Low power consumption, Low dropout voltage,

With CE function ME6215 Series

General Description

ME6215 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 current limiter's foldback circuit also operates as a short protect for the output current limiter and the output pin. The CE function allows the output of regulator to be turned off, resulting in greatly reduced power consumption. The ME6215 series can operate with up to 18V input.

Features

- Highly Accurate：±2%
- Output voltage range：1.5V~5.0V
- Low power consumption：6uA(TYP.)
- Large output current：300mA (V_{IN}＝3.8V,V_{OUT}＝2.8V)
- Input voltage: up to 18V
- Dropout voltage：
  0.16V at 100mA and 0.32V at 200mA
- CE Pin Function : Active High
- Short-circuit Current：25mA(TYP.)
- Excellent Input Stability
- Be available to regulator and reference voltage

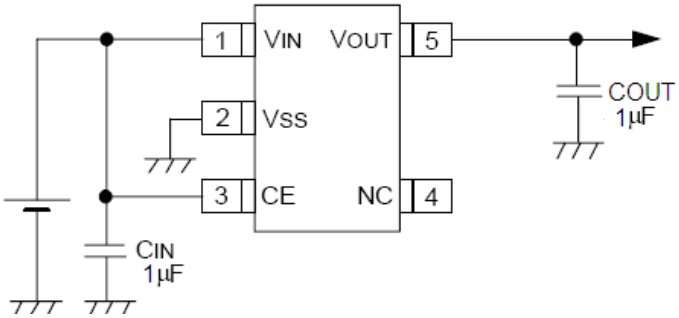
Applications

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

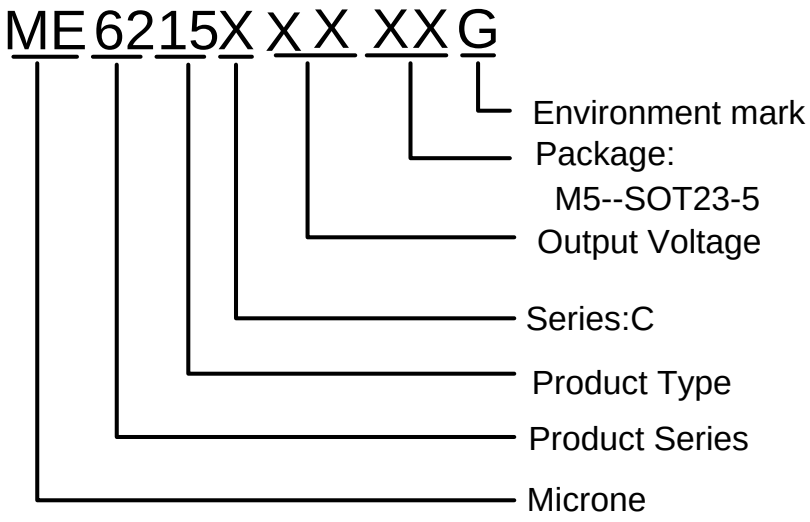
Packages

- 5-pin SOT23-5

Typical Application

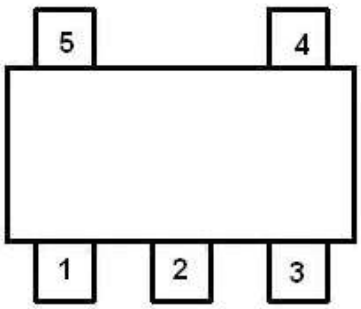


Selection Guide



product series	product description
ME6215C28M5G	V_{OUT} =2.8V
ME6215C30M5G	V_{OUT} =3.0V
ME6215C33M5G	V_{OUT} =3.3V

Pin Configuration

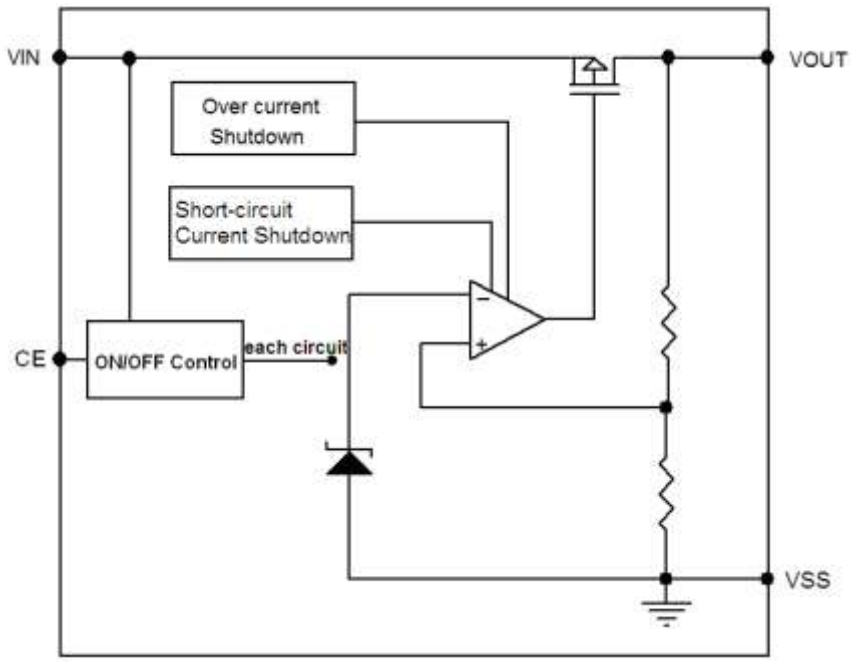


SOT23-5

Pin Assignment

Pin Num SOT23-5	Symbol	Function
1	V_{IN}	Power Input
2	V_{SS}	Ground
3	CE	ON / OFF Control
4	NC	No Connect
5	V_{OUT}	Output

Block Diagram



Absolute Maximum Ratings

Parameter		Symbol	Ratings	Units
Input Voltage		V_{IN}	18	V
Output Current		I_{OUT}	580	mA
Output Voltage		V_{OUT}	Vss-0.3～V_{IN} +0.3	V
CE Pin Voltage		V_{CE}	Vss-0.3～V_{IN} +0.3	V
Power Dissipation	SOT23-5	P_D	250	mW
Operating Temperature Range		T_{OPR}	－40～＋125	℃
Storage Temperature Range		T_{STG}	－40～＋150	℃
Lead Temperature			260℃，4sec	

Electrical Characteristics

(V_{IN}= V_{OUT}+1V，V_{CE}＝V_{IN} ，$C_{IN=}C_{OUT}$=1uF，Ta=25^{O}C，unless otherwise noted)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Output Voltage	V_{OUT}(E) (Note 2)	I_{OUT}=10mA, V_{IN}= V_{OUT}+1V	X 0.98	V_{OUT} (T) (Note 1)	X 1.02	V
Input Voltage	V_{IN}		2.8		18	V
Maximum Output Current	I_{OUTMAX}	V_{IN}= V_{OUT}+1V		300	350	mA
Load Regulation	ΔV_{OUT}	V_{IN}= V_{OUT}+1V , 1mA≤I_{OUT}≤100mA		4		mV
Dropout Voltage (Note 1)	V_{DIF1}	I_{OUT} =100mA		160		mV
	V_{DIF2}	I_{OUT} =200mA		320		mV
Supply Current	I_{SS}	V_{IN}= V_{OUT}+1V		6		μA
Stand-by Current	I_{CEL}	V_{CE}＝0V		0		μA
Line Regulation	ΔV_{OUT}	I_{OUT} =30mA V_{OUT}+1V ≤V_{IN}≤18V		30		mV
CE “High” Voltage	VCEH	Start up	1.3			V
CE “Low” Voltage	VCEL	Shut down			0.8	V
Short-circuit Current	I_{SHORT}	V_{IN}= V_{OUT}+1V, V_{CE}＝V_{IN}, V_{OUT}＝0V		25	50	mA
Over Current Protection	I_{limit}	V_{IN}= 3.8V		580	750	mA

Note ：

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)’

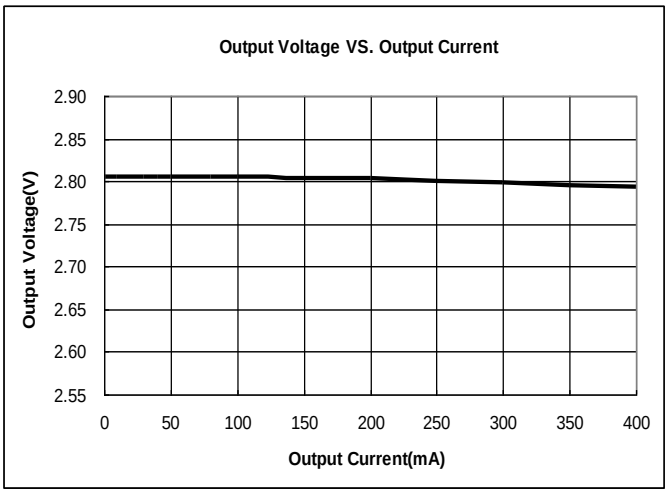
V_{IN1} ： The input voltage when V_{OUT}(E)’ appears as input voltage is gradually decreased.

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

Type Characteristics (ME6215C28)

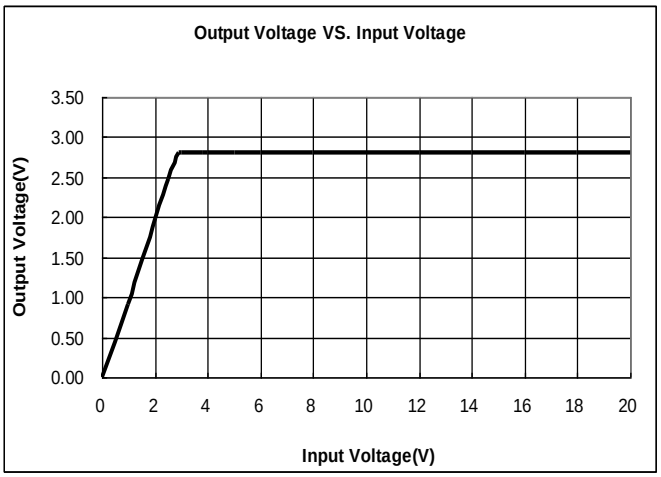
（1）Output Voltage VS. Output Current

（V_{IN}=V_{OUT}+1, **Ta = 25 °C**）



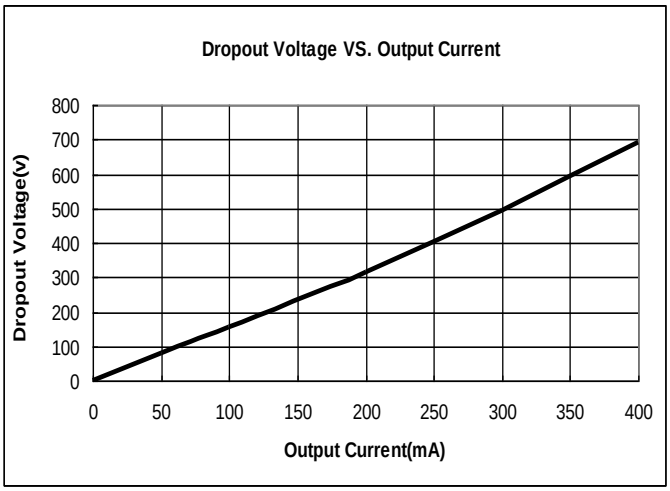
（2）Output Voltage VS. Input Voltage

（V_{IN}=V_{OUT}+1, I_{OUT} =10mA **,Ta = 25 °C**）



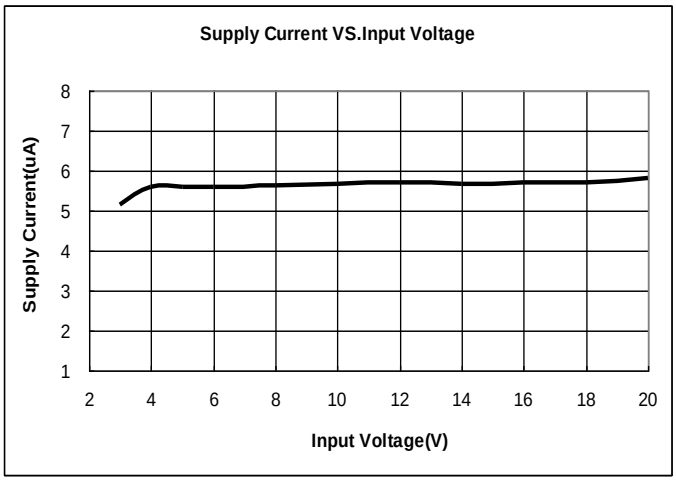
（3）Dropout Voltage VS. Output Current

（V_{IN}=V_{OUT}+1V,**Ta = 25 °C**）

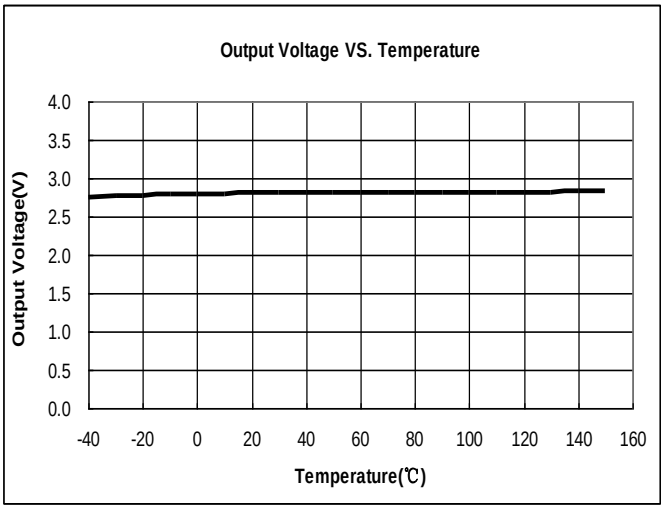


（4）Supply Current VS. Input Voltage

（**Ta = 25 °C**）

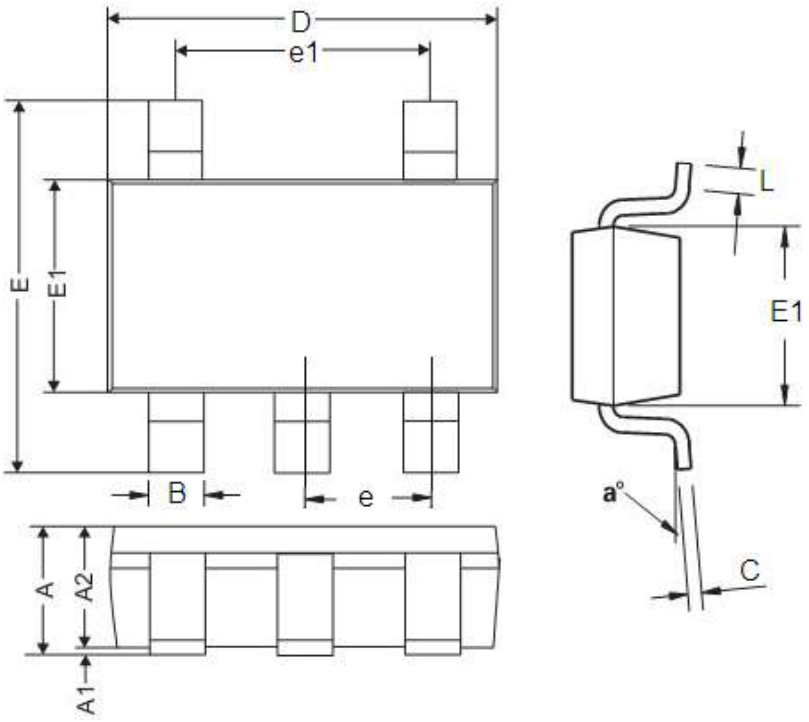


（5）Output Voltage VS. Temperature (V_{IN}=V_{OUT}+1V, I_{OUT} =10mA)



Packaging Information

Packaging Type: SOT23-5



DIM	Millimeters		Inches	
	Min	Max	Min	Max
A	0.9	1.45	0.0354	0.0570
A1	0	0.15	0	0.0059
A2	0.9	1.3	0.0354	0.0511
B	0.2	0.5	0.0078	0.0196
C	0.09	0.26	0.0035	0.0102
D	2.7	3.10	0.1062	0.1220
E	2.2	3.2	0.0866	0.1181
E1	1.30	1.80	0.0511	0.0708
e	0.95REF		0.0374REF	
e1	1.90REF		0.0748REF	
L	0.10	0.60	0.0039	0.0236
a^0	0^0	30^0	0^0	30^0

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