ME6401 Series Low ESR Cap Compatable Positive Voltage Regulators

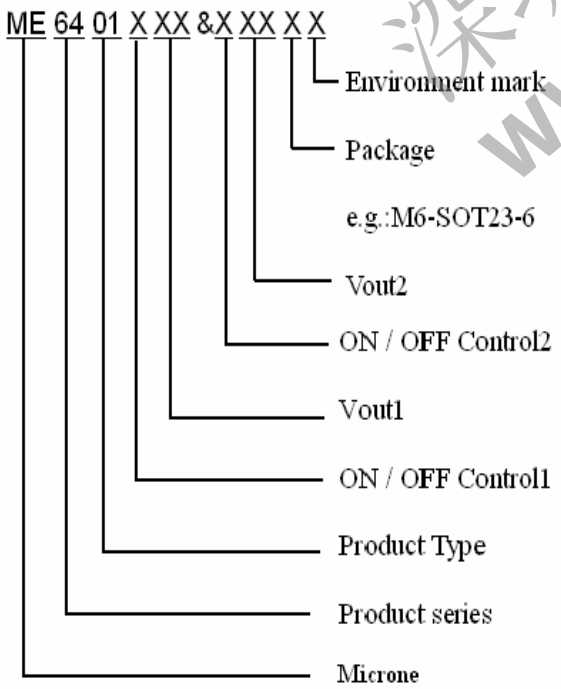
ME6401 series are highly precise, low power consumption, high voltage, positive voltage regulators manufactured using CMOS and laser trimming technologies .The series provides large currents with a significantly small dropout voltage.

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.

FEATURES

- Highly Accurate：±2%
- Output voltage range：1.2V~5.0V
- Low power consumption：Typ. =90μA
- Large output current ：More than 450mA (Vout＝2.8V)
- Dropout voltage：
200mV at 100mA and 400mV at 200mA;
- Highly Accurate y： ±2%
- Be available to regulator and reference voltage
- Packages：SOT23-6

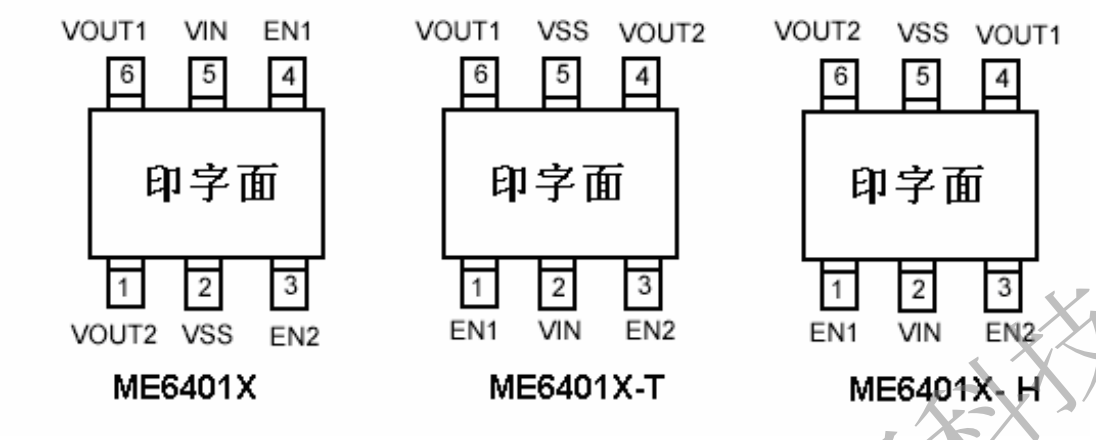
Selection Guide



APPLICATIONS

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

PIN CONFIGURATION



PIN ASSIGNMENT

ME6401CXX&Cxx

PIN			NAME	FUNCTION
ME6401X	ME6401X-T	ME6401X-H		
4	1	1	EN1	ON / OFF Control1
5	2	2	VIN	INPUT1
3	3	3	EN2	ON / OFF Control2
1	4	6	VOUT2	OUTPUT2
2	5	5	VSS	GROUND
6	6	4	VOUT1	OUTPUT2

Absolute Maximum Ratings

PARAMETER		SYMBOL	DESCRIPTION	UNIT
Input Voltage		V_{IN}	6.5	V
Output Current		I_{out}	700	mA
Output Voltage		V_{out}	Vss-0.3 ~ Vout+0.3	V
Power Dissipation	SOT23-6	Pd	250	mW
Operating Ambient Temperature		T_{Opr}	-25 ~ +85	℃
Storage Temperature		T_{stg}	-40 ~ +125	℃
Soldering Temperature And Time		T_{solder}	260℃, 10s	

Electrical Characteristics

ME6401CXX&Cxx

(Vin=Vout+1V,Cin=Cout=1u,Ta=25^{0}C Unless otherwise stated)

PARAMETER	SYMBOL	CONDITION	MIX	TYP	MAX	UNIT
Output Voltage	V_{OUT}(E) (Note 2)	I_{OUT}=10mA,	X 0.98	V_{OUT}(T) (Note 1)	X 1.02	V
Maximum Output Voltage	I_{OUT} (max)	V_{OUT} (1.8V)		300		mA
		V_{OUT} (2.8V)		450		mA
Load Regulation	ΔV_{OUT}	1mA≤I_{OUT}≤100mA		9		mV
Dropout Voltage (Note 3)	V_{dif1}	I_{OUT} =100mA		200		mV
	V_{dif2}	I_{OUT} =200mA		400		mV
Supply Current	I_{SS}			90		μA
Stand-by Current	I_{CEL}	V_{EN}=V_{SS}		0.1		μA
Line Regulations	$\frac{\Delta V_{OUT}}{\Delta V_{IN} \bullet V_{OUT}}$	I_{OUT} =40mA Vout+1V ≤V_{IN}≤6V		0.05		%/V
CE “High” Voltage	VCEH	Start up	1.0			V
CE “Low” Voltage	VCEL	Shut down			0.7	V
Power Supply Ripple Rejection Ratio	PSRR	Vin=[Vout+1]V +1Vp-pAC I_{OUT} =50mA,f=1kHz		70		dB
Output noise	EN	I_{OUT}=40mA 300Hz~50kHz		50		uVrms
Short Circuit Current	I_{SHORT}	V_{OUT} (1.8V) =Vss		30		mA
		V_{OUT} (2.8V) =Vss		100		mA

注：

1. V_{OUT} (T) ： Specified Output Voltage

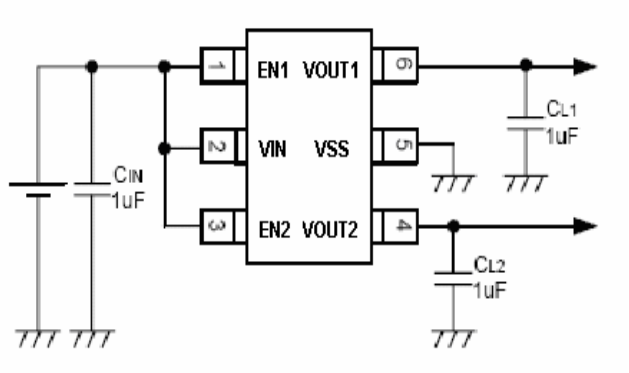
2.V_{OUT} (E) ： Effective Output Voltage (Ie. The output voltage when “V_{OUT} (T)+1.0V”is provided at the Vin pin while maintaining a certain Iout value.)

3.V_{dif} ： V_{IN1} –V_{OUT} (E)’

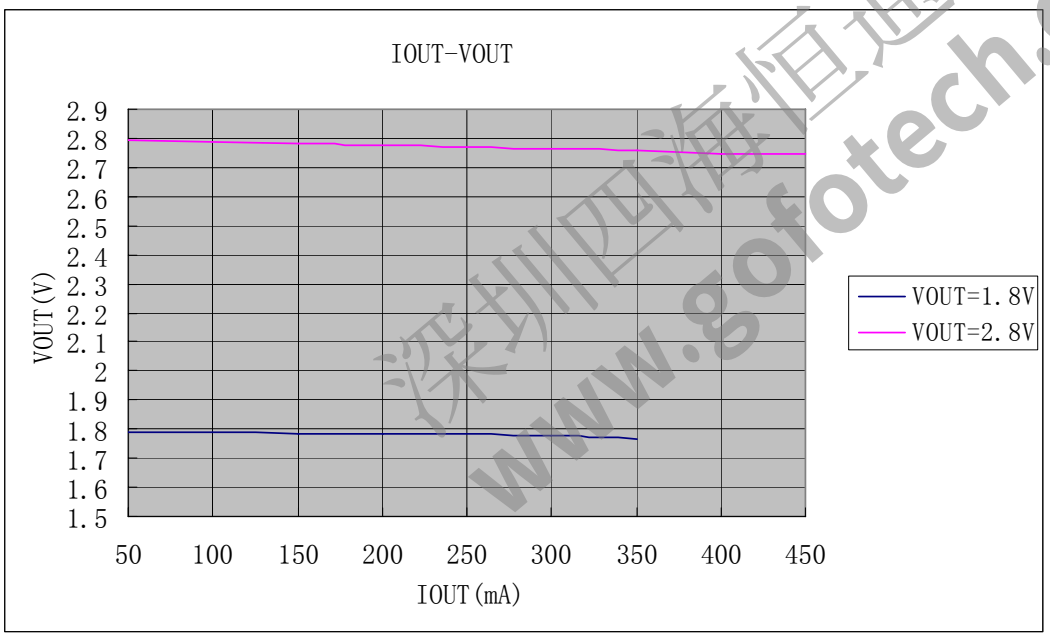
V_{IN1} ： The input voltage when V_{OUT}(E)’ appears as input voltage is gradually decreased.

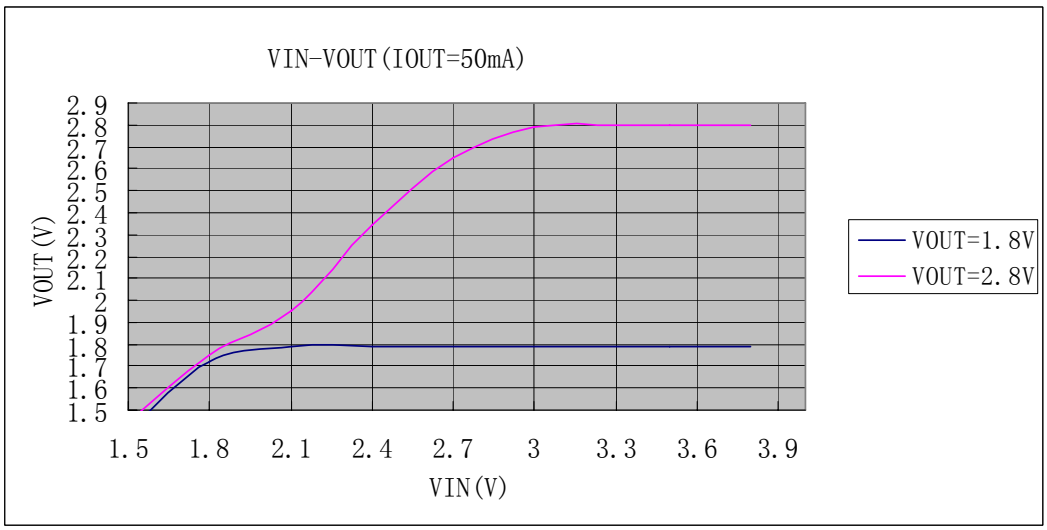
V_{OUT} (E)’=A voltage equal to 98% of the output voltage whenever an amply stabilized Iout {V_{OUT} (T)+1.0V} is input.

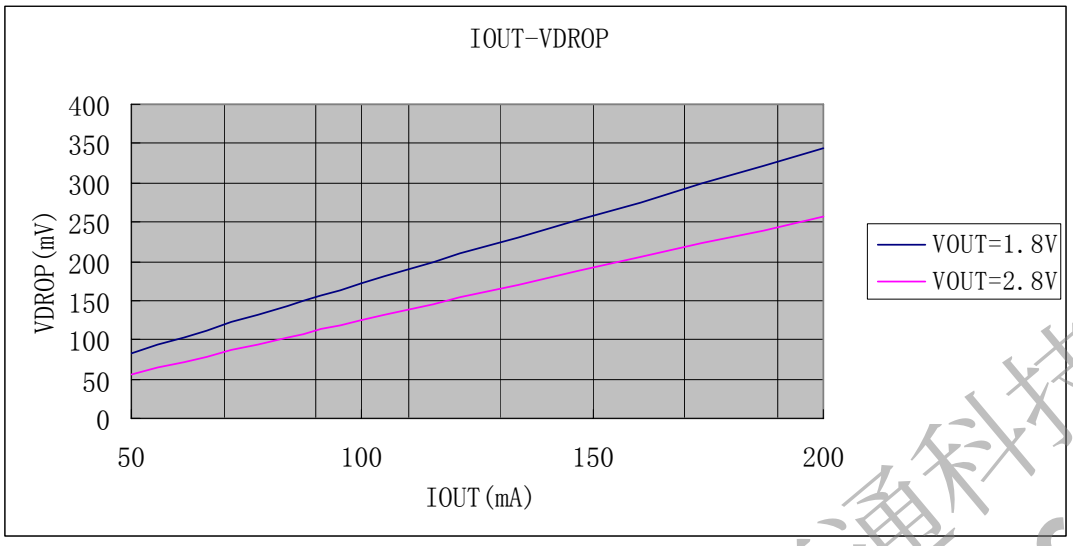
Test Circuits

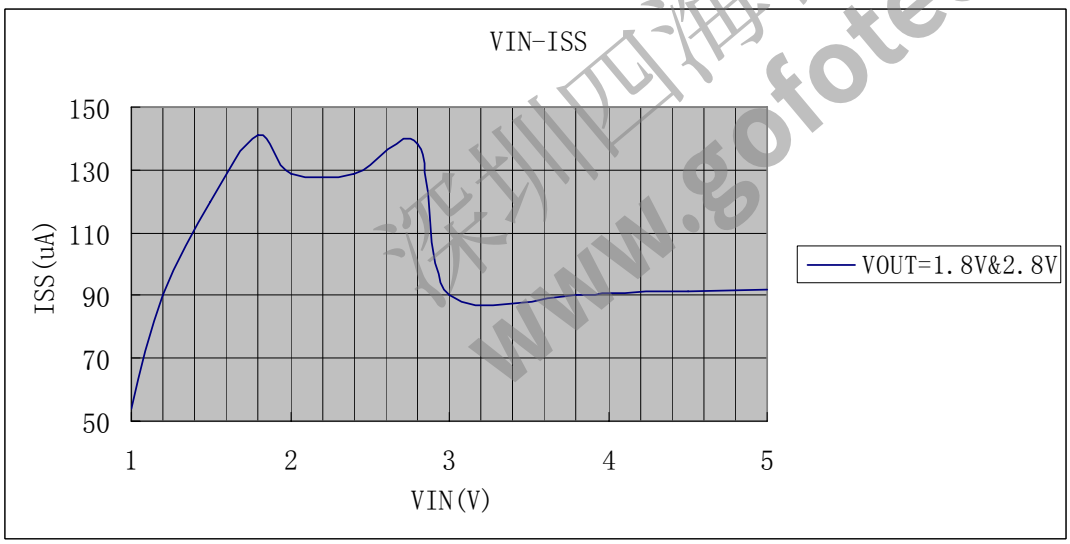


Type Characteristics

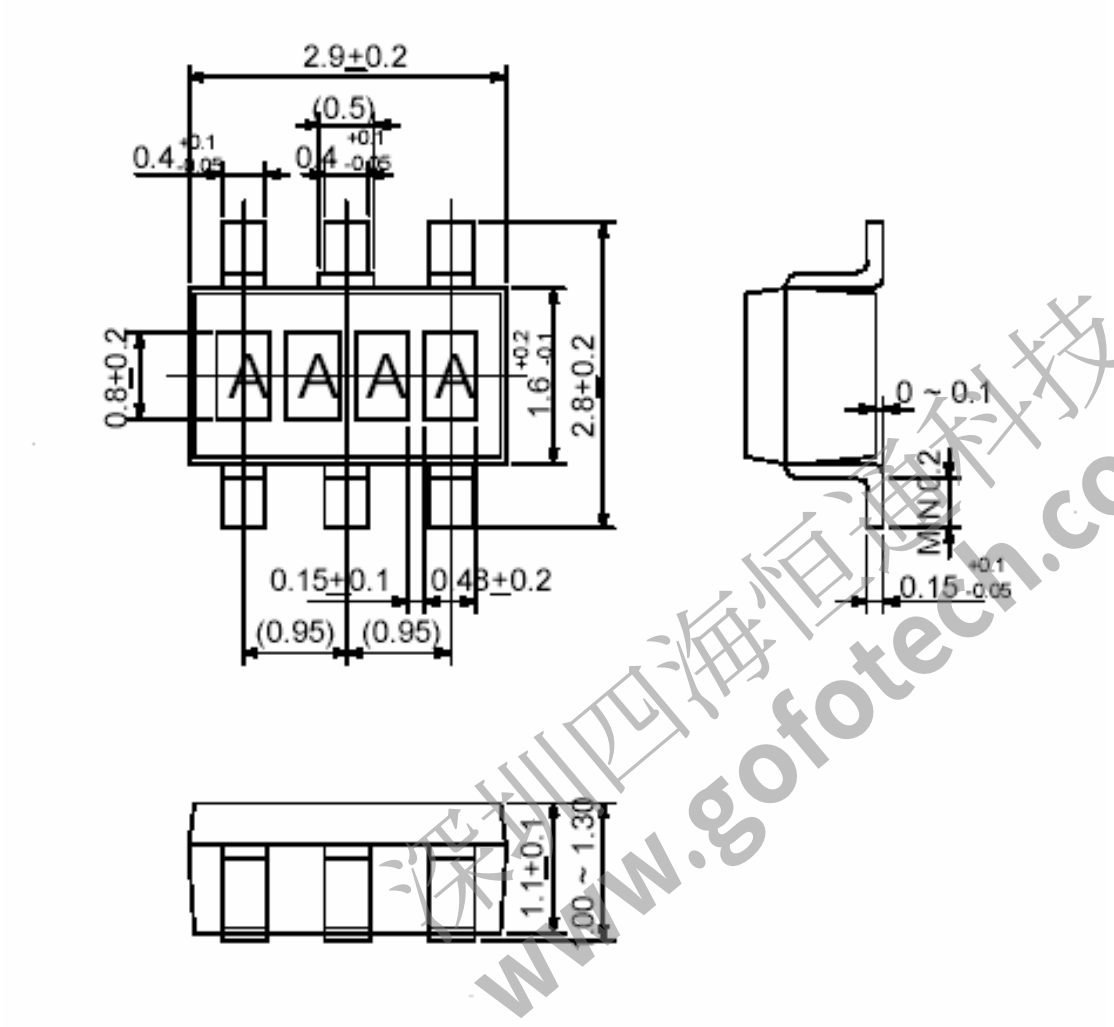








Package Dimensions



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