■ INTRODUCTION

The CE6260 Series are a group of positive voltage regulators manufactured by CMOS technologies with high ripple rejection, extremely low power consumption and low dropout voltage, which provide large output currents even when the difference of the input-output voltage is small. Each of the CE6260 series consists of a high-precision voltage reference, an error correction circuit, and a current limited output driver. Thus the series are very suitable for the battery-powered equipments, such as Portable/Palm computers, Portable consumer equipments, industry equipments and so on, which want to prolong the using life of the battery.

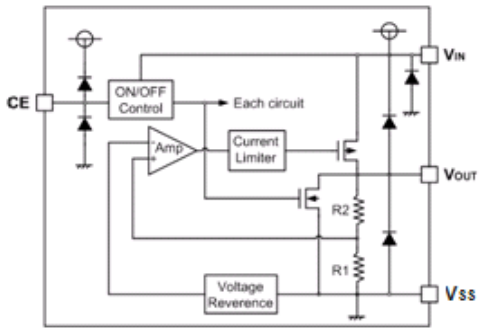
■ FEATURES

- Output Current: 500mA (Typ.)
- Quick Start-Up: 50μs (Typ.)
- Built-in Quick Discharge Circuit
- Output Voltage Range:
  0.9V～5.0V（selectable in 0.1V steps）
- High Accuracy: ±2％（Typ.）
- Dropout Voltage:
  120mV@100mA（3.0V Typ.）
- Excellent Line Regulation: 0.1％/V
- Built-in Current Limiter
- Built-in Short Circuit Protection
- Static safety, 2KV@HBM
- TC: 100ppm/℃
- Low ESR Capacitor: Ceramic Compatible

■ APPLICATIONS

- Battery powered systems
- Portable instrumentations
- Reference Voltage Sources
- Radio control systems
- Portable/Palm computers
- Portable consumer equipments

■ BLOCK DIAGRAM

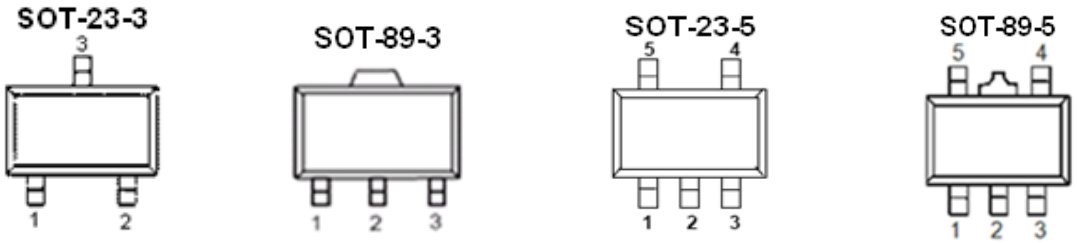


■ ORDER INFORMATION

CE6260①②③④

DESIGNATOR	SYMBOL	DESCRIPITION
①	A	Standard
	B	With Shutdown Function
②③	Integer	Output Voltage (0.9~5V) e.g:3.0V=②:3, ③:0
④	M	Package:SOT-23-3/5
	P	Package:SOT-89-3/5

■ PIN CONFIGURATION（Pin output sequence can be ordered by customer）



PIN NUMBER			PIN NAME	FUNCTION
SOT-23-3	SOT-89-3			
M	P	PT		
1	1	2	V_{SS}	Ground
2	3	1	V_{OUT}	Output
3	2	3	V_{IN}	Power input

SOT-23-5

PIN NUMBER	SYMBOL	FUNCTION
1	V_{IN}	Power Input Pin
2	V_{SS}	Ground
3	CE	Chip Enable Pin
4	NC	No Connection
5	V_{OUT}	Output Pin

SOT-89-5

PIN NUMBER	SYMBOL	FUNCTION
1	V_{OUT}	Output Pin
2	V_{SS}	Ground
3	NC	No Connection
4	CE	Chip Enable Pin
5	V_{IN}	Power Input Pin

■ ABSOLUTE MAXIMUM RATINGS

(Unless otherwise specified, Ta=25°C)

PARAMETER		SYMBOL	RATINGS	UNITS
Input Voltage		V_{IN}	V_{SS}-0.3~V_{SS}+8	V
Output Current		I_{OUT}	600	mA
Output Voltage		V_{OUT}	V_{SS}-0.3~V_{IN}+0.3	V
Power Dissipation	SOT-89	Pd	500	mW
	SOT-23	Pd	250	mW
Operating Temperature		T_{Opr}	-40~+85	℃
Storage Temperature		T_{stg}	-40~+125	℃
Soldering Temperature & Time		T_{solder}	260℃, 10s	

■ ELECTRICAL CHARACTERISTICS

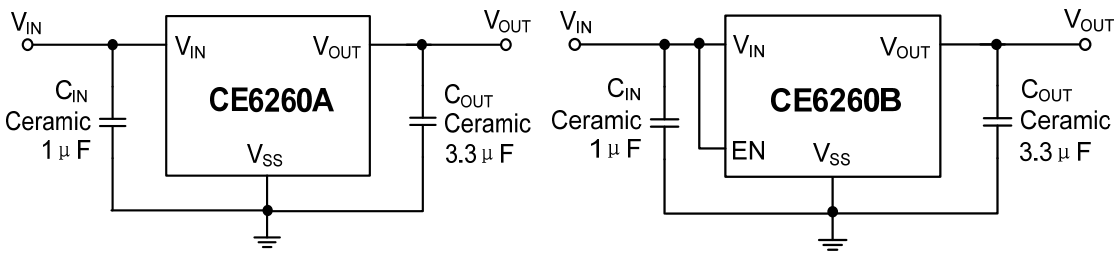
CE6260 Series ($V_{IN}=V_{OUT}+1V, C_{IN} = C_{OUT} = 3.3\mu F$，Ta=25℃,unless otherwise specified)

PARAMETER	SYMBOL	CONDITIONS		MIN	TYP	MAX	UNITS
Output Voltage	$V_{OUT}(E)$ (Note 2)	I_{OUT}=100mA, $V_{IN}=V_{OUT}+1V$, $V_{IN}\geq 2V$	1.5V<V_{OUT}≤5.0V	V_{OUT} *0.98	V_{OUT} (Note 1)	V_{OUT} *1.02	V
			0.9V≤V_{OUT}≤1.5V	V_{OUT} -0.03	V_{OUT}	V_{OUT} +0.03	V
Supply Current	I_{SS}	$V_{CE}=V_{IN}=V_{OUT}$ +1V			6		μA
Shutdown Current	I_{SHDN}	—			0.1	1.0	μA
Output Current	I_{OUT}	$V_{IN}\geq 2V$, $V_{IN}=V_{OUT}+1V$		500			mA
Dropout Voltage (Note 3)	V_{dif1}	I_{OUT} =100mA			120		mV
	V_{dif2}	I_{OUT} =500mA			650		mV
Load Regulation	ΔV_{OUT}	$V_{IN}=V_{OUT}+1V$, 1mA≤I_{OUT}≤500mA			70		mV
Line Regulation	$\frac{\Delta V_{OUT}}{\Delta V_{IN} * V_{OUT}}$	I_{OUT} =100mA $V_{OUT}+1V\leq V_{IN}\leq 6V$			0.1		%/V
Output Voltage Temperature Characteristics	$\frac{\Delta V_{OUT}}{\Delta T * V_{OUT}}$	I_{OUT} =40mA -40≤T≤+85			100		ppm/℃
Power Supply Ripple Rejection	1kHZ	PSRR	I_{OUT} =50mA		65		dB
	10kHZ				60		
Short Current	I_{Short}	$V_{OUT}=V_{SS}$			30		mA
Current Limit	I_{Lim}	$V_{IN}= V_{OUT}+1V$			650		mA
Input Voltage	V_{IN}	—		2.0		6.0	V
CE "High" Voltage	V_{CE} "H"			1.5		V_{IN}	V
CE "Low" Voltage	V_{CE} "L"					0.3	V

NOTE:

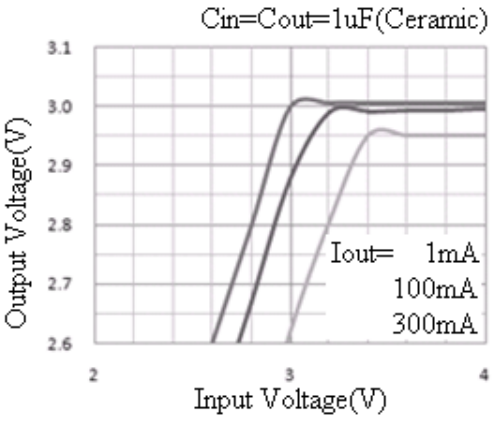
1. V_{OUT}：Specified Output Voltage.
2. V_{OUT} (E) ： Effective Output Voltage (I.e. The Output Voltage When V_{IN} = (V_{OUT} +1.0V) And Maintain A Certain I_{OUT} Value).
3. V_{diff}： The Difference Of Output Voltage And Input Voltage When Input Voltage Is Decreased Gradually Till Output Voltage Equals To 98% Of V_{OUT} (E); When V_{OUT}<2.0V, V_{IN}≥2.0V Should be Guaranteed.

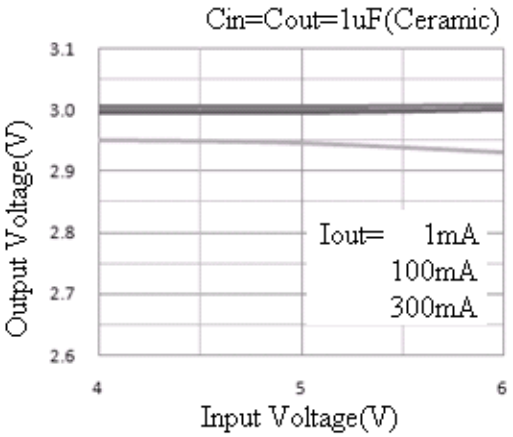
■ TYPICAL APPLICATION CIRCUITS



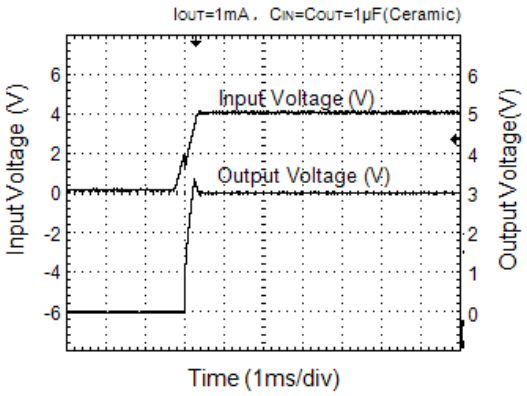
■ TYPICAL PERFORMANCE CHARACTERISTICS（CE6260B30P, for instance）

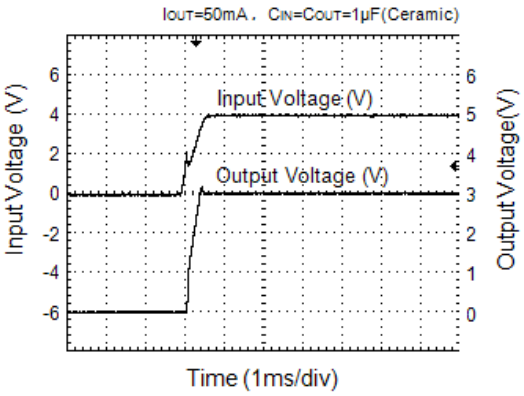
（1）Output Voltage vs. Input Voltage



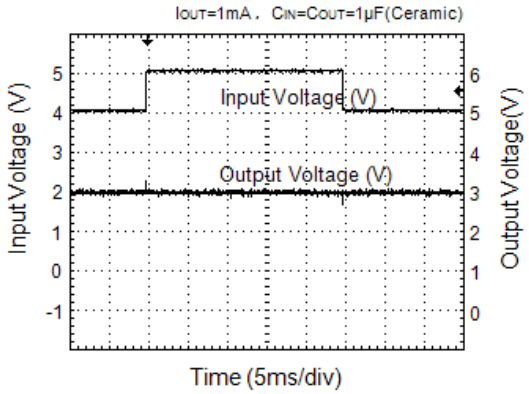


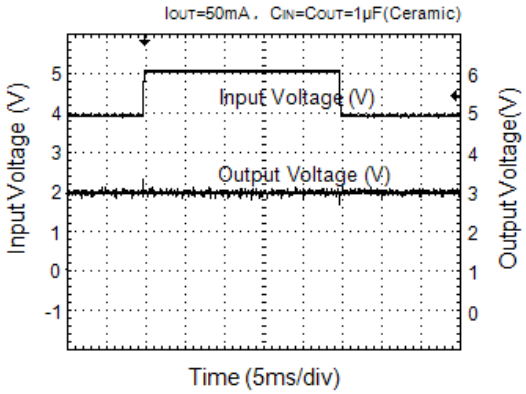
（2）Input Transient Response 1



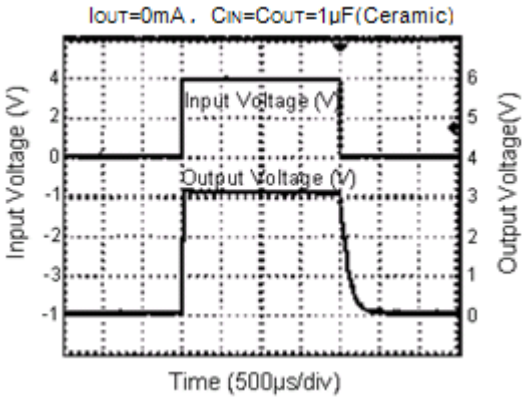


（3）Input Transient Response 2

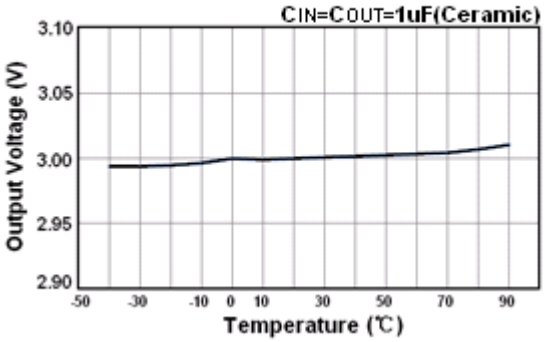




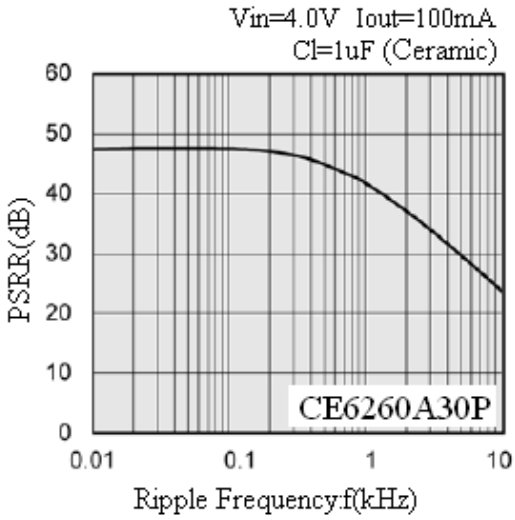
（4）CE Shutdown Response



（5）Output Voltage vs Temperature

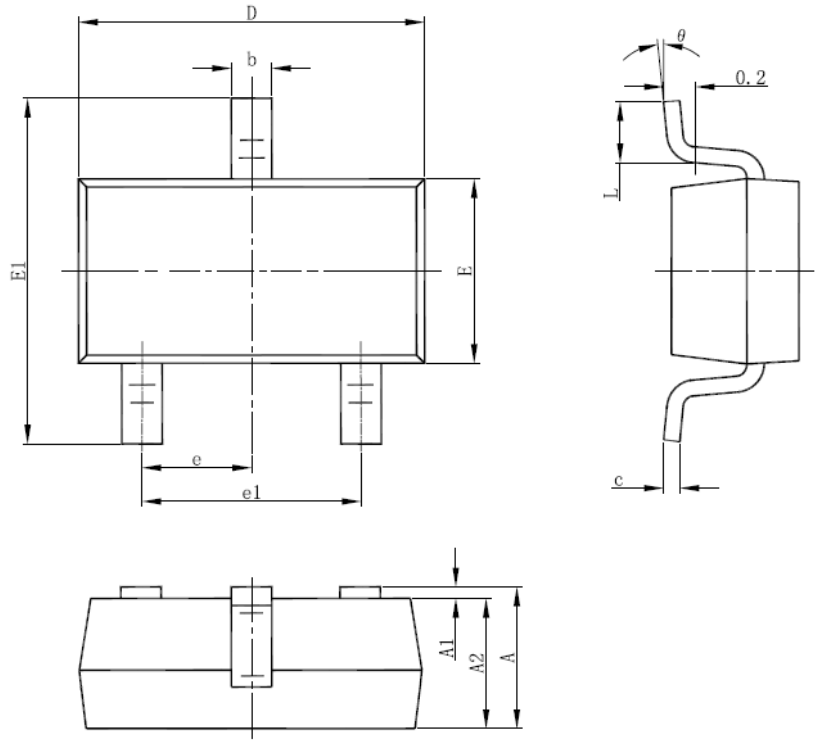


（6）PSRR



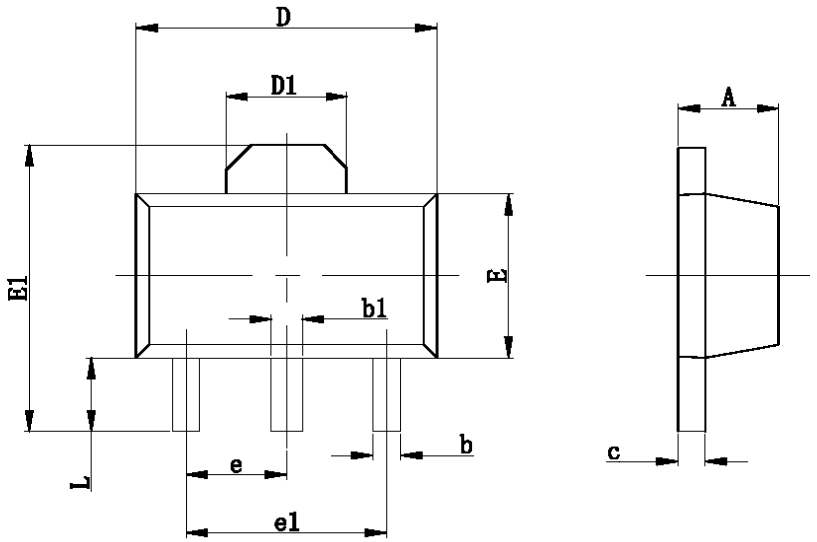
■ PACKAGING INFORMATION

● SOT-23-3 PACKAGE OUTLINE DIMENSIONS



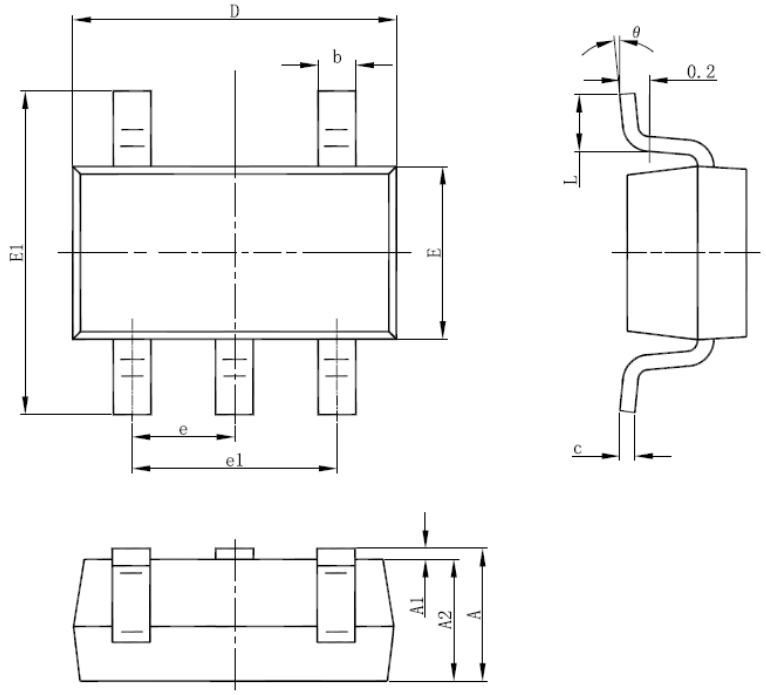
Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	1.050	1.250	0.041	0.049
A1	0.000	0.100	0.000	0.004
A2	1.050	1.150	0.041	0.045
b	0.300	0.500	0.012	0.020
c	0.100	0.200	0.004	0.008
D	2.820	3.020	0.111	0.119
E	1.500	1.700	0.059	0.067
E1	2.650	2.950	0.104	0.116
e	0.950(BSC)		0.037(BSC)	
e1	1.800	2.000	0.071	0.079
L	0.300	0.600	0.012	0.024
θ	0°	8°	0°	8°

- **SOT-89-3 PACKAGE OUTLINE DIMENSIONS**



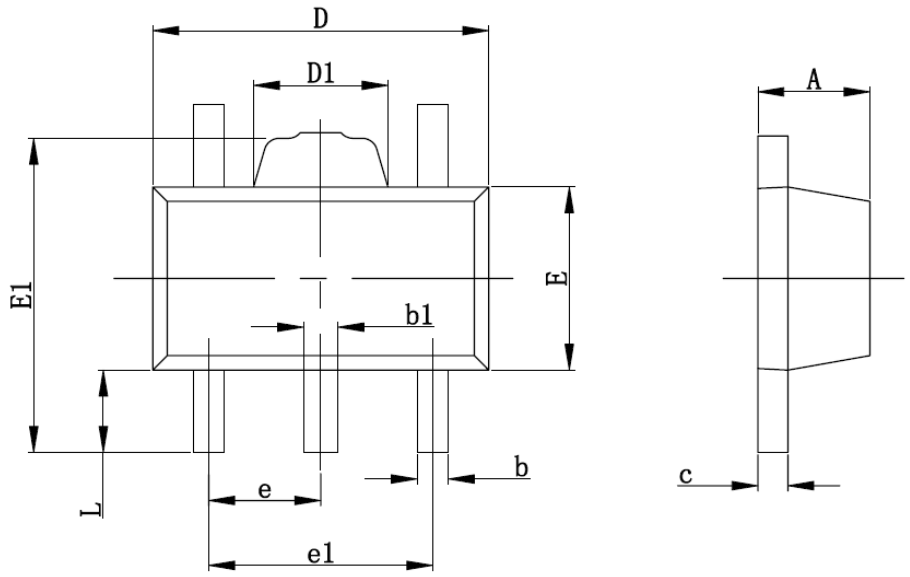
Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	1.400	1.600	0.055	0.063
b	0.320	0.520	0.013	0.197
b1	0.400	0.580	0.016	0.023
c	0.350	0.440	0.014	0.017
D	4.400	4.600	0.173	0.181
D1	1.550 REF		0.061 REF	
E	2.300	2.600	0.091	0.102
E1	3.940	4.250	0.155	0.167
e	1.500 TYP		0.060TYP	
e1	3.000 TYP		0.118TYP	
L	0.900	1.200	0.035	0.047

● SOT-23-5 PACKAGE OUTLINE DIMENSIONS



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	1.050	1.250	0.041	0.049
A1	0.000	0.100	0.000	0.004
A2	1.050	1.150	0.041	0.045
b	0.300	0.500	0.012	0.020
c	0.100	0.200	0.004	0.008
D	2.820	3.020	0.111	0.119
E	1.500	1.700	0.059	0.067
E1	2.650	2.950	0.104	0.116
e	0.950(BSC)		0.037(BSC)	
e1	1.800	2.000	0.071	0.079
L	0.300	0.600	0.012	0.024
θ	0°	8°	0°	8°

- **SOT-89-5 PACKAGE OUTLINE DIMENSIONS**



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	1.400	1.600	0.055	0.063
b	0.320	0.520	0.013	0.020
b1	0.360	0.560	0.014	0.022
c	0.350	0.440	0.014	0.017
D	4.400	4.600	0.173	0.181
D1	1.400	1.800	0.055	0.071
E	2.300	2.600	0.091	0.102
E1	3.940	4.250	0.155	0.167
e	1.500TYP		0.060TYP	
e1	2.900	3.100	0.114	0.122
L	0.900	1.100	0.035	0.043