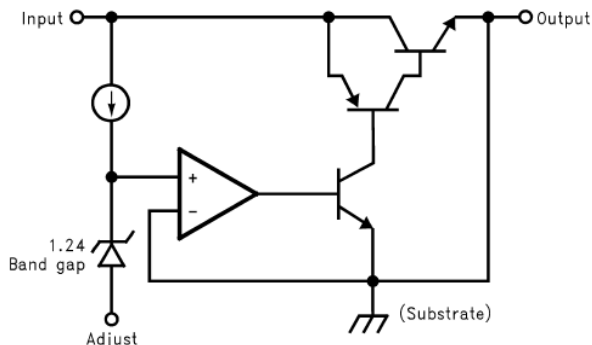
### Feature:

- Input Voltage: up to 25V
- Output Voltage Range: 3.3V, 5.0V, 12V, and Adj
- Output Current: 5A
- Package: TO-220, TO-263
- Low Power Consumption: 5mA (TYP.)
- High PSRR: 50dB(1KHZ)
- High Accurate:  $\pm 2.5\%$
- Thermal Shutdown Protection

### Pin Configuration:



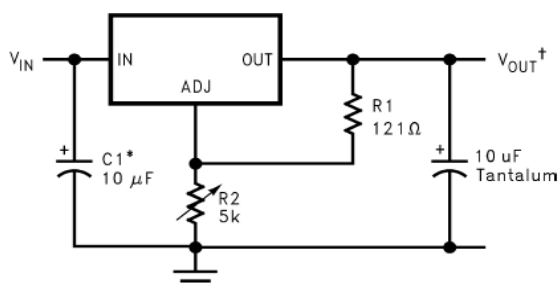
### Functional Block Diagram:



### Application:

- Post Regulator for Switching DC/DC Converter
- High Efficiency Linear Regulators
- Battery Charger
- PC
- LCD-TV

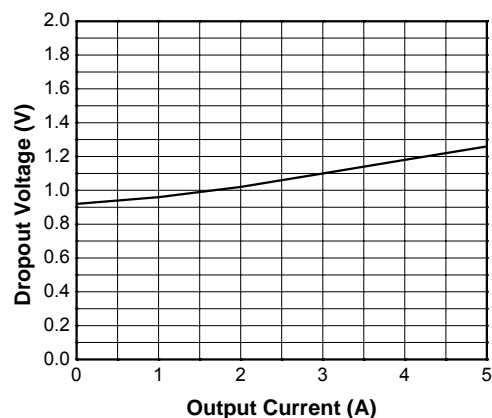
### Typical Application Circuit:



\*NEEDED IF DEVICE IS FAR FROM FILTER CAPACITORS

$$^{\dagger}V_{OUT} = 1.25V \left(1 + \frac{R2}{R1}\right)$$

### Typical Performance Characteristics:



## ME1085 Series

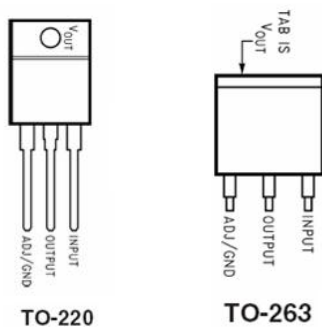
### Description:

The ME1085 is a series of low dropout voltage regulators with a dropout of 1.5V at 3A of Load current. The ME1085 is available in three fixed voltages, 3.3V, 5.0V, and 12V etc. It offers current limiting and thermal shutdown.

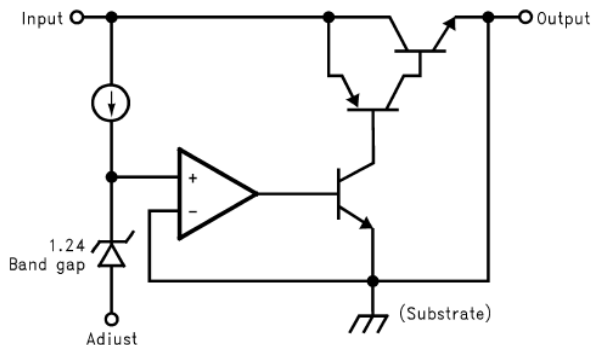
### Feature:

- Input Voltage: up to 25V
- Output Voltage Range: 3.3V, 5V, 12V, and Adj
- Output Current: 3A
- Package: TO220, TO263
- Low Power Consumption: 5mA ( TYP.)
- High PSRR: 50dB(1KHZ)
- High Accurate:  $\pm 2.5\%$
- Thermal Shutdown Protection

### Pin Configuration:



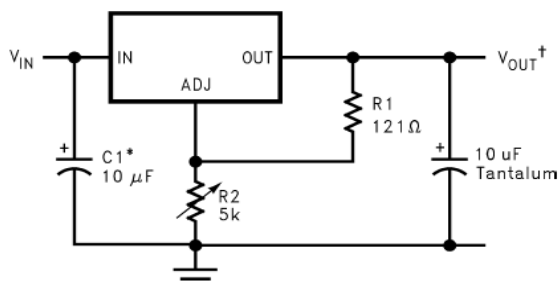
### Functional Block Diagram:



### Application:

- Post Regulator for Switching DC/DC Converter
- High Efficiency Linear Regulators
- Battery Charger
- PC
- LCD-TV

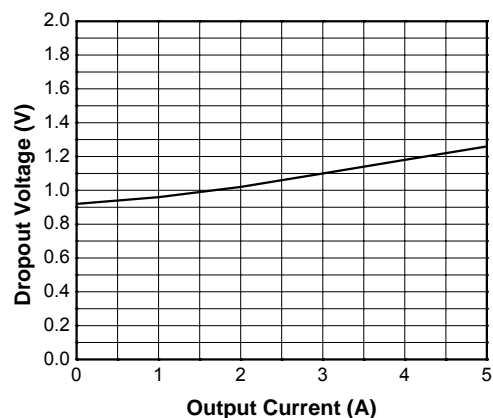
### Typical Application Circuit:



\*NEEDED IF DEVICE IS FAR FROM FILTER CAPACITORS

$$\dagger V_{OUT} = 1.25V \left( 1 + \frac{R2}{R1} \right)$$

### Typical Performance Characteristics:



## ME1117 Series

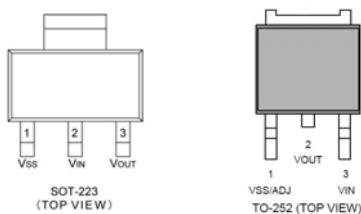
### Description:

The ME1117 is a series of low dropout voltage regulators with a dropout of 1.2V at 800mA of Load current. The ME1117 offer voltage from 1.25-12V. It offers current limiting and thermal shutdown.

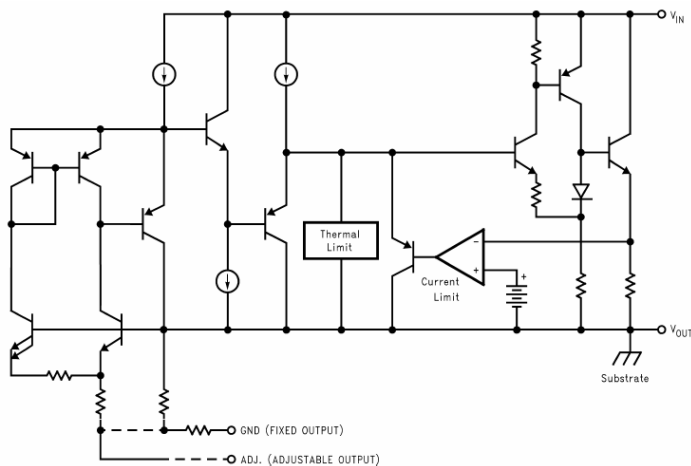
### Feature:

- Input Voltage: up to 20V
- Output Voltage Range: 1.25V-12V
- Output Current: 800mA
- Package: SOT-223/TO252
- Low Power Consumption: 2mA ( TYP.)
- High PSRR: 50dB(1KHZ)
- High Accurate:  $\pm 2\%$
- Thermal Shutdown Protection

### Pin Configuration:



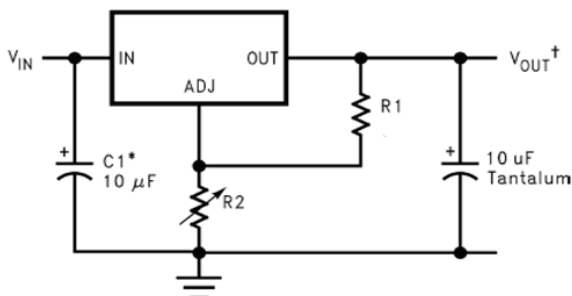
### Functional Block Diagram:



### Application:

- Post Regulator for Switching DC/DC Converter
- High Efficiency Linear Regulators
- Battery Charger
- Battery Powered Instrumentation
- Portable DVD/DPF/DVD/LCD-TV
- Set Box

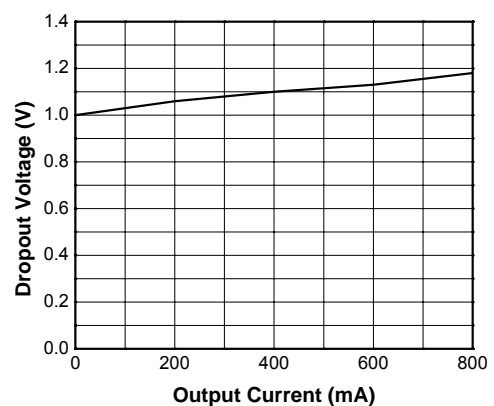
### Typical Application Circuit:



\*NEEDED IF DEVICE IS FAR FROM FILTER CAPACITORS

$$V_{OUT} = 1.25V \left( 1 + \frac{R2}{R1} \right)$$

### Typical Performance Characteristics:



## ME3206 Series

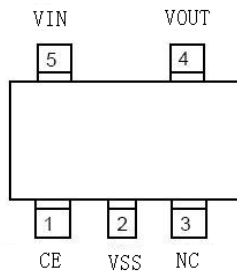
### Description:

ME3206 series are highly precise, low power consumption, positive voltage regulators manufactured using CMOS and laser trimming technologies.

### Feature:

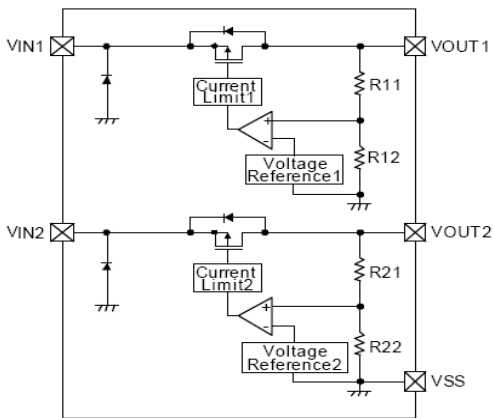
- Input Voltage: up to 6.5V
- Dual Output Voltage Range: 1.5V to 5.0V
- Output Current: 300mA
- Package: SOT-23-5L
- Low Power Consumption: 16uA ( TYP.)
- Low Dropout: 100mV @ 100mA
- High PSRR: 50dB(1KHZ)
- High Accurate:  $\pm 2\%$
- Thermal Shutdown Protection

### Pin Configuration:



SOT-25 (TOP VIEW)

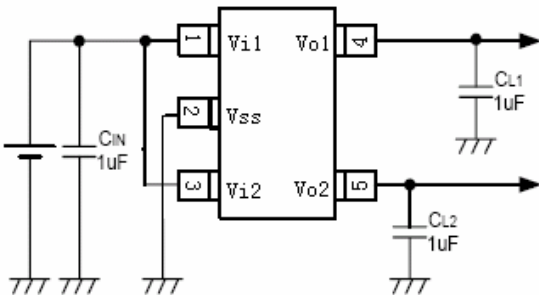
### Functional Block Diagram:



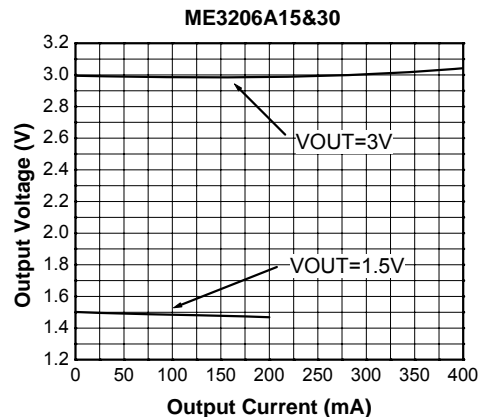
### Application:

- Battery powered equipment
- Communication tools
- Mobile phones
- Portable games
- Portable AV systems
- Cameras, Video systems
- Reference voltage sources

### Typical Application Circuit:



### Typical Performance Characteristics:



## ME6401 Series

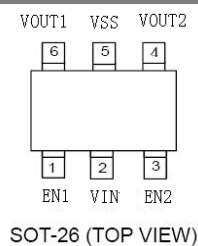
### Description:

ME6401series are highly precise, low power consumption, positive voltage regulators manufactured using CMOS and laser trimming technologies.

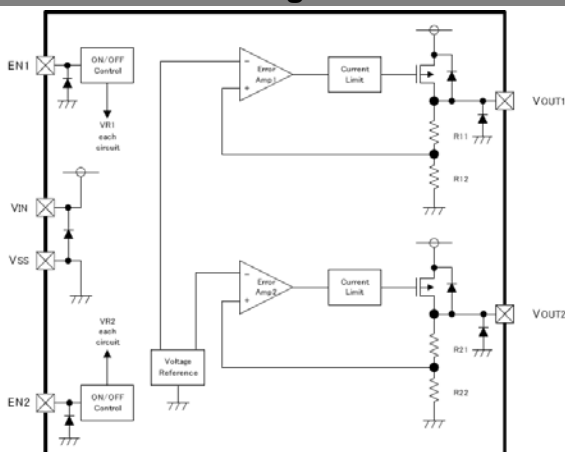
### Feature:

- Input Voltage: up to 6.5V
- Dual Output Voltage Range: 1.2V to 5.0V
- Output Current: 400mA
- Package: SOT-23-6L
- Low Power Consumption: 90uA ( TYP.)
- Low Dropout: 200mV@100mA and 400mV @200mA
- High PSRR: 70dB(1KHZ)
- High Accurate:  $\pm 2\%$
- With Enable Function
- Thermal Shutdown Protection

### Pin Configuration:



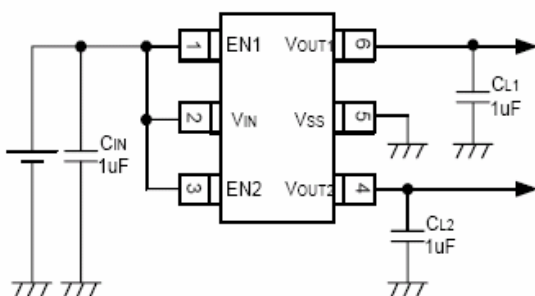
### Functional Block Diagram:



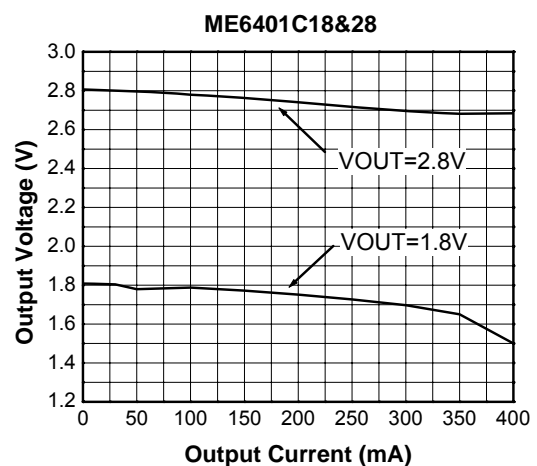
### Application:

- Mobile Phone
- PDA
- MP3/MP4
- DSC

### Typical Application Circuit:



### Typical Performance Characteristics:



## ME6203 Series

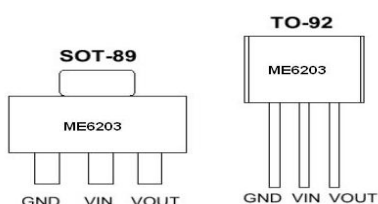
### Description:

The ME6203 series is a set of three-terminal high current low voltage regulator implemented in CMOS technology. They can deliver 100mA output current and allow an input voltage as high as 24V. They are available with several fixed output voltages ranging from 3.0V to 8V. CMOS technology ensures low voltage drop and low quiescent current.

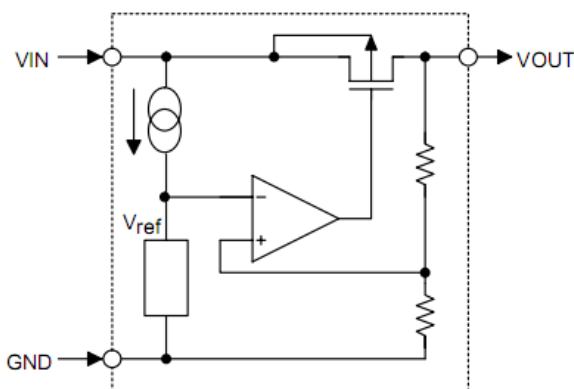
### Feature:

- Low power consumption
- Low voltage drop
- Low temperature coefficient
- High input voltage (up to 24V)
- High output current : 100mA ( $P_d \leq 250\text{mW}$ )
- TO-92 and SOT-89 package

### Pin Configuration:



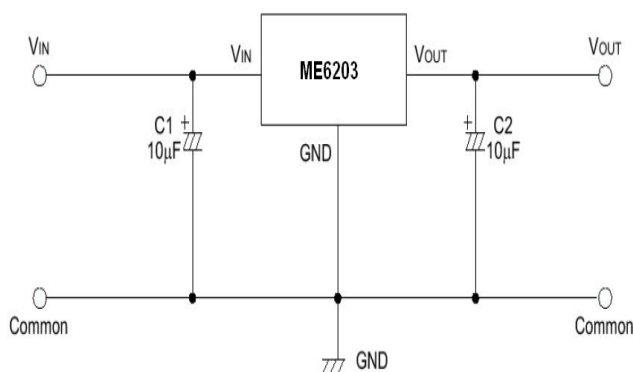
### Functional Block Diagram:



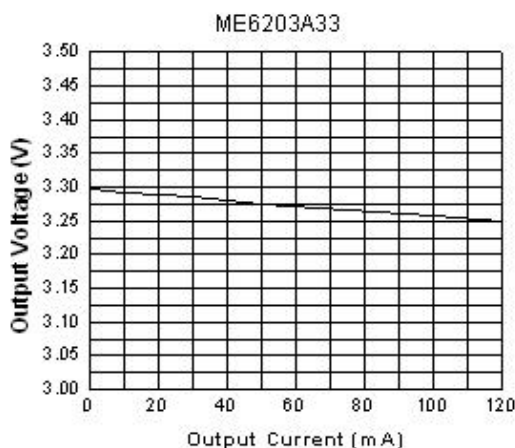
### Application:

- Battery-powered equipment
- Communication equipment
- Audio/Video equipment

### Typical Application Circuit:



### Typical Performance Characteristics:



## ME6207 Series

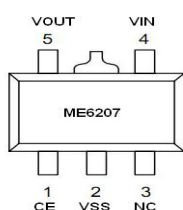
### Description:

The ME6207 Series is a positive voltage regulator with a low dropout voltage, high output voltage accuracy, and low current consumption developed based on CMOS technology.

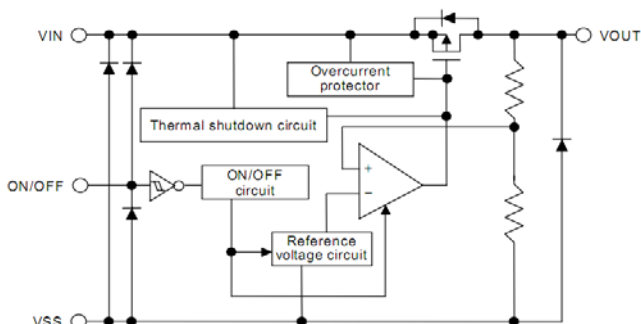
### Feature:

- Output voltage: 1.5 V to 5.5 V, selectable in 0.1 V steps.
- High-accuracy output voltage:  $\pm 1.0\%$
- Low dropout voltage
- Low current consumption
- High peak current capability
- Built-in ON/OFF circuit
- Low ESR capacitor can be used
- High ripple rejection
- Built-in overcurrent protector
- Built-in thermal shutdown circuit
- Small package: SOT-89-5, 6-Pin HSON(A)

### Pin Configuration:



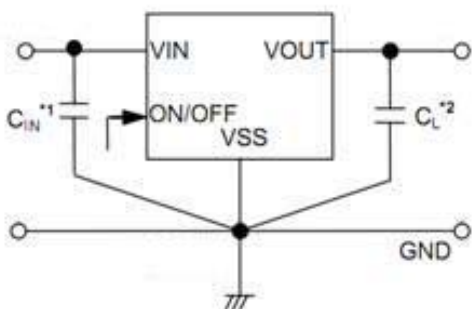
### Functional Block Diagram:



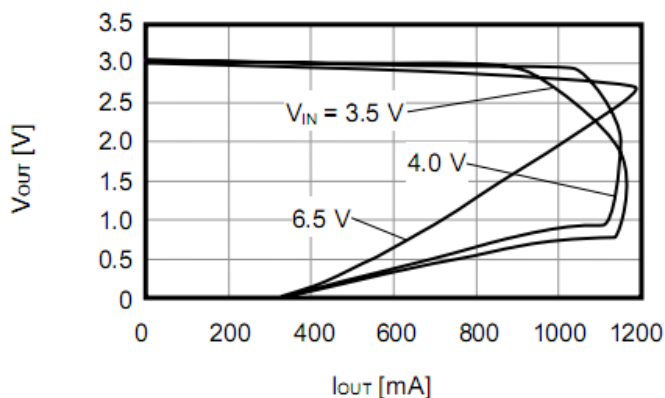
### Application:

- Power supply for DVD and CD-ROM drives
- Power supply for battery-powered devices
- Power supply for personal communication devices
- Power supply for note PCs

### Typical Application Circuit:



### Typical Performance Characteristics:

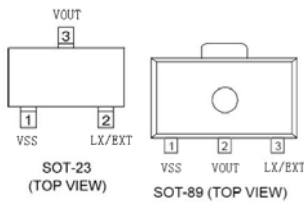


## ■ MEXX1C Series

### Description:

MEXX1C Series is a PFM Step-up DC/DC converter IC with low supply current by CMOS process. High frequency noise that occurs during switching is reduced by using advanced circuit designed, output voltage is programmable in 0.1V steps between 2.0~7.0V and maximum frequency is 100KHz(Typ.).

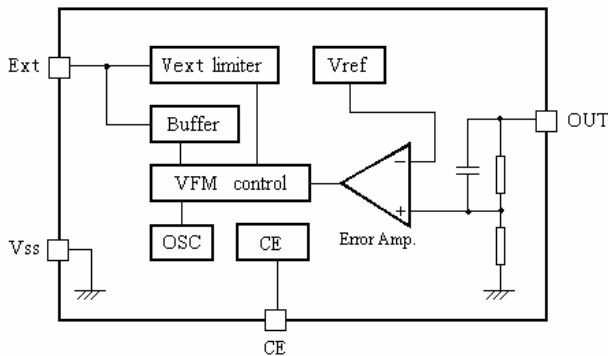
### Pin Configuration:



### Feature:

- Operating voltage range: 0.9V~8V
- Low start voltage:  $\leq 0.9V$ (at  $I_{out}=1mA$ )
- Output voltage range: 2.0V~7.0V(step 0.1V)
- Output Current :250mA(e.g.: $V_{in}=3.0V, V_{out}=3.3V$ )
- Package: SOT-23,SOT-89
- Low Power Consumption: 6uA ( TYP.)
- Low ripple and low noise
- Maximum oscillator frequency:100KHz(TYP.)
- High Efficiency: 85%(TYP.)
- Output voltage accuracy:  $\pm 2.5\%$

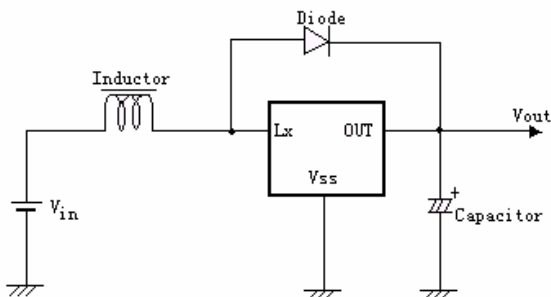
### Functional Block Diagram:



### Application:

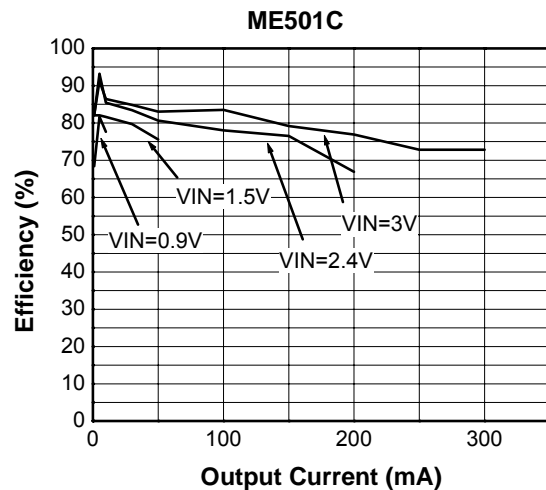
- Power source for battery-powered equipment
- Power source for wireless mouse, wireless keyboard, toys, cameras, camcorders, VCRs, PDAs, and hand-held communication ,LED Lighting etc.

### Typical Application Circuit:



For use Build\_in Transistor

### Typical Performance Characteristics:

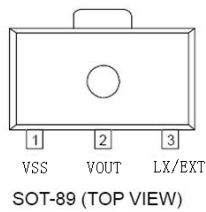


## ■ MEXX1D Series

### Description:

MEXX1D Series is a PFM Step-up DC/DC converter IC with low supply current by CMOS process. High frequency noise that occurs during switching is reduced by using advanced circuit designed, output voltage is programmable in 0.1V steps between 2.0~7.0V and maximum frequency is 180KHz(Typ.).

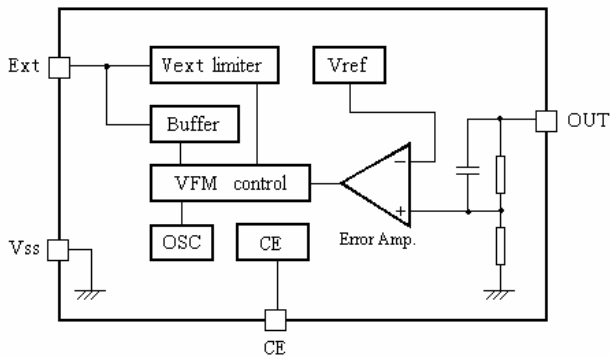
### Pin Configuration:



### Feature:

- Operating voltage range: 0.9V~8V
- Low start voltage:  $\leq 0.9V$ (at  $I_{out}=1mA$ )
- Output voltage range: 2.0V~7.0V(step 0.1V)
- Output Current :250mA(e.g.: $V_{in}=3.0V, V_{out}=5.0V$ )
- Package: SOT-23,SOT-89
- Low Power Consumption: 9uA ( TYP.)
- Low ripple and low noise
- Maximum oscillator frequency:180KHz(TYP.)
- High Efficiency:85%(TYP.)
- Output voltage accuracy:  $\pm 2.5\%$

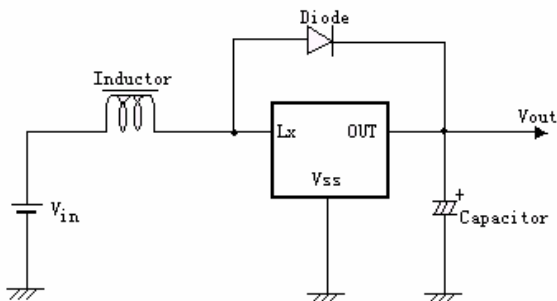
### Functional Block Diagram:



### Application:

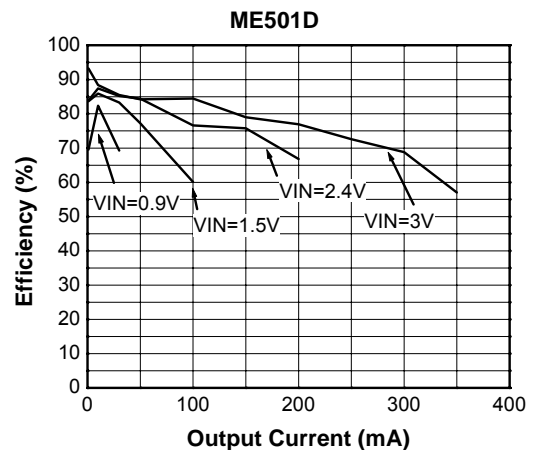
- Power source for battery-powered equipment
- Power source for wireless mouse, wireless keyboard, toys, cameras, camcorders, VCRs, PDAs, and hand-held communication, Led lighting etc.

### Typical Application Circuit:



For use Build\_in Transistor

### Typical Performance Characteristics:



## ME2100 Series

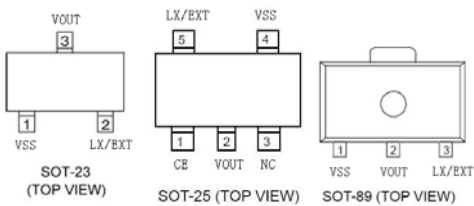
### Description:

ME2100 Series is a PFM Step-up DC/DC converter IC with low supply current by CMOS process. High frequency noise that occurs during switching is reduced by using advanced circuit designed, output voltage is programmable in 0.1V steps between 2.0~7.0V and maximum frequency is 100KHz.

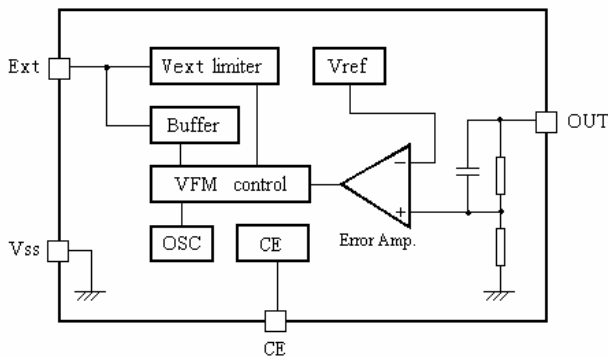
### Feature:

- Operating voltage range: 0.9V~8V
- Low start voltage:  $\leq 0.9V$ (at  $I_{out}=1mA$ )
- Output voltage range: 2.0V~7.0V(step 0.1V)
- Output Current :300mA(e.g.: $V_{in}=3.0V, V_{out}=3.3V$ )
- Package: SOT-23,SOT-89,SOT-23-5L
- Low Power Consumption: 6uA ( TYP.)
- Low ripple and low noise
- Output voltage accuracy:  $\pm 2.5\%$
- Maximum oscillator frequency:100KHz(TYP.)
- High Efficiency: 85%(TYP.)

### Pin Configuration:



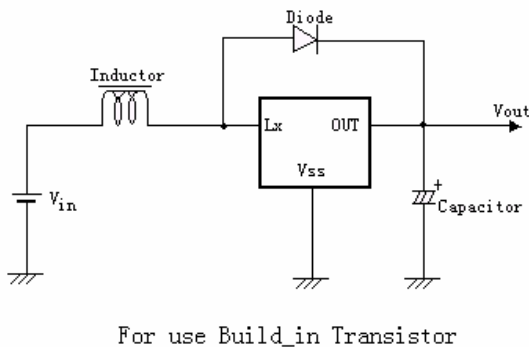
### Functional Block Diagram:



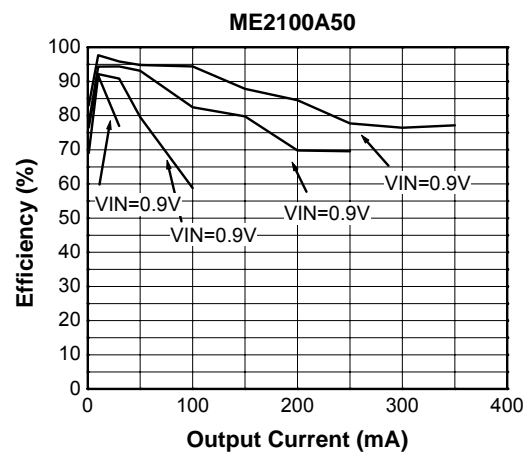
### Application:

- Power source for battery-powered equipment
- Power source for wireless mouse, wireless keyboard, toys, cameras, camcorders, VCRs, PDAs, and hand-held communication equipment
- Power source for appliances which require higher cell voltage than that of batteries used in the appliances

### Typical Application Circuit:



### Typical Performance Characteristics:



## ME2108 Series

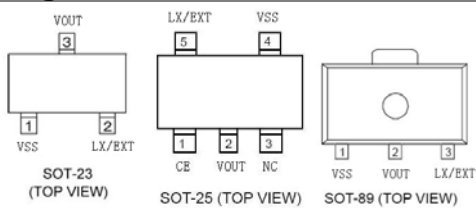
### Description:

ME2108 Series is a PFM Step-up DC/DC converter IC with low supply current by CMOS process. High frequency noise that occurs during switching is reduced by using advanced circuit designed, output voltage is programmable in 0.1V steps between 2.0~7.0V and maximum frequency is 180KHz.

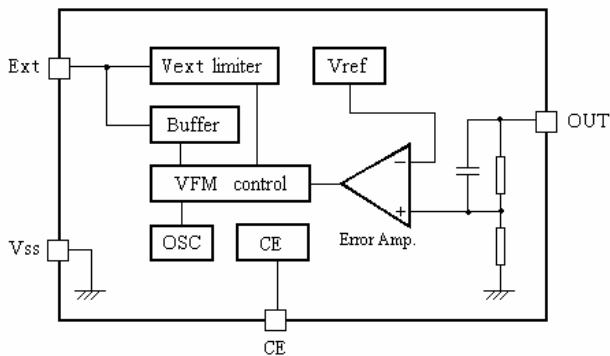
### Feature:

- Operating voltage range: 0.9V~8V
- Low start voltage:  $\leq 0.9V$ (at  $I_{out}=1mA$ )
- Output voltage range: 2.0V~7.0V(step 0.1V)
- Output Current :400mA(e.g.: $V_{in}=3.0V, V_{out}=3.3V$ )
- Package: SOT-23,SOT-23-5L,SOT-89
- Low Power Consumption: 9uA ( TYP.)
- Low ripple and low noise
- Maximum oscillator frequency:180KHz(TYP.)
- High Efficiency: 85%(TYP.)
- Output voltage accuracy:  $\pm 2.5\%$

### Pin Configuration:



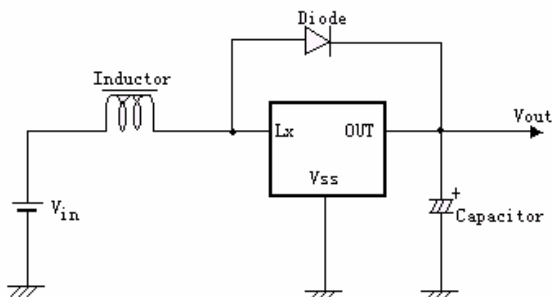
### Functional Block Diagram:



### Application:

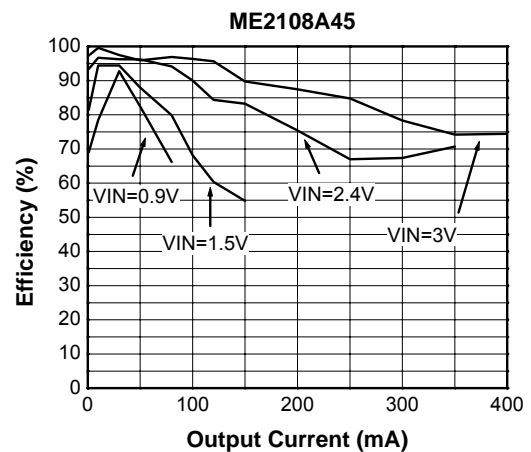
- Power source for battery-powered equipment
- Power source for wireless mouse, wireless keyboard, toys, cameras, camcorders, VCRs, PDAs, and hand-held communication LED lighting etc.

### Typical Application Circuit:



For use Build\_in Transistor

### Typical Performance Characteristics:



## ME2109 Series

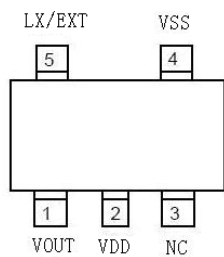
### Description:

ME2109 Series is a CMOS step-up switching regulator controller with an external low-ON-resistance Nch Power MOS, ME2109 Series features a PWM/PFM switching controller that can switch the operation to a PFM controller under a light Load to increase the efficiency.

### Feature:

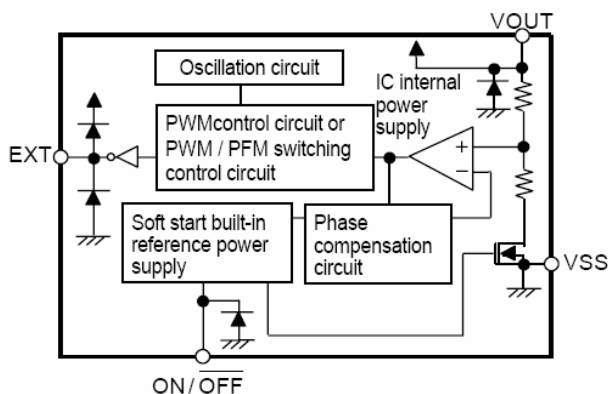
- Low start voltage:  $\leq 0.9V$ (at  $I_{out}=1mA$ )
- Output voltage range: 2.0V~6.5V(step 0.1V)
- Soft start function
- Shutdown function
- Package: SOT-23-5L
- Low Power Consumption: 35uA ( TYP.)
- Low ripple and low noise
- Maximum oscillator frequency:300KHz(TYP.)
- High Efficiency: 85%(TYP.)
- Output voltage accuracy:  $\pm 2.5\%$
- Slow-Start Time : 3mS(Type)

### Pin Configuration:



SOT-25 (TOP VIEW)

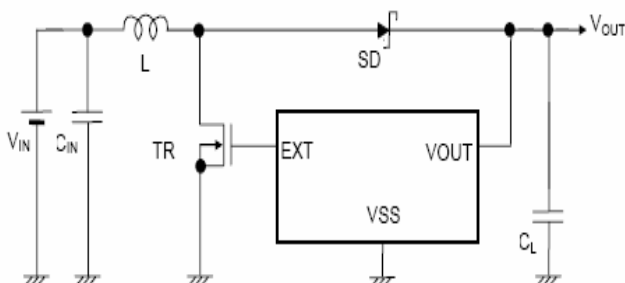
### Functional Block Diagram:



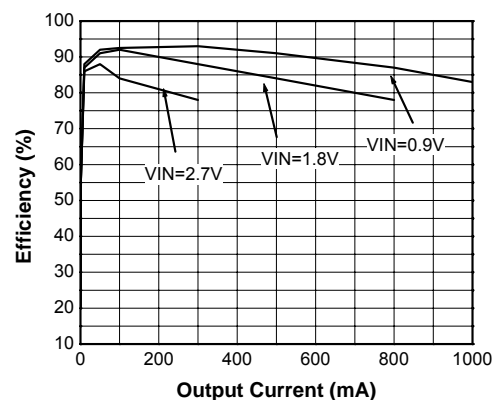
### Application:

- Power supplies for portable equipment such as mp3,PDA etc.
- Power source for audio equipment
- Constant voltage power supplies for cameras, VCRs, and communications devices LED lighting etc.

### Typical Application Circuit:



### Typical Performance Characteristics:



## ME3101 Series

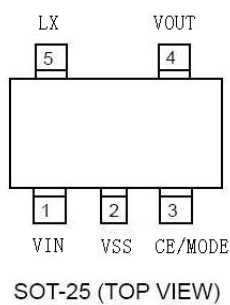
### Description:

The ME3101 series is a group of synchronous rectification type DC/DC step down converters with automatic PWM/PFM switching control, designed to allow the use of ceramic capacitors. The device enable a high efficiency, stable power supply with an output current of 500mA. Oscillation frequency is 1.2MHz.

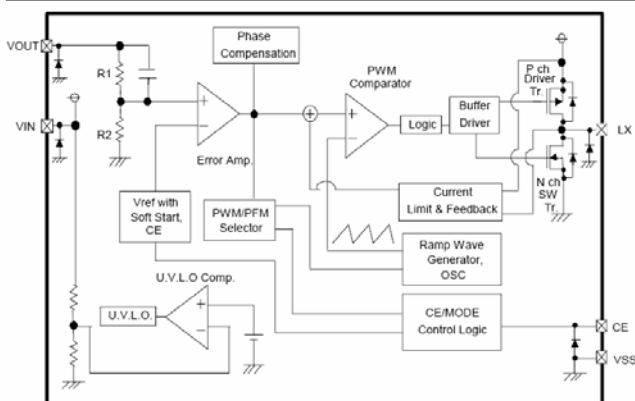
### Feature:

- Out current:500mA
- Input Voltage Range:2.0~6.0V
- 1.2MHz Switching Frequency
- 500mA Output current
- Soft-start circuit built-in
- Current limiter circuit built-in
- SOT23-5L Package

### Pin Configuration:



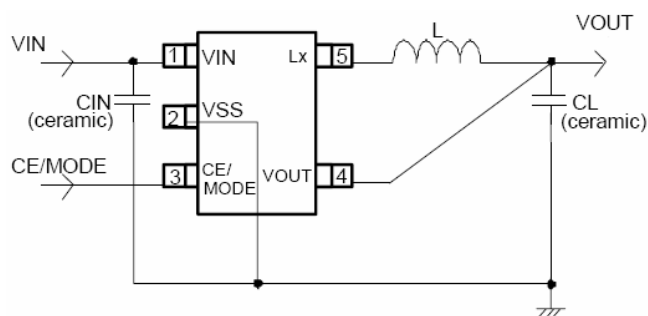
### Functional Block Diagram:



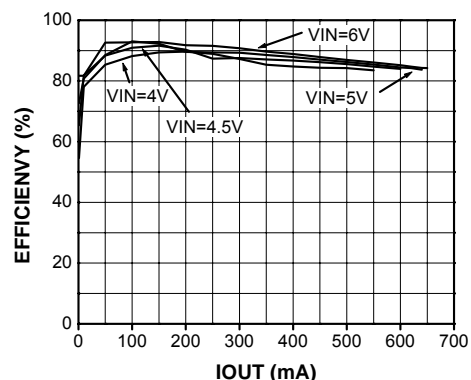
### Application:

- Mobile phones(PDC,GSM,CDMA,IMT200 etc.)
- Bluetooth equipment
- PDAS
- Portable communication modem
- Cameras
- Digital cameras
- Cordless phones
- Notebook computers

### Typical Application Circuit:



### Typical Performance Characteristics:

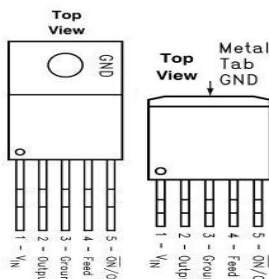


## ME3116 Series

### Description:

The ME3116 series of regulators are monolithic integrated circuits that provide all the active functions for a step-down(buck) switching regulator, capable of driving a 3A load with excellent line and load regulation. These devices are available in fixed output voltages of 3.3V, 5V, 12V, and an adjustable output version.

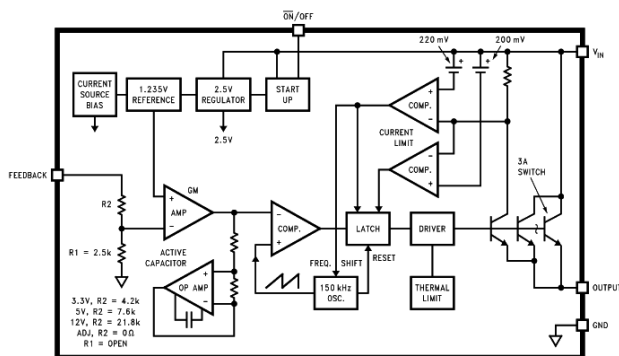
### Pin Configuration:



### Feature:

- 3.3V, 5V, 12V, and adjustable output versions
- Adjustable version output voltage range, 1.2V to 37V±4% max over line and load conditions
- Available in TO-220 and TO-263 packages
- Guaranteed 3A output load current
- Input voltage range up to 40V
- Requires only 4 external components
- Excellent line and load regulation specifications
- 150 kHz fixed frequency internal oscillator
- TTL shutdown capability
- Low power standby mode, IQ typically 80  $\mu$ A
- High efficiency
- Uses readily available standard inductors
- Thermal shutdown and current limit protection

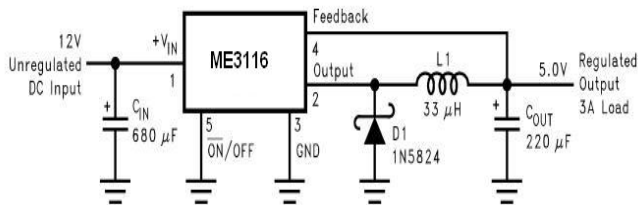
### Functional Block Diagram:



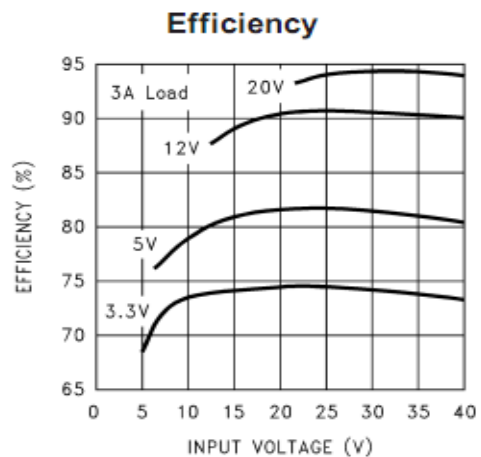
### Application:

- Simple high-efficiency step-down (buck) regulator
- On-card switching regulators
- Positive to negative converter

### Typical Application Circuit:



### Typical Performance Characteristics:



## ME2106 Series

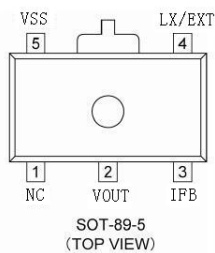
### Description:

ME2106 Series is a PFM Step-up DC/DC driver IC with invariant current, design for LED applications. Thought the external resistance, output current reach 0mA~500mA.

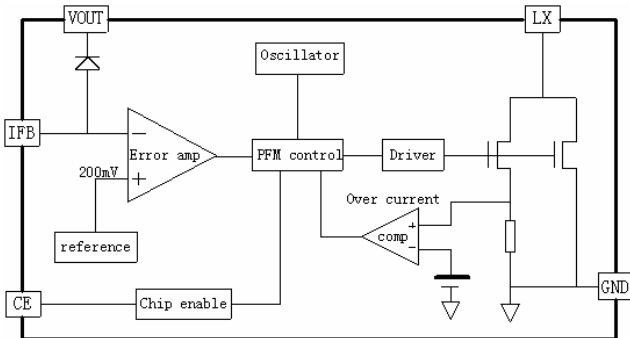
### Feature:

- Low start voltage: <math><0.9V</math> ( at  $I_{out}=1mA</math>)$
- Output Current range: 0~ 500mA;
- Output Current accuracy:  $\pm 10\%$
- High Efficiency: 85%(Type)
- Package: SOT-89-5L

### Pin Configuration:



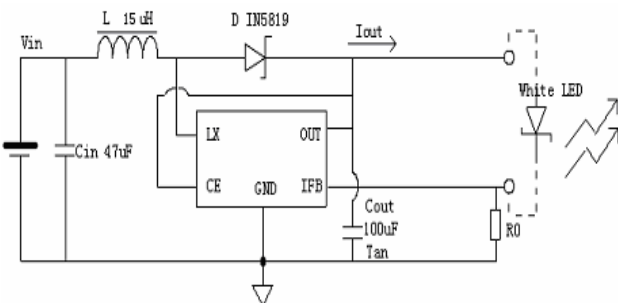
### Functional Block Diagram:



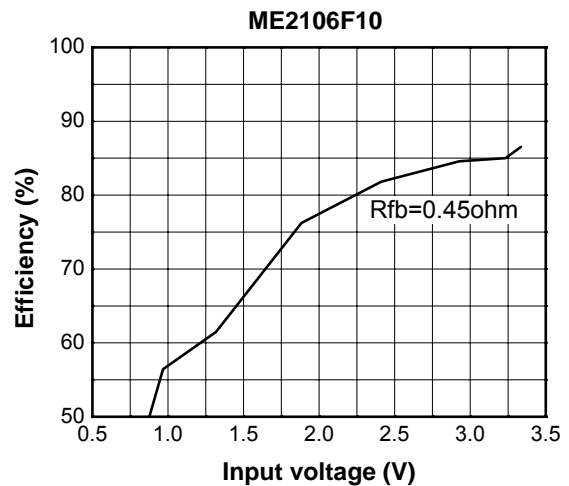
### Application:

- Power source for high-power LED
- Power source for invariant current

### Typical Application Circuit:



### Typical Performance Characteristics:

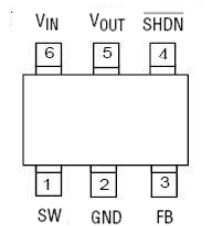


## ME2206 Series

### Description:

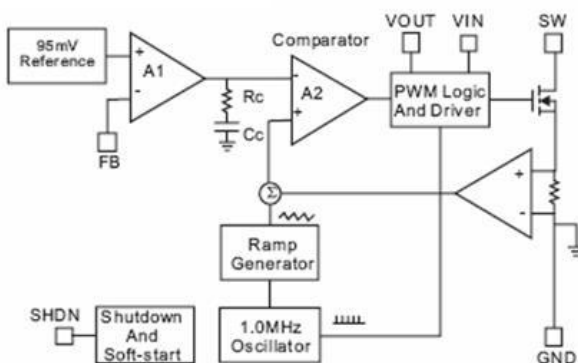
The ME2206 is a set-up DC-DC converter that delivers a regulated output current. The device switches at a 1MHz constant frequency, allowing for the use of small value external inductor and ceramic capacitors.

### Pin Configuration:



SOT-26 (TOP VIEW)

### Functional Block Diagram:



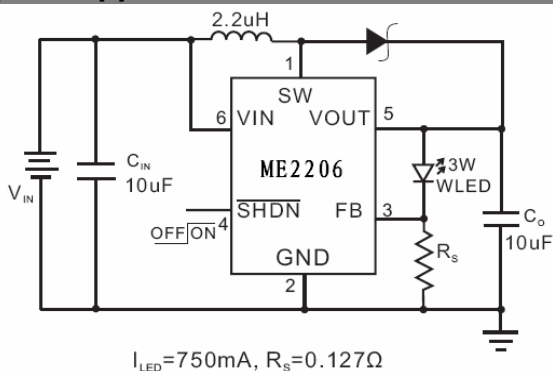
### Feature:

- LED Power Efficiency: up to 90%
- Current Accuracy:  $\pm 5\%$
- Low Start-Up Voltage: 0.9V(I<sub>LED</sub>=270mA)
- Low Hold Voltage:0.75V(I<sub>LED</sub>=270mA)
- 1MHz Switching Frequency
- Uses small, Low Profile External Components
- Low R<sub>DS(ON)</sub> : 100m $\Omega$  (TYP.)
- Open LED Protection
- Over Temperature Protection
- Low Profile SOT-23-6L Package
- Pb-Free Package

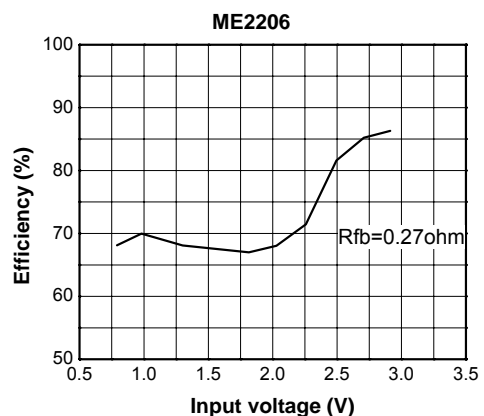
### Application:

- White LED Torch (Flashlight)
- White LED Camera Flash
- DSC (Digital Still Camera) Flash
- Cellular Camera Phone Flash
- PDA Camera Flash
- Camcorder Torch (Flashlight) Lamp

### Typical Application Circuit:



### Typical Performance Characteristics:

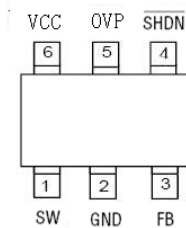


## ME2209 Series

### Description:

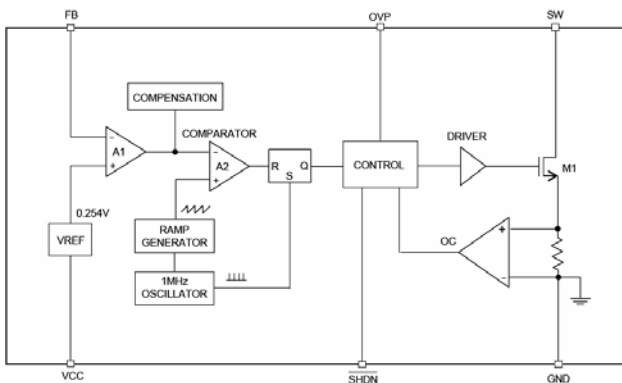
The ME2209 is a set-up DC-DC converter specifically designed to drive up to 5 series white LEDs with constant current. A low 0.254V feedback voltage minimizes power loss in the current setting resistor for high efficiency. The OVP pin monitors the output voltage and turns off the converter whenever the LEDs are open.

### Pin Configuration:

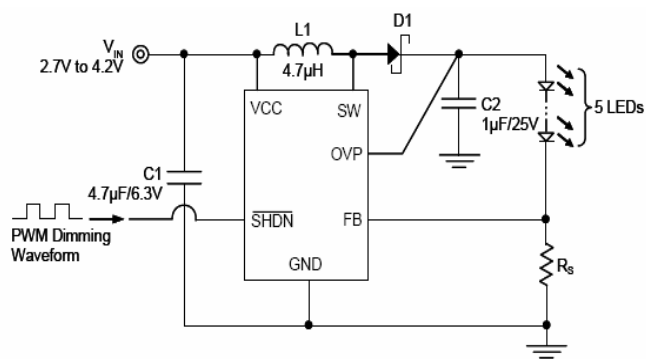


SOT-26 (TOP VIEW)

### Functional Block Diagram:



### Typical Application Circuit:



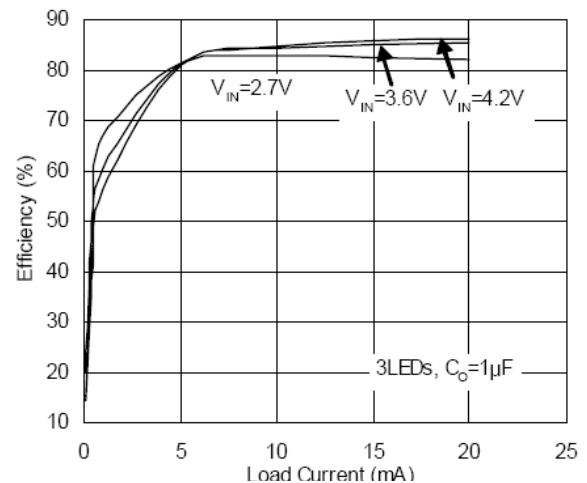
### Feature:

- Inherently Matched LED Current
- High Efficiency:87%
- Drivers Up to Five LEDs from 2.5V Supply
- 24V Internal Power Switch
- Fast 1MHz Switching Frequency
- Uses Tiny 1mm Tall Inductors
- Requires Only 1uF Output Capacitors
- 20.5V Over Voltage Protection
- SOT23-6 Package

### Application:

- White LED Backlight Display for PDA
- Pocket PC
- Smart Phones
- Handheld Devices
- Cellular Phones

### Typical Performance Characteristics:



## ME2601 Series

### Description:

ME2601 is designed for LED displays. As an enhancement of its predecessor, ME2601 contains a serial buffer and data latches which convert serial input data into parallel output format. At ME2601 output stage, sixteen regulated current ports are designed to provide uniform and constant current sinks for driving LEDs within a large range of VF variations.

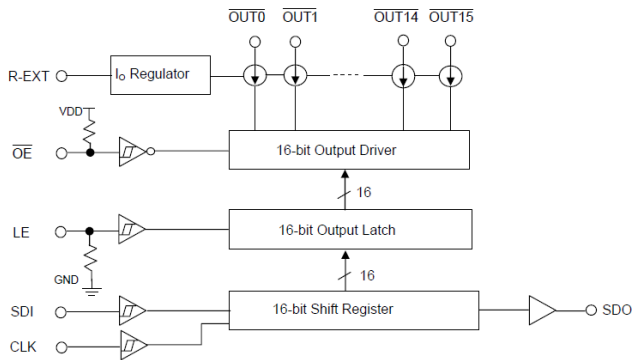
### Pin Configuration:

GND	1	24	VDD
SDI	2	23	R-EXT
CLK	3	22	SDO
LE	4	21	OE
OUT0	5	20	OUT15
OUT1	6	19	OUT14
OUT2	7	18	OUT13
OUT3	8	17	OUT12
OUT4	9	16	OUT11
OUT5	10	15	OUT10
OUT6	11	14	OUT9
OUT7	12	13	OUT8

### Feature:

- 16 constant-current output channels
- Constant output current invariant to load voltage change
- Excellent output current accuracy:  
Between ICs:  $< \pm 3\%$ (max.), and between ICs  $< \pm 6\%$ (max.)
- Output current adjusted through an external resistor
- Constant output current range: 5-90mA
- Fast response of output current, OE(min.): 200ns
- 25MHz clock frequency
- 5V supply voltage
- Optional for Pb-free & Green Package

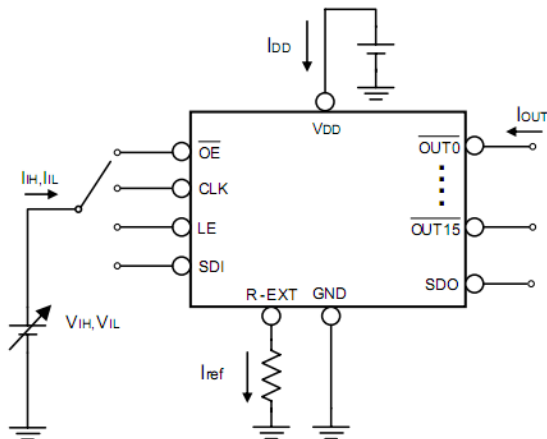
### Functional Block Diagram:



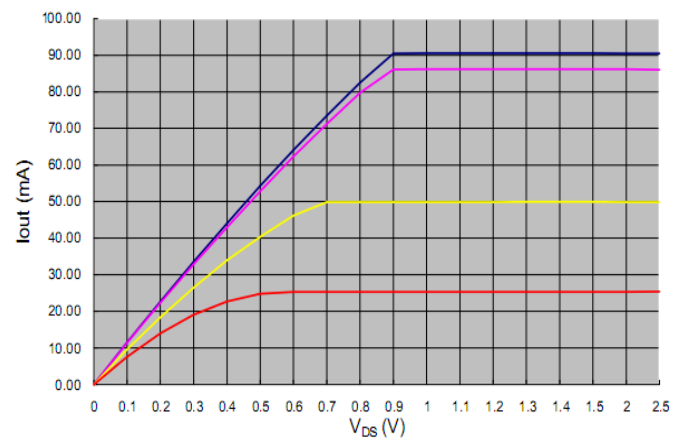
### Application:

- LED board

### Typical Application Circuit:



### Typical Performance Characteristics:



## ME2604 Series

### Description:

ME2604 is designed for LED displays. As an enhancement of its predecessor, ME2604 contains a serial buffer and data latches which convert serial input data into parallel output format. At ME2604 output stage, sixteen regulated current ports are designed to provide uniform and constant current sinks for driving LEDs within a large range of VF variations.

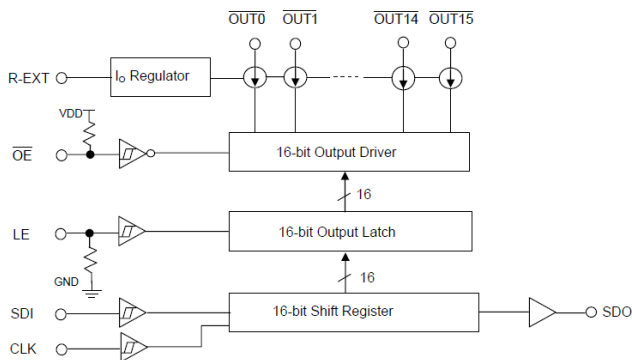
### Pin Configuration:

GND	1	24	VDD
SDI	2	23	R-EXT
CLK	3	22	SDO
LE	4	21	OE
OUT0	5	20	OUT15
OUT1	6	19	OUT14
OUT2	7	18	OUT13
OUT3	8	17	OUT12
OUT4	9	16	OUT11
OUT5	10	15	OUT10
OUT6	11	14	OUT9
OUT7	12	13	OUT8

### Feature:

- 16 constant-current output channels
- Constant output current invariant to load voltage change
- Excellent output current accuracy:  
Between ICs:  $< \pm 3\%$ (max.), and between ICs  $< \pm 6\%$ (max.)
- Output current adjusted through an external resistor
- Constant output current range: 3-45mA
- Fast response of output current, OE(min.): 300ns
- 25MHz clock frequency
- 5V supply voltage
- Optional for Pb-free & Green Package

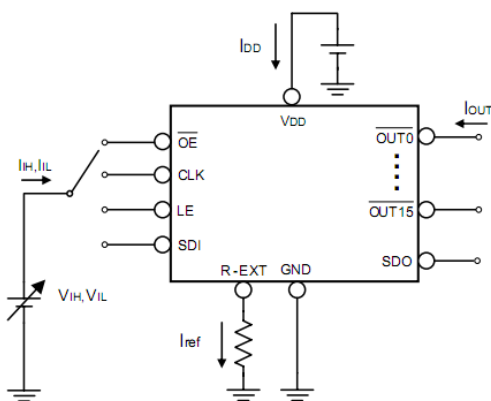
### Functional Block Diagram:



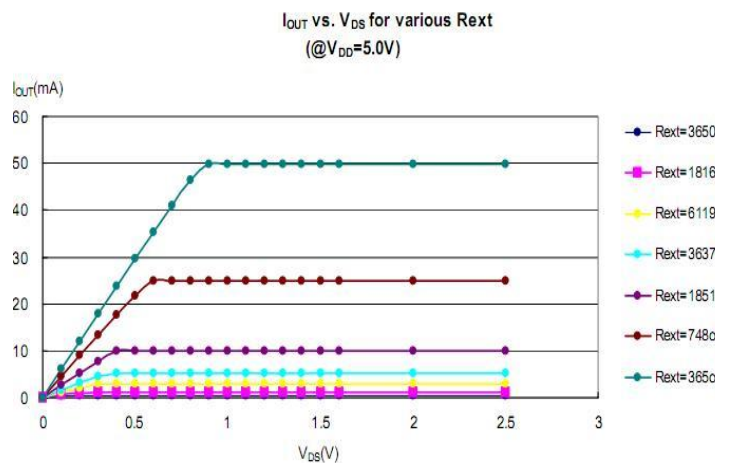
### Application:

- LED board

### Typical Application Circuit:



### Typical Performance Characteristics:



## ■ MEL71XX Series

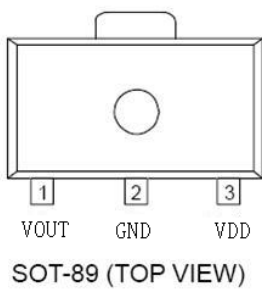
### Description:

MEL71XX series is a low dropout current regulator rated for 260~350mA constant sink current.

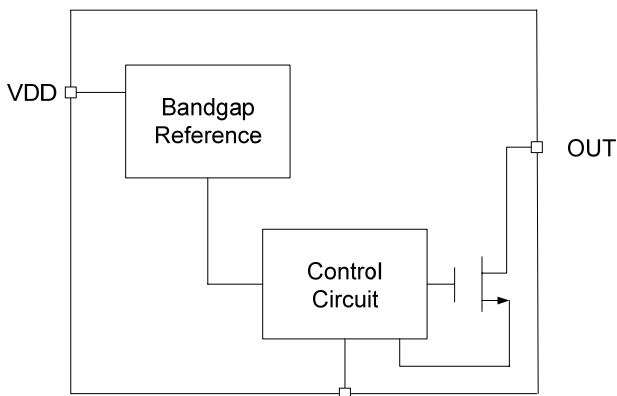
### Feature:

- Input Voltage Range: 2.7V to 6.0V
- Output current Range: 260mA to 350mA
- Package: SOT-89-3

### Pin Configuration:



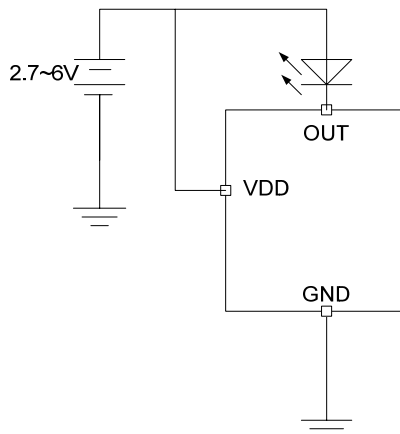
### Functional Block Diagram:



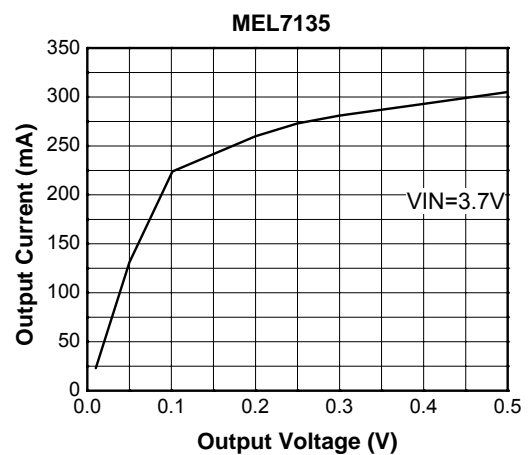
### Application:

- Power LED driver

### Typical Application Circuit:



### Typical Performance Characteristics:

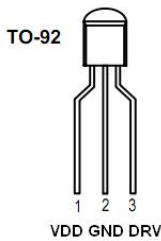


## ME8100 Series

### Description:

The ME8100 is a high performance green-energy offline power supply controller. It features a scalable driver for driving external NPN or MOSFET transistors for line voltage switching. This proprietary architecture enables many advanced features to be integrated into a small package (TO-92 or SOT23-5), resulting in lowest total cost solution.

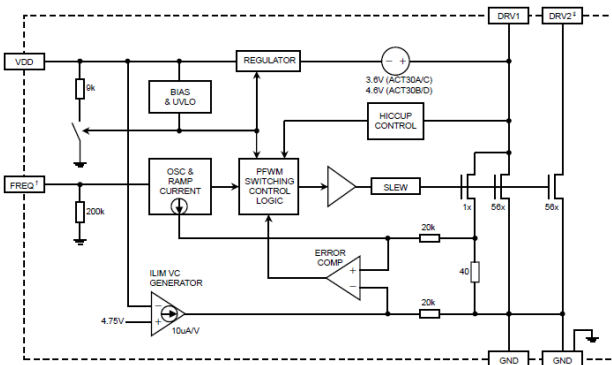
### Pin Configuration:



### Feature:

- Lowest Total Cost Solution
- 0.15W Standby Power
- Emitter Drive Allows Safe NPN Flyback Use
- Hiccup Mode Short Circuit
- Current Mode Operation
- Over-Current Protection
- Under-voltage Protection with Auto-restart
- Proprietary Scalable Output Driver
- Flexible Packaging Options (including TO-92)
- 65kHz or 100kHz Switching Frequency
- Selectable 0.4A to 1.2A Current Limit

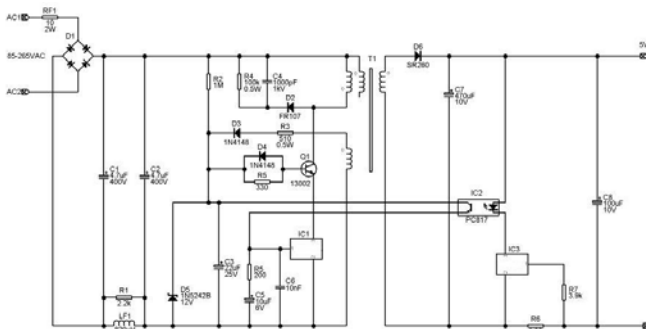
### Functional Block Diagram:



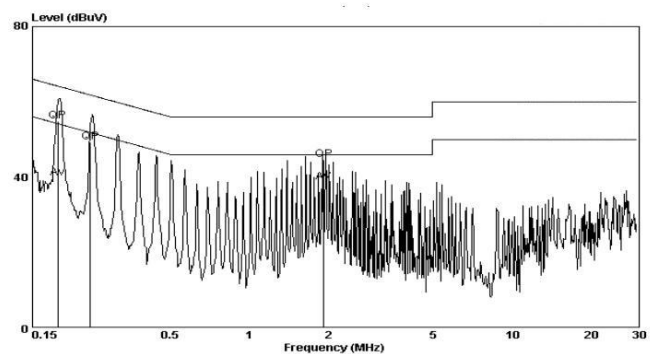
### Application:

- Battery Chargers
- Power Adaptors
- Standby Power Supplies
- Appliances
- Universal Off-line Power Supplies

### Typical Application Circuit:



### Typical Performance Characteristics:

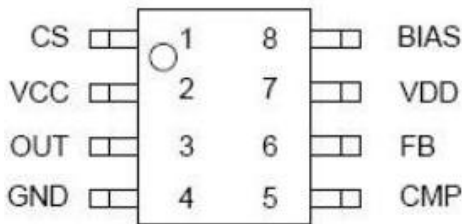


## ME8108 Series

### Description:

The ME8108 is a high performance AC/DC power supply controller for the cost effective battery charger and adapter total solutions. It can achieve constant voltage and constant current (CV and CC) regulation without requiring an opto-coupler and secondary control circuitry. Meanwhile, it also eliminates the need of loop compensation circuitry while maintaining system stability.

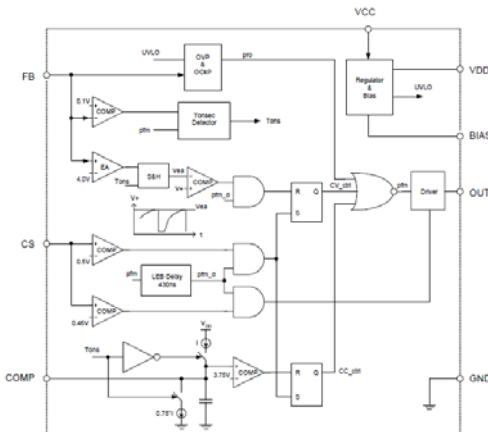
### Pin Configuration:



### Feature:

- Primary Side Regulation (PSR) solution without opto-coupler
- Pass Energy Star EPS 2.0 with over 2.5% margin (>68.4% ) because Pulse Frequency Modulation (PFM) is adopted for high efficiency at light load
- $\pm 1.5\%$  Constant Voltage (CV) regulation and  $\pm 5\%$  constant current regulation with 1.8m AWG26 cable
- Less than 0.2W no load input power for universal line
- Pass EN55022 Class B with 6dB margin without Y cap
- High reliability guaranteed by built-in multi-protection functions- Meets IEC 61000-4-5 AC line Surge
- Cost effective total charger solution

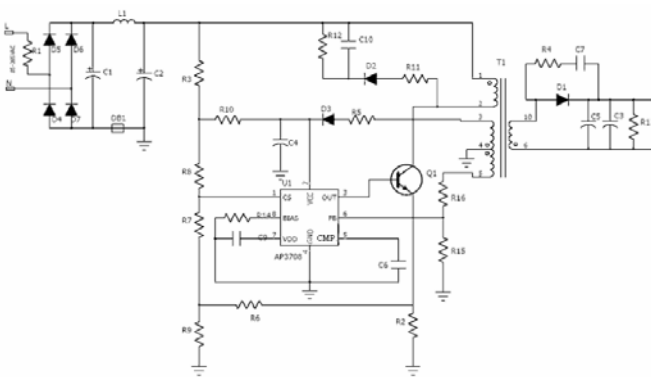
### Functional Block Diagram:



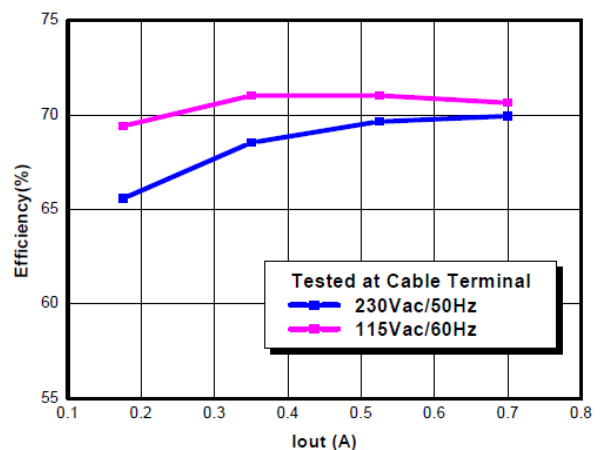
### Application:

- Cellphone charger or adapter

### Typical Application Circuit:



### Typical Performance Characteristics:





## ME8263 Series

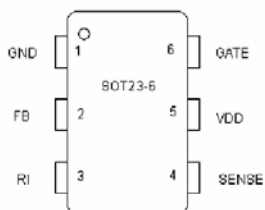
### Description:

ME8263 is a highly integrate current mode PWM control IC optimized for high performance, low standby power and cost effective offline flyback converter applications in sub 30W range.

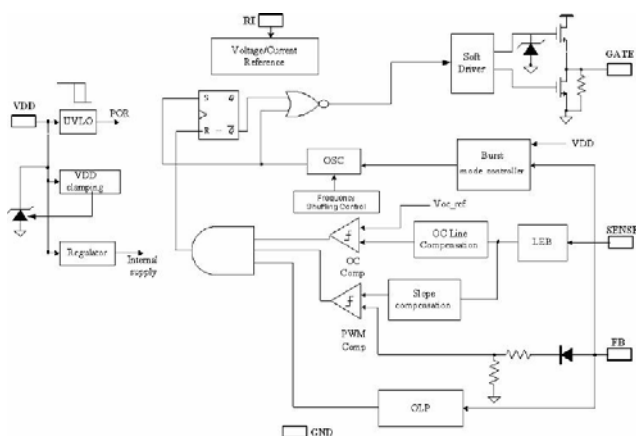
### Feature:

- Frequency shuffling technology for improved EMI performance.
- Extended burst mode control for improved efficiency and minimum standby power design.
- Audio noise free operation.
- External programmable PWM switching frequency.
- Internal synchronized slope compensation.
- Low VDD startup current and low operating current(1.4mA).
- Leading edge blanking on current sense input
- Good protection coverage with auto self-recovery

### Pin Configuration:



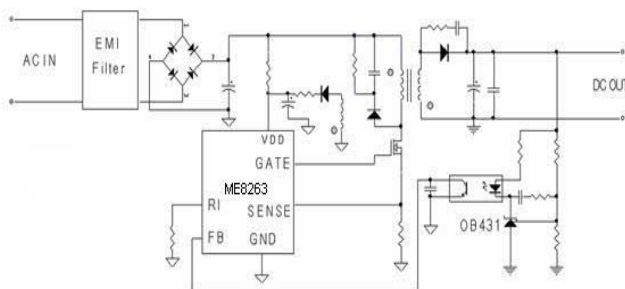
### Functional Block Diagram:



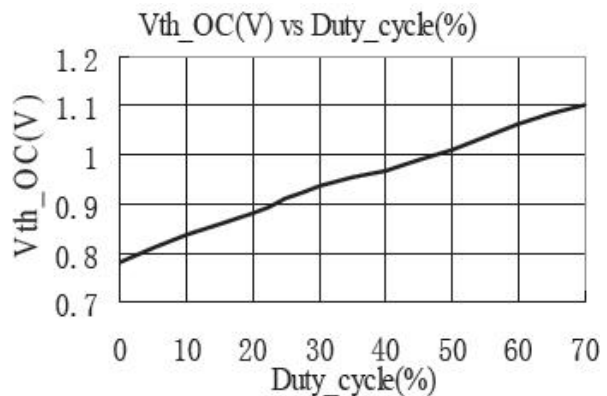
### Application:

- Battery charger
- Power adaptor
- Set-top box power supplies
- Open-frame SMPS

### Typical Application Circuit:



### Typical Performance Characteristics:



## MEM2301 Series

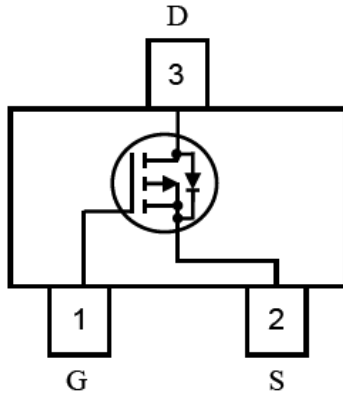
### Description:

MEM2301 is a P-Channel logic enhancement mode power field effect transistors are produced using high cell density DMOS trench technology. This high density process is especially tailored to minimize on-state resistance.

### Feature:

- -20V/-2.8A,  $R_{DS(ON)} = 90m\Omega @ V_{GS} = -4.5V$
- -20V/-2A,  $R_{DS(ON)} = 110m\Omega @ V_{GS} = -2.5V$
- Super high density cell design for extremely low  $R_{DS(ON)}$
- SOT-23 package design

### Pin Configuration:



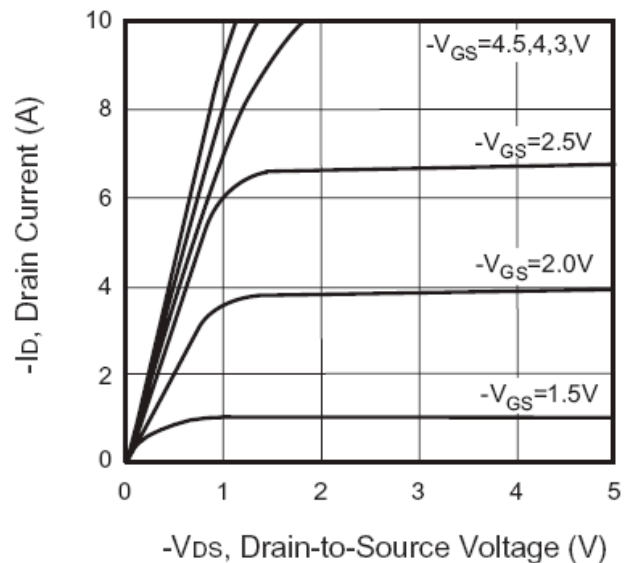
### Application:

- MP3/MP4
- GPS
- Portable equipment
- DC/DC Converter
- Load Switch

### Absolute Maximum Ratings:

Parameter	Symbol	Ratings	Unit
Drain-Source Voltage	VDSS	-20V	V
Gate-Source Voltage	VGSS	±8	V
Drain Current	ID	-2.8	A
Total Power Dissipation	Pd	0.5	W
Operating Temperature Range	TOpr	150	°C
Storage Temperature Range	Tstg	-65/150	°C

### Typical Performance Characteristics:



## MEM2303 Series

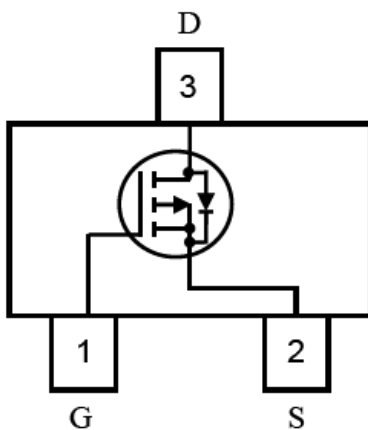
### Description:

MEM2303 is a P-Channel logic enhancement mode power field effect transistors are produced using high cell density DMOS trench technology. This high density process is especially tailored to minimize on-state resistance.

### Feature:

- -30V/-4.2A,  $R_{DS(ON)} = 50m\Omega @ V_{GS} = -10V$
- -30V/-4A,  $R_{DS(ON)} = 56m\Omega @ V_{GS} = -4.5V$
- -30V/-2.5A,  $R_{DS(ON)} = 71m\Omega @ V_{GS} = -2.5V$
- Super high density cell design for extremely low  $R_{DS(ON)}$
- SOT-23 package design

### Pin Configuration:



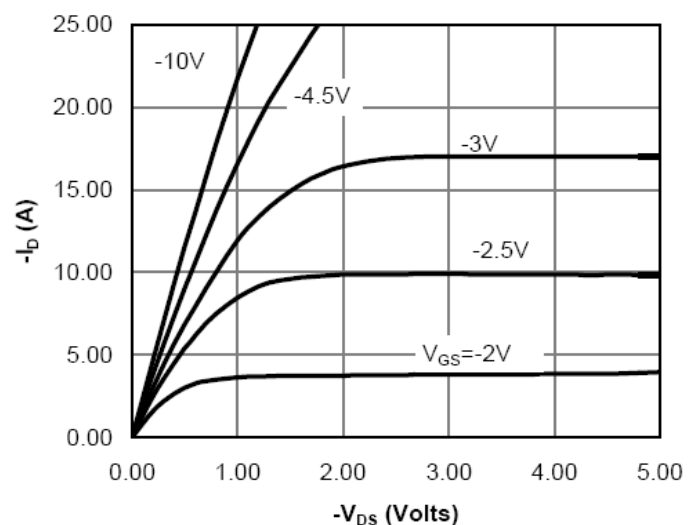
### Application:

- Power Management Notebook
- Portable Equipment
- Battery Powered System
- DC/DC Converter
- Load Switch
- LCD Display inverter

### Absolute Maximum Ratings:

Parameter	Symbol	Ratings	Unit
Drain-Source Voltage	$V_{DSS}$	-30V	V
Gate-Source Voltage	$V_{GSS}$	$\pm 12$	V
Drain Current	$I_D$	-4.2	A
Total Power Dissipation	$P_d$	1	W
Operating Temperature Range	$T_{Opr}$	150	$^{\circ}C$
Storage Temperature Range	$T_{stg}$	-65/150	$^{\circ}C$

### Typical Performance Characteristics:



## MEM2307 Series

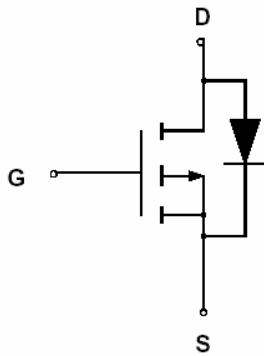
### Description:

MEM2307 is a P-Channel MOSFET, It uses advanced trench technology to provide excellent RDS(ON) with low gate charge. Standard Product is Pb-free.

### Feature:

- -30V/-4.3A, RDS(ON) < 88mΩ @VGS = -10V
- -30V/-3A, RDS(ON) < 108mΩ @VGS = -4.5V
- Single P-MOSFET
- TrenchFET Power MOSFET
- Super high density cell design for extremely low RDS(ON)
- Exceptional on-resistance and maximum DC current capability
- SOT-23-3 package design

### Pin Configuration:



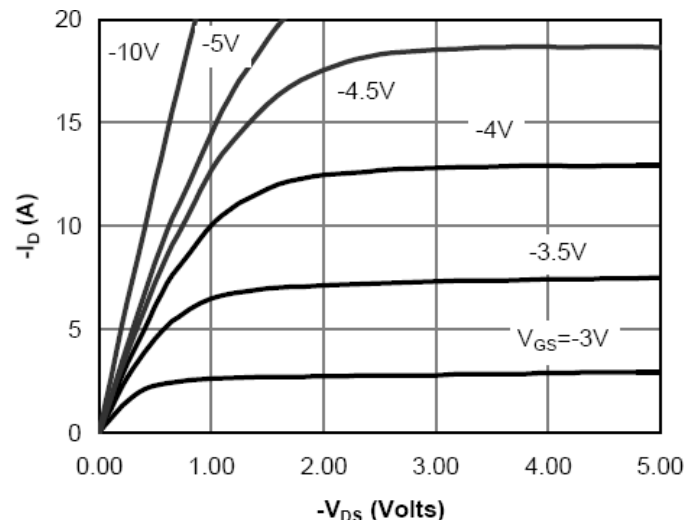
### Application:

- Power Management Notebook
- Portable Equipment
- Battery Powered System
- DC/DC Converter
- Load Switch
- LCD Display inverter

### Absolute Maximum Ratings:

Parameter	Symbol	Ratings	Unit
Drain-Source Voltage	VDSS	-20V	V
Gate-Source Voltage	VGSS	±8	V
Drain Current	ID	-2.8	A
Total Power Dissipation	Pd	0.5	W
Operating Temperature Range	TOpr	150	°C
Storage Temperature Range	Tstg	-65/150	°C

### Typical Performance Characteristics:



## MEM2309 Series

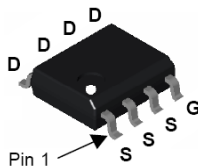
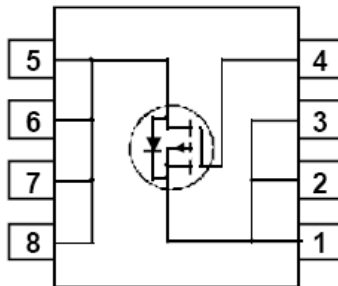
### Description:

MEM2309 is a P-Channel MOSFET, It uses advanced PowerTrench Process. It has been optimized for power management applications requiring a wide range of gate drive voltage ratings(4.5-25).

### Feature:

- -30V/-6A, RDS(ON) = 53mΩ @VGS=-10V
- -30V/-4A, RDS(ON) = 68mΩ @VGS=-4.5V
- Single P-MOSFET
- Low gate charge
- Fast switching speed
- High performance trench technology for extremely low RDS(on)
- High power and current handling capability
- SOP- 8 package design

### Pin Configuration:



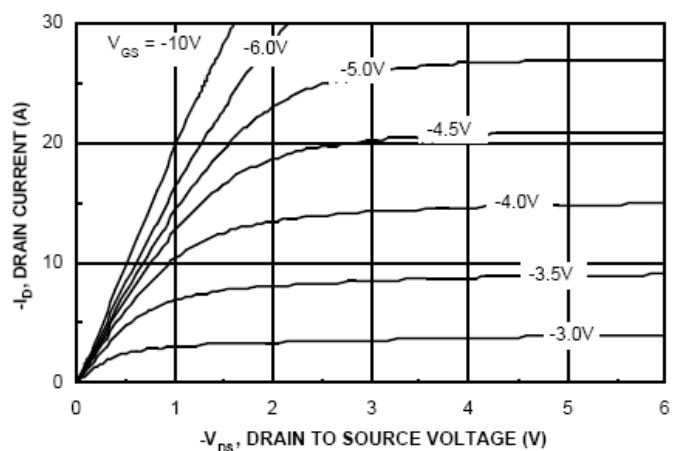
### Application:

- Power Management Notebook
- Portable Equipment
- Battery Protection
- DC/DC Converter
- Load Switch
- LCD Display inverter

### Absolute Maximum Ratings:

Parameter	Symbol	Ratings	Unit
Drain-Source Voltage	$V_{DSS}$	-30V	V
Gate-Source Voltage	$V_{GSS}$	±20	V
Drain Current	$I_D$	-6	A
Total Power Dissipation	$P_d$	2	W
Operating Temperature Range	$T_{Opr}$	150	°C
Storage Temperature Range	$T_{stg}$	-65/150	°C

### Typical Performance Characteristics:



## MEM2311 Series

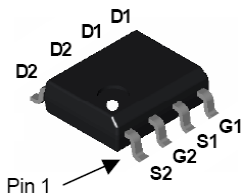
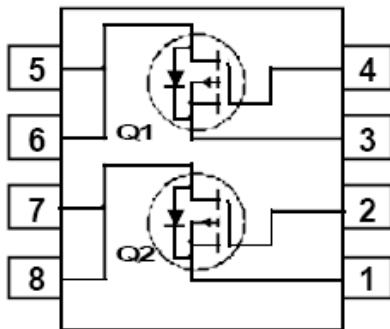
### Description:

MEM2311 is a dual P-Channel MOSFET, It uses advanced PowerTrench Process. It has been optimized for power management applications requiring a wide range of gate drive voltage ratings(4.5-25).

### Feature:

- -30V/-6A,  $R_{DS(ON)} = 52m\Omega @ V_{GS} = -10V$
- -30V/-4A,  $R_{DS(ON)} = 67m\Omega @ V_{GS} = -4.5V$
- Dual P-MOSFET
- Low gate charge
- Fast switching speed
- High performance trench technology for extremely Low  $R_{DS(ON)}$
- High power and current handling capability
- SOP- 8 package design

### Pin Configuration:



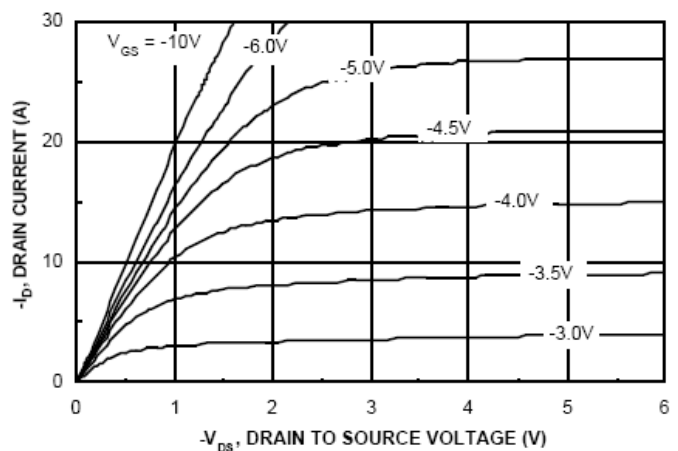
### Application:

- Power Management Notebook
- Portable Equipment
- Battery Protection
- DC/DC Converter
- Load Switch
- LCD Display inverter

### Absolute Maximum Ratings:

Parameter	Symbol	Ratings	Unit
Drain-Source Voltage	$V_{DSS}$	-30V	V
Gate-Source Voltage	$V_{GSS}$	$\pm 20$	V
Drain Current	$I_D$	-6	A
Total Power Dissipation	$P_d$	1	W
Operating Temperature Range	$T_{Opr}$	150	$^{\circ}C$
Storage Temperature Range	$T_{stg}$	-65/150	$^{\circ}C$

### Typical Performance Characteristics:



## MEM2302 Series

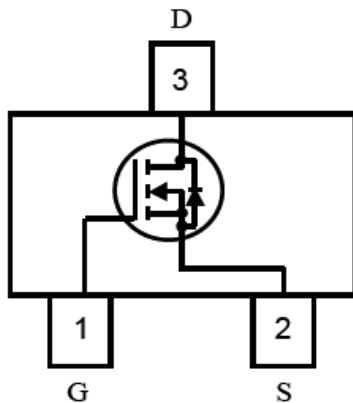
### Description:

MEM2302 is a N-Channel logic enhancement mode power field effect transistors are produced using high cell density DMOS trench technology. This high density process is especially tailored to minimize on-state resistance.

### Feature:

- 20V/3A,  $R_{DS(ON)} = 29m\Omega @ V_{GS}=4.5V$
- 20V/2A,  $R_{DS(ON)} = 36m\Omega @ V_{GS}=2.5V$
- Super high density cell design for extremely low  $R_{DS(ON)}$
- SOT-23-3 package design

### Pin Configuration:



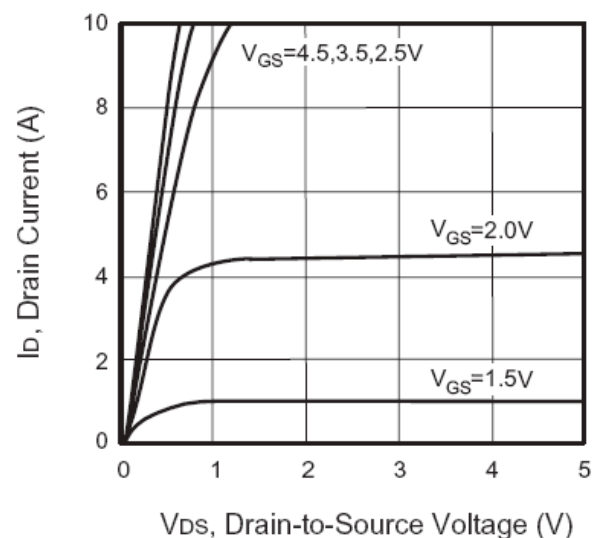
### Application:

- Power Management Notebook
- Portable Equipment
- Battery Powered System
- DC/DC Converter
- Load Switch
- LCD Display inverter

### Absolute Maximum Ratings:

Parameter	Symbol	Ratings	Unit
Drain-Source Voltage	$V_{DSS}$	20V	V
Gate-Source Voltage	$V_{GSS}$	$\pm 8$	V
Drain Current	$I_D$	3	A
Total Power Dissipation	$P_d$	0.3	W
operating junction temperature	$T_j$	150	$^{\circ}C$
Storage Temperature Range	$T_{stg}$	-65/150	$^{\circ}C$

### Typical Performance Characteristics:



## MEM2306 Series

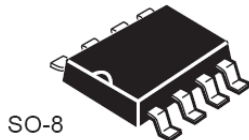
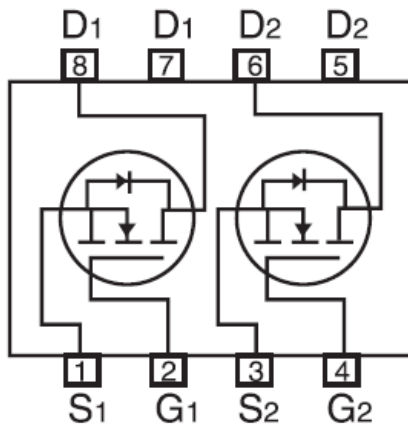
### Description:

MEM2306 is a dual N-Channel logic enhancement mode field effect transistor are produced using high cell density ,DMOS trench technology. This high density process is especially tailored to minimize on-state resistance

### Feature:

- 20V/5A,  $R_{DS(ON)} = 23m\Omega @ V_{GS}=3.85V$
- 20V/5.2A,  $R_{DS(ON)} = 32m\Omega @ V_{GS}=2.5V$
- Dual N-Channel MOSFET
- Super high density cell design for extremely low  $R_{DS(ON)}$
- High power and current handling capability
- Lead free product is acquired.
- SOP- 8 package design

### Pin Configuration:



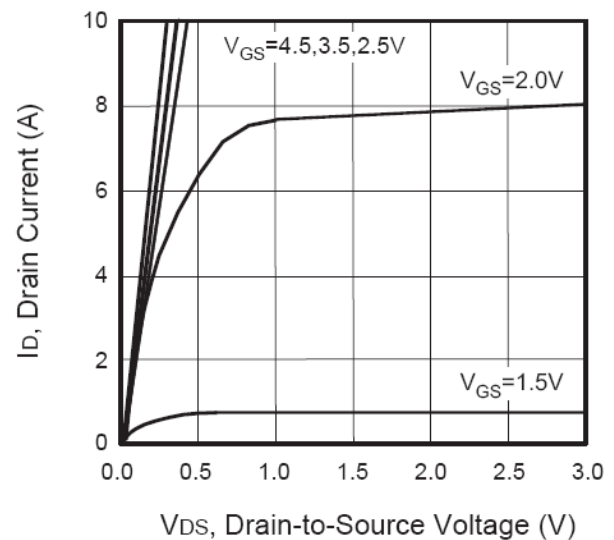
### Application:

- Power Management Notebook
- Portable Equipment
- Battery Powered System
- DC/DC Converter
- Load Switch
- LCD Display inverter

### Absolute Maximum Ratings:

Parameter	Symbol	Ratings	Unit
Drain-Source Voltage	$V_{DSS}$	20V	V
Gate-Source Voltage	$V_{GSS}$	$\pm 12$	V
Drain Current	$I_D$	5	A
Total Power Dissipation	$P_d$	2	W
Operating Temperature Range	$T_{Opr}$	150	$^{\circ}C$
Storage Temperature Range	$T_{stg}$	-65/150	$^{\circ}C$

### Typical Performance Characteristics:



## MEM2310 Series

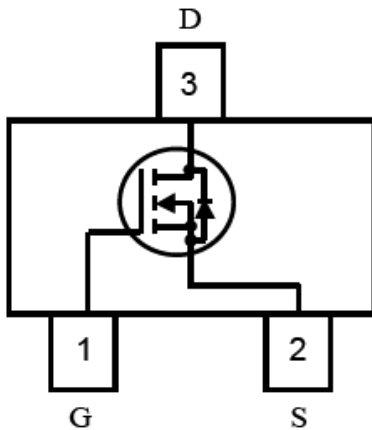
### Description:

MEM2310 is a N-Channel enhancement mode field effect transistor. It uses advanced trench technology to provide excellent RDS(ON), low gate charge and operation with gate voltage as low as 2.5V.

### Feature:

- 30V/5.7A, RDS(ON) = 22mΩ @ VGS=10V
- 30V/5A, RDS(ON) = 25.4mΩ @ VGS=4.5V
- 30V/3A, RDS(ON) = 34mΩ @ VGS=2.5V
- Single N-MOSFET
- Low gate charge
- Super high density cell design for extremely low RDS(ON)
- Exceptional low on-resistance and maximum DC current capability
- SOT-23 package design

### Pin Configuration:



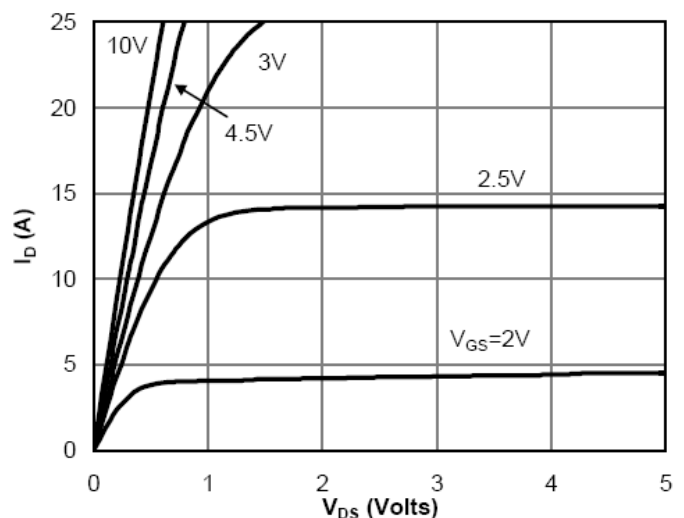
### Application:

- Power Management Notebook
- Portable Equipment
- Battery Powered System
- DC/DC Converter
- Load Switch
- LCD Display inverter

### Absolute Maximum Ratings:

Parameter	Symbol	Ratings	Unit
Drain-Source Voltage	$V_{DSS}$	30V	V
Gate-Source Voltage	$V_{GSS}$	±12	V
Drain Current	$I_D$	5.8	A
Total Power Dissipation	$P_d$	0.5	W
operating junction temperature	$T_j$	150	°C
Storage Temperature Range	$T_{stg}$	-65/150	°C

### Typical Performance Characteristics:



## MEM8205 Series

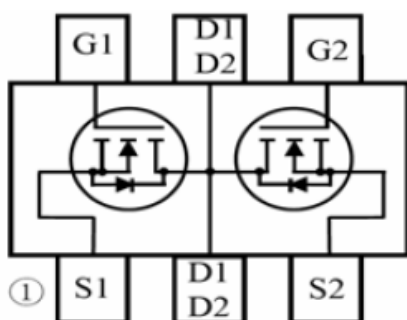
### Description:

MEM2316 is a dual N-Channel enhancement mode field effect transistor which is produced using high cell density, DMOS trench technology. This high density process is especially tailored to minimize on-state resistance

### Feature:

- 20V/6A,  $R_{DS(ON)} = 20\text{m}\Omega @ V_{GS}=4.5\text{V}, I_D=6\text{A}$
- 20V/6A  $R_{DS(ON)} = 21\text{m}\Omega @ V_{GS}=3.85\text{V}, I_D=5\text{A}$
- 20V/6A  $R_{DS(ON)} = 26\text{m}\Omega @ V_{GS}=2.5\text{V}, I_D=4\text{A}$
- Dual N-MOSFET
- Super high density cell design for extremely low  $R_{DS(ON)}$
- High power and current handling capability
- Lead free product is acquired
- SOT-23-6L /TSSOP8package design

### Pin Configuration:



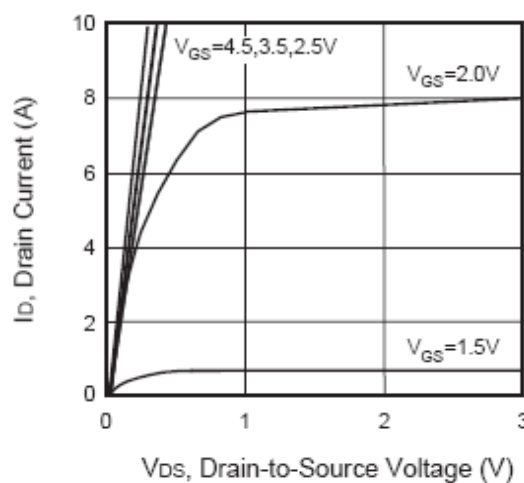
### Application:

- Power Management Notebook
- Portable Equipment
- Battery Powered System
- DC/DC Converter
- Load Switch
- LCD Display inverter

### Absolute Maximum Ratings:

Parameter	Symbol	Ratings	Unit
Drain-Source Voltage	$V_{DSS}$	20V	V
Gate-Source Voltage	$V_{GSS}$	$\pm 12$	V
Drain Current	$I_D$	6	A
Total Power Dissipation	$P_d$	0.5	W
Operating Temperature Range	$T_{Opr}$	150	$^{\circ}\text{C}$
Storage Temperature Range	$T_{stg}$	-65/150	$^{\circ}\text{C}$

### Typical Performance Characteristics:

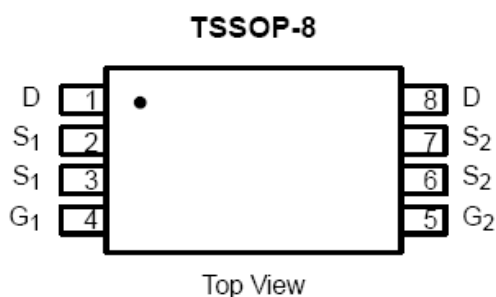


## MEM2318 Series

### Description:

MEM2318 is a N-Channel logic enhancement mode power field effect transistors are produced using highcell density DMOS trench technology. This high density process is especially tailored to minimize on-state resistance.

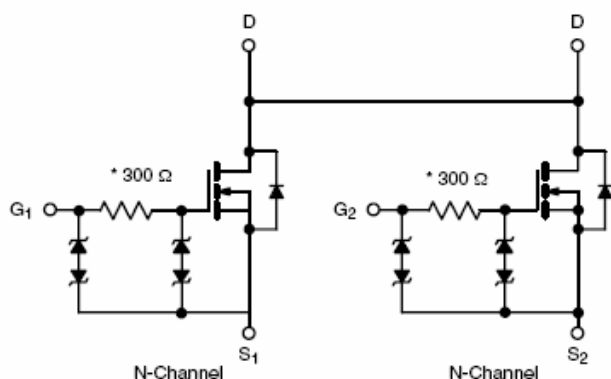
### Pin Configuration:



### Feature:

- 20V/6A, RDS(ON)=19mΩ @VGS=4.5V
- 20V/5A, RDS(ON)=20mΩ @VGS=3.85V
- 20V/4A, RDS(ON)=20mΩ @VGS=2.5V
- Super high density cell design for extremely low RDS(ON)
- Built in ESD protection
- TSSOP8 package design

### Functional Block Diagram:



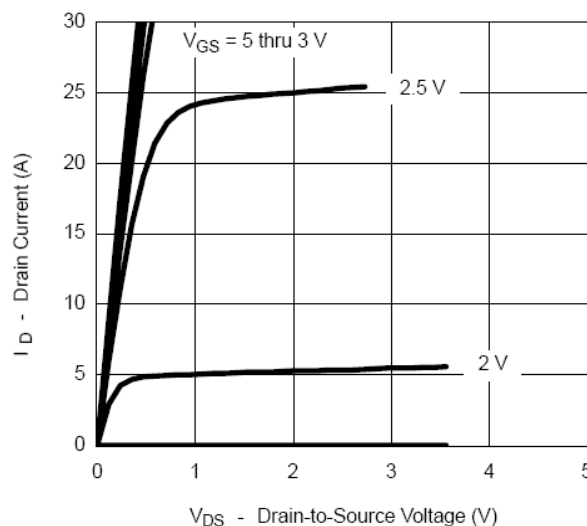
### Application:

- Power Management Notebook
- Portable Equipment
- Battery Powered System
- DC/DC Converter
- Load Switch
- LCD Display inverter

### Absolute Maximum Ratings:

Parameter	Symbol	Rated	Unit
Drain-Source Voltage	$V_{DSS}$	20V	V
Gate-Source Voltage	$V_{GSS}$	±12	V
Drain Current	$I_D$	6	A
Total Power Dissipation	$P_d$	2	W
Operating Temperature Range	$T_{Opr}$	150	°C
Storage Temperature Range	$T_{stg}$	-65/150	°C

### Typical Performance Characteristics:



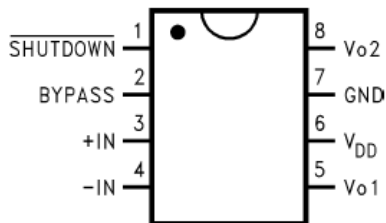
## ME5890 Series

### Description:

ME5890 is an audio power amplifier primarily designed for demanding applications in mobile phones and other portable communication device applications. It does not require output coupling capacitors or bootstrap capacitors, and features an internal thermal shutdown protection mechanism. Also, it contains advanced pop&click circuitry which eliminates noises.

### Pin Configuration:

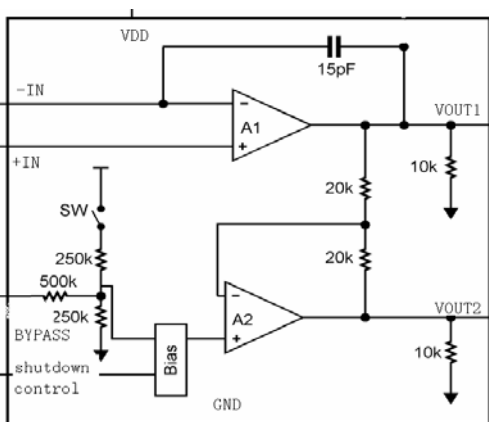
#### Mini Small Outline (MSOP) Package



### Feature:

- Available in space-saving packages: micro SMD, MSOP, SOIC, and LLP
- Ultra low current shutdown mode
- BTL output can drive capacitive Loads
- Improved pop&click circuitry eliminates noise during turn-on and turn-off transitions 2.2 - 5.5V operation
- No output coupling capacitors, snubber networks or bootstrap capacitors required
- Thermal shutdown protection
- Unity-gain stable
- External gain configuration capability

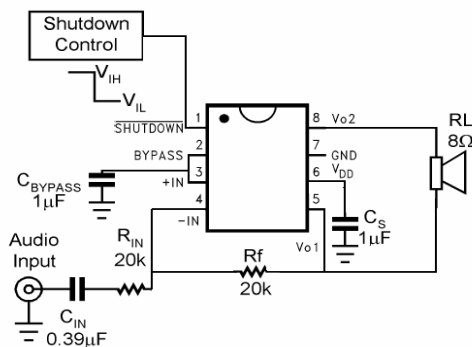
### Functional Block Diagram:



### Application:

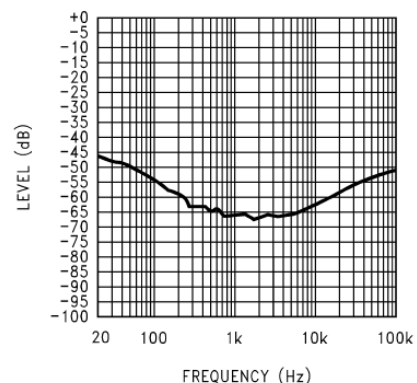
- Mobile Phones
- PDAs
- Portable electronic devices

### Typical Application Circuit:



### Typical Performance Characteristics:

Power Supply Rejection Ratio (PSRR) @  $A_V = 2$   
 $V_{DD} = 5V$ ,  $V_{ripple} = 200mVp-p$   
 $R_L = 8\Omega$ ,  $R_{IN} = 10\Omega$



## ME5990 Series

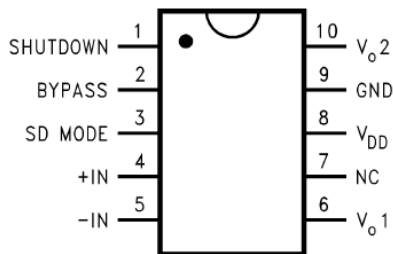
### Description:

ME5990 is an audio power amplifier primarily designed for demanding applications in mobile phones and other portable communication device applications, delivering 1.25 or 2 watts of continuous average power. Don't require output coupling capacitors or bootstrap capacitors and feature a low-power consumption shutdown-mode.

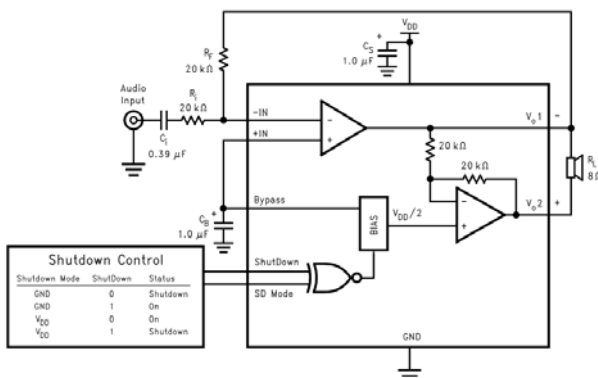
It can be configured by external gain-setting resistors.

### Pin Configuration:

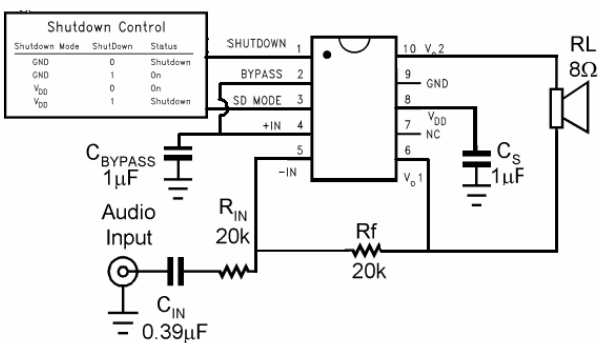
Exposed-DAP TSSOP Package



### Functional Block Diagram:



### Typical Application Circuit:



### Feature:

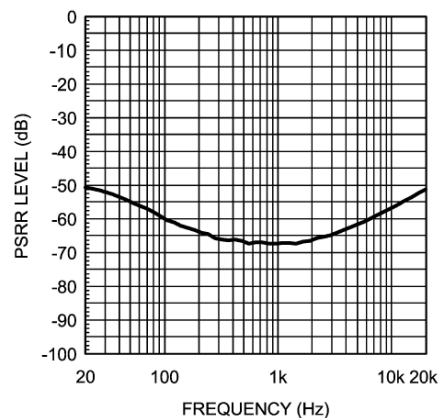
- Available in space-saving packages: LLP, CSP TSSOP, MSOP, and ITL
- Ultra low current shutdown mode
- Improved pop & click circuitry eliminates noise during turn-on and turn-off transitions
- 2.2 - 5.5V operation
- No output coupling capacitors, snubber networks or bootstrap capacitors required
- Unity-gain stable
- External gain configuration capability
- User selectable shutdown High or Low logic Level

### Application:

- Mobile Phones
- PDAs
- Portable electronic devices

### Typical Performance Characteristics:

Power Supply Rejection Ratio (PSRR) vs Frequency  
V<sub>DD</sub> = 5V, R<sub>L</sub> = 8Ω, input 10Ω terminated

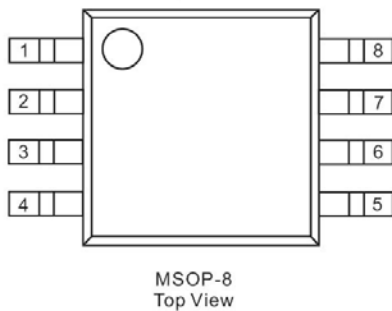


## ME5103 Series

### Description:

ME5103 is a 3W mono filterless class-D amplifier with high PSRR and differential input that eliminate noise and RF rectification. The filterless architecture requires no external output filter, fewer external components, less PCB area and lower system costs, and simplifies application design. It features shortcircuit protection and thermal shutdown.

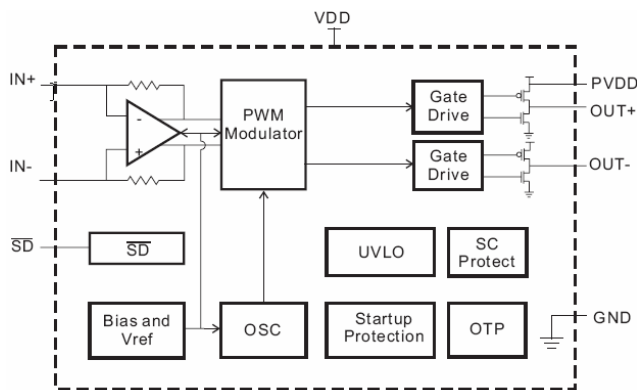
### Pin Configuration:



### Feature:

- Ultra Low EMI, -20dB Better Than FCC Class-B @ 300MHz
- High Efficiency up to 90% @1W with an 8 Speaker
- Shutdown Current <1 A
- 3W@10% THD Output with a 4 Load at 5V Supply
- Demanding Few External Components
- Superior Low Noise without Input
- Supply Voltage from 2.8V to 5.5 V
- Short Circuit Protection
- Thermal Shutdown
- Pb-Free Package
- Available in Space Saving Packages: 1.45mmx1.45mm WCSP9, MSOP-8, DFN 3x3

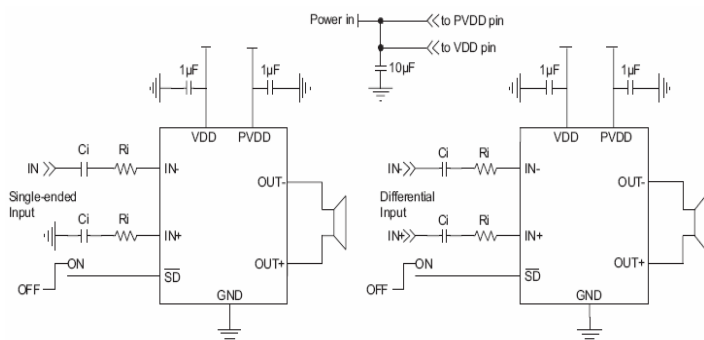
### Functional Block Diagram:



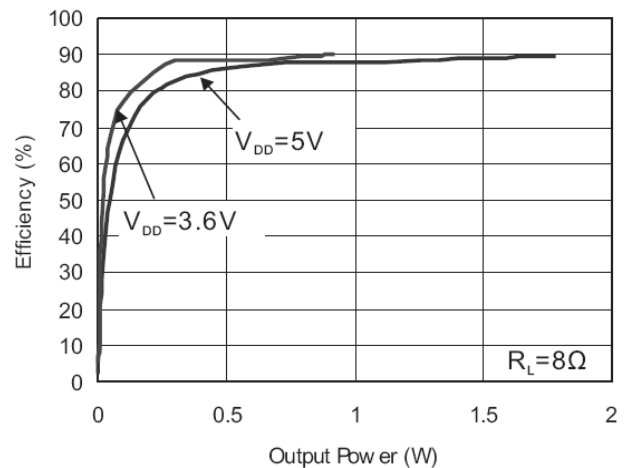
### Application:

- Cellular Phones/Smart Phones
- MP4/MP3, GPS
- Digital Photo Frame
- Electronic Dictionary
- Portable Game Machines

### Typical Application Circuit:



### Typical Performance Characteristics:

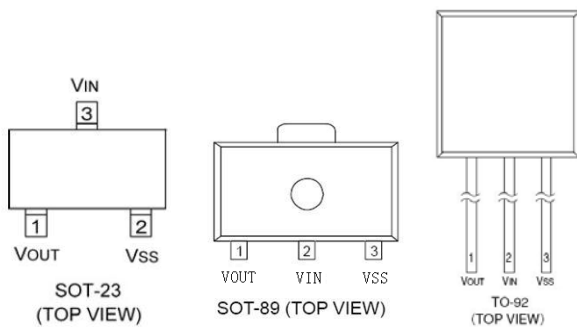


## ME2801 Series

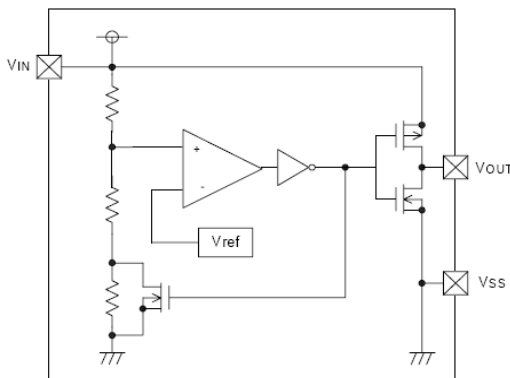
### Description:

ME2801 Series are highly precise, low power consumption voltage detectors, manufactured using CMOS technologies. Detect voltage is extremely accurate with minimal temperature drift. CMOS output are available.

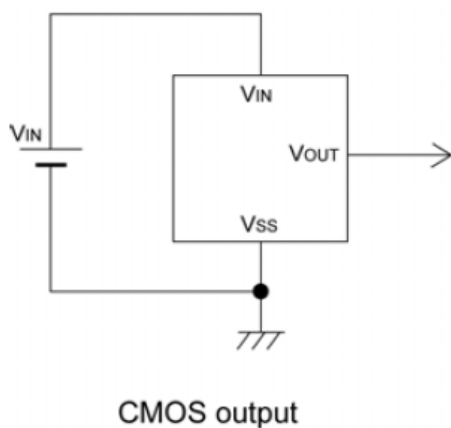
### Pin Configuration:



### Functional Block Diagram:



### Typical Application Circuit:



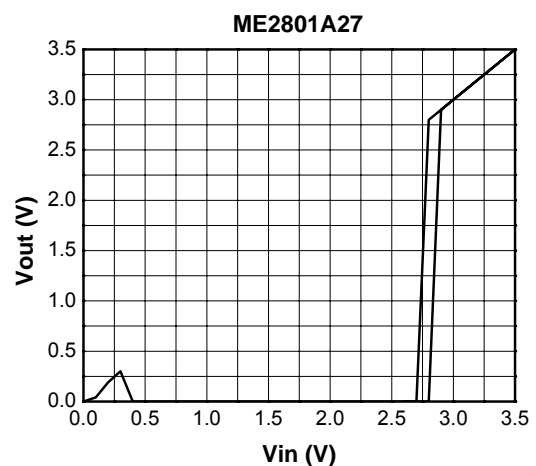
### Feature:

- Highly accurate:  $\pm 1\%$
- Low power consumption: 1uA(TYP.)
- Detect voltage range: 2.1V~4.4V in 0.1V increments
- Operating voltage range: 0.7V~10.0V
- Detect voltage temperature characteristics: TYP  $\pm 100\text{ppm}/^\circ\text{C}$
- Output configuration: CMOS
- Package: SSOT-24, SOT-23, SOT-89, TO-92

### Application:

- Microprocessor reset circuitry
- Memory battery back-up circuits
- Power-on reset circuits
- Power failure detection
- System battery life and charge voltage monitors

### Typical Performance Characteristics:



## ME2802 Series

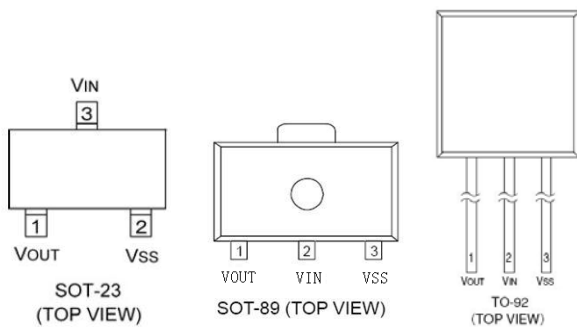
### Description:

ME2802 Series are highly precise, low power consumption voltage detectors, manufactured using CMOS technologies. Detect voltage is extremely accurate with minimal temperature drift. N-channel open drain are available.

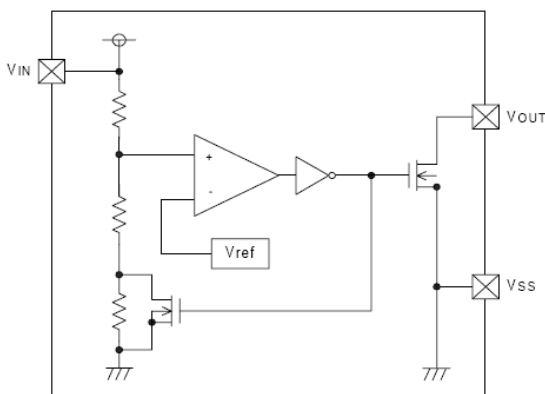
### Feature:

- Highly accurate:  $\pm 1\%$
- Low power consumption: 1 $\mu$ A (TYP.)
- Detect voltage range: 2.1V~4.4V in 0.1V increments
- Operating voltage range: 0.7V~10V
- Detect voltage temperature characteristics: TYP  $\pm 100$ ppm/ $^{\circ}$ C
- Output configuration: NOMS
- Package: SSOT-24, SOT-23, SOT-89, TO-92

### Pin Configuration:



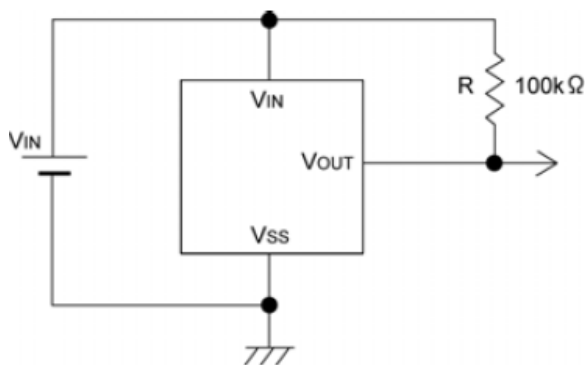
### Functional Block Diagram:



### Application:

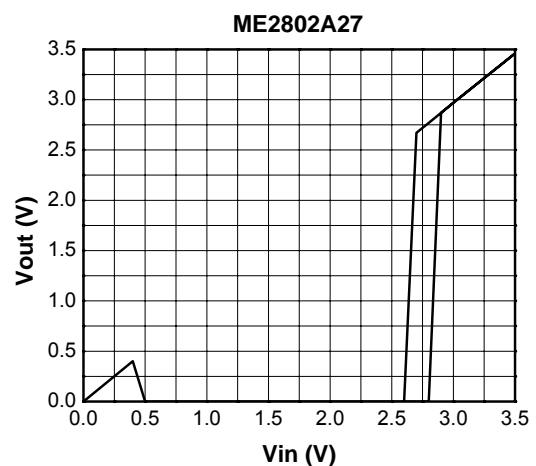
- Microprocessor reset circuitry
- Memory battery back-up circuits
- Power-on reset circuits
- Power failure detection
- System battery life and charge voltage monitors

### Typical Application Circuit:



N-channel open drain output

### Typical Performance Characteristics:

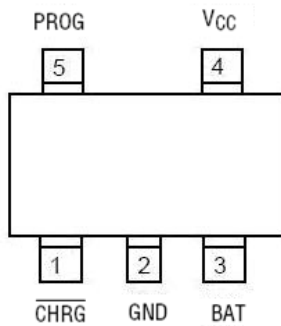


## ME4054 Series

### Description:

ME4054 is a constant-current/constant-voltage linear charger for single cell lithium-ion batteries. Its ThinSOT package and low external component count make the ME4054 ideally suited for portable applications. Furthermore, the ME4054 is specifically designed to work within USB power specifications.

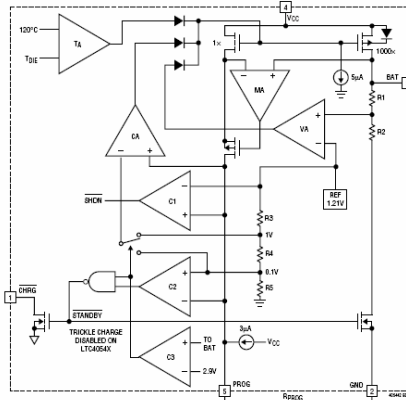
### Pin Configuration:



### Feature:

- Programmable Charge Current Up to 800mA
- No MOSFET, Sense Resistor or Blocking Diode Required
- Complete Linear Charger in ThinSOT Package for Single Cell Lithium-Ion Batteries
- Constant-Current/Constant-Voltage Operation with Thermal Regulation to Maximize Charge Rate Without Risk of Overheating
- Charges Single Cell Li-Ion Batteries Directly from USB Port
- Preset 4.2V Charge Voltage with  $\pm 1\%$  Accuracy
- Automatic Recharge
- Charge Status Output Pin
- C/10 Charge Termination
- 25 $\mu$ A Supply Current in Shutdown
- 2.9V Trickle Charge Threshold
- Soft-Start Limits Inrush Current
- Available in 5-Lead SOT-23 Package

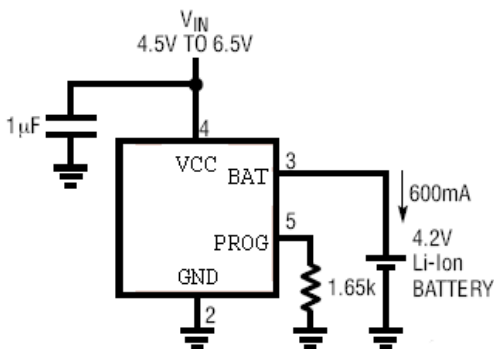
### Functional Block Diagram:



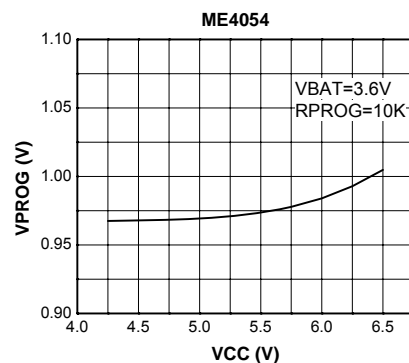
### Application:

- Cellular Telephones, PDAs, MP3 Players
- Charging Docks and Cradles
- Bluetooth Applications

### Typical Application Circuit:



### Typical Performance Characteristics:

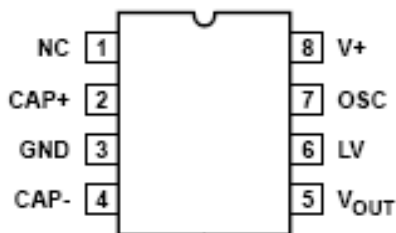


## ME7660 Series

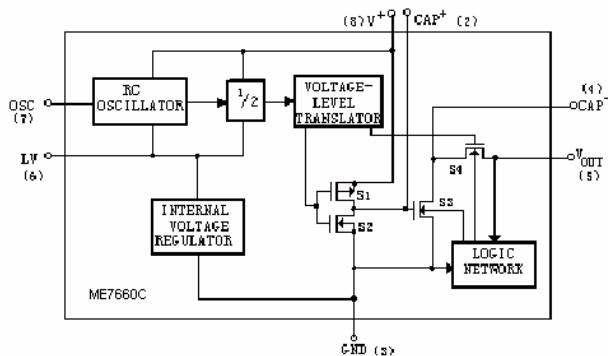
### Description:

ME7660C is a charge pump dc-to-dc voltage converter using AL-gate CMOS technology and optimization design. It converts a +2.5V to +10V input to a corresponding -2.5V to -10V output using only two external capacitors, eliminating inductors and their associated cost, size and EMI.

### Pin Configuration:



### Functional Block Diagram:



Block of function module in chip

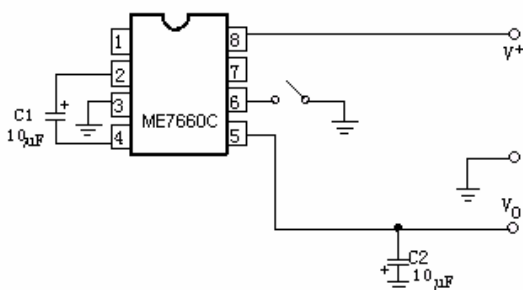
### Feature:

- Converts +5V Logic supply to + 5V
- Wide input voltage range: 2.5V~10V
- Efficient voltage conversion: 99.9%
- Good power efficiency: 98%
- Low power supply: 40uA @5V input
- Easy to use: only two external capacitors required
- Compatible with RS232 negative powersupply standard
- High ESD protection: up to 3kV
- No Dx diode needed for high voltage operation
- Package : SOP-8, DIP-8

### Application:

- LCD Display Module
- Specially designed LCD display module
- Instrument product

### Typical Application Circuit:



### Typical Performance Characteristics:

