

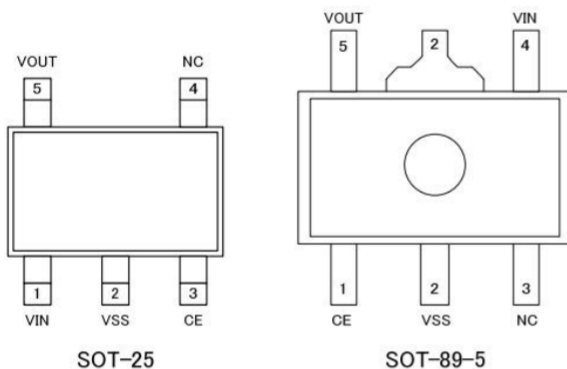
Features

- 100 μ A Current at no Load
- $\pm 2\%$ Output Accuracy
- 700mA Output Current
- Current Limit Protection

Applications

- Industrial Controls
- Home Automation
- Modules (Wireless, Camera, etc.)
- Portable, Battery Powered Equipment

PIN CONFIGURATION



Pin Number		Pin Name	Pin Function
SOT23-5	SOT89-5		
1	4	VIN	Input of Supply Voltage
2	2	GND (VSS)	Ground
3	1	EN (CE)	Enable Control Input
4	3	NC	No Internal Connection
5	5	VOUT	Output of the Regulator

Ordering Information

XC6227C331MR

PACKAGE TYPE
MR: SOT23-5
PR: SOT89-5

OUTPUT VOLTAGE
12: 1.2V
15: 1.5V
18: 1.8V
25: 2.5V
30: 3.0V
33: 3.3V
50: 5.0V

MARKING DIAGRAMS

XC6227C121MR Marking: 3EC07
XC6227C181MR Marking: 3EL07
XC6227C331MR Marking: 3H307

Absolute Maximum Ratings

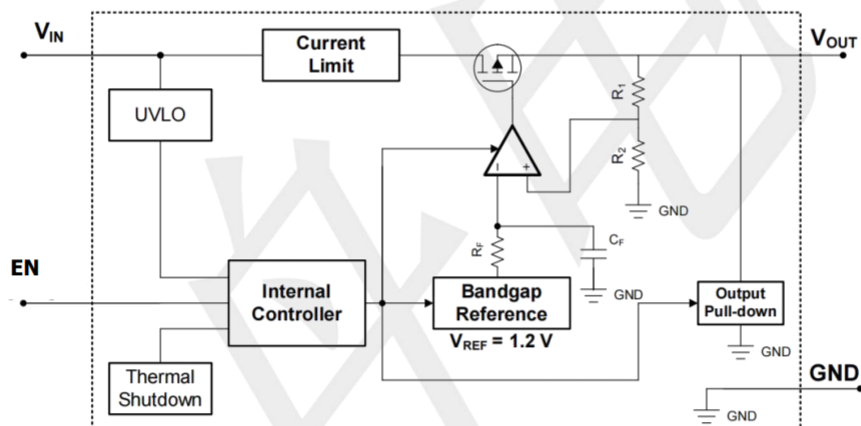
over operating free-air temperature range (unless otherwise noted)

		MIN	MAX	UNIT
V _{IN}	Continuous input voltage range	-0.3	6.5	V
V _{OUT}	Output voltage range	-0.3	6.5	
EN	EN pin voltage range	-0.3	6.5	
I _{OUT}	Output pin current	Internally limited		mA
Temperature	Operating junction, T _J	-40	150	°C
	Storage, T _{stg}	-55	150	

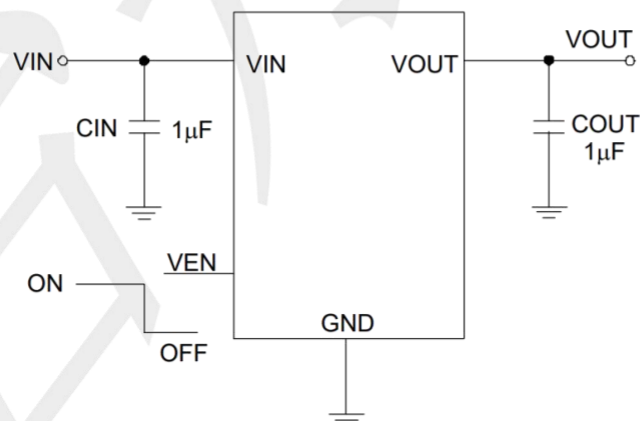
ESD Ratings

			VALUE	UNIT
V (ESD)	Electrostatic discharge	Human body model (HBM)	±2000	V
		Machine Model (MM)	±200	

BLOCK DIAGRAM



Typical Application Circuit



Electrical Characteristics

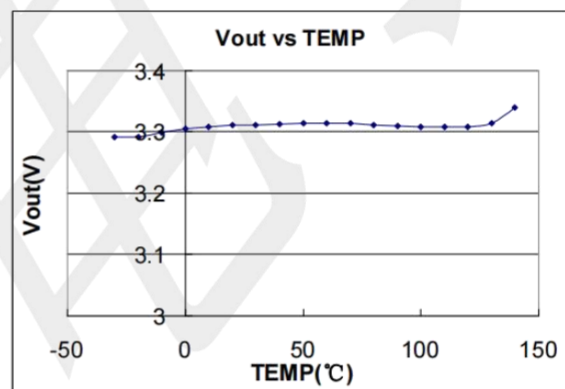
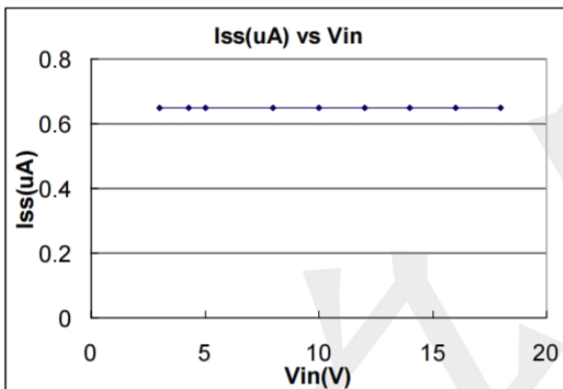
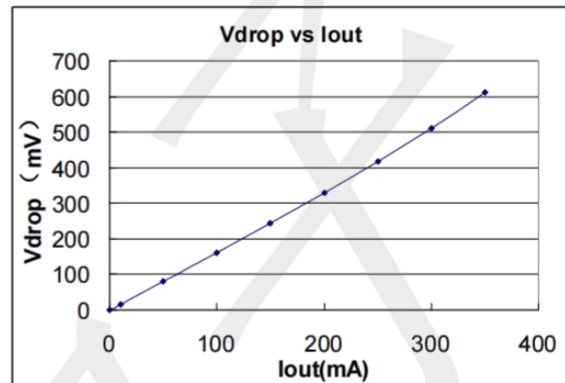
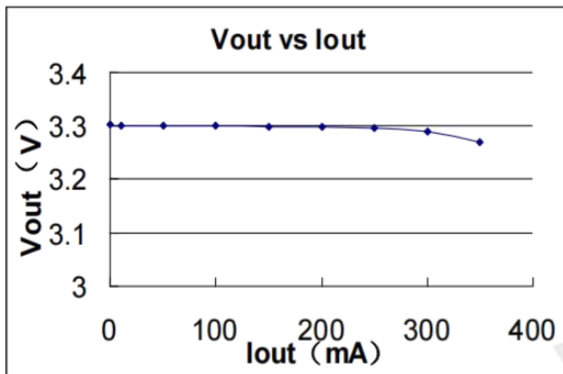
(VIN=15V, VEN=5V, TA=25°C, unless otherwise specified)

PARAMETER	SYMBOL	TEST Conditions	MIN	TYP	MAX	UNIT
Supply Voltage	V _{IN}		1.7	--	6	V
Output current	I _{OUT}		0	--	700	mA
DC Output Voltage Accuracy		I _{OUT} = 0.1mA	-2	--	2	%
Dropout Voltage (V _{IN} -V _{OUT})	I _{OUT} = 100mA	V _{OUT} = 1.5V	--	400	--	mV
		V _{OUT} = 1.8V	--	300	--	
		V _{OUT} = 2.8V	--	200	--	
		V _{OUT} = 3.0V	--	180	--	
		V _{OUT} = 3.3V	--	160	--	
		V _{OUT} = 4.5V	--	130	--	
		V _{OUT} = 5.0V	--	120	--	
Maximum output current	I _{outmax}	V _{IN} = V _{OUT} +1V	--	700	--	mA
Ground Current (I _{OUT} = 0mA)	I _Q	V _{OUT} = 3.3V	100	--	--	uA
Shutdown Ground Current	I _{SD}	V _{EN} = 0V,	--	0.01	0.5	
V _{OUT} Shutdown Leakage Current	I _{LEAK}	V _{OUT} = 0V	--	0.01	0.5	
Enable Threshold Voltage	V _{IH}	EN Rising	1.2	--	--	V
	V _{IL}	EN Falling	--	--	0.5	
EN Input Current	I _{EN}	V _{EN} = 5V	--	10	100	nA
Line Regulation	Δ _{LINE}	I _{OUT} =1mA, 2≤V _{IN} ≤6V	--	0.3	--	%
Load Regulation	Δ _{LOAD}	10mA ≤ I _{OUT} ≤ 100mA	--	0.3	--	
Output Current Limit	I _{LIM}	V _{OUT} =0.9× V _{OUT} (NOM)	700	750		mA
Power Supply Rejection Ratio	PSRR	V _{OUT} =3.3V, I _{OUT} =30mA, V _{IN} = 6V, f = 1kHz	--	65	--	dB
Thermal Shutdown Temperature	T _{SD}	I _{OUT} =10mA	--	160	--	°C
Thermal Shutdown Hysteresis	Δ _{TSD}		--	15	--	
Package Thermal Resistance θ _{JA} (Note 1)	SOT23-5	Thermal Resistance	--	210	--	°C/W
	SOT89-5	Junction-toAmbient	--	100	--	
Total Power Dissipation T _c =25°C	SOT23-5	P _{DTOT}	--	0.6	--	W
	SOT89-5		--	1.25	--	

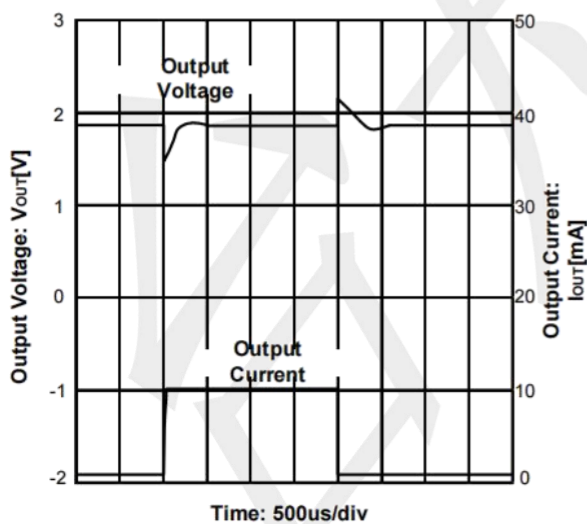
Note: 1. Test condition: For SOT23-5, the device is mounted on FR-4 substrate PC board, with minimum recommended pad layout. SOT89-5 devices are mounted on 1"x1" FR-4 substrate PC board, with minimum recommended pad layout

Typical Operating Characteristics (25 °C, unless otherwise noted)

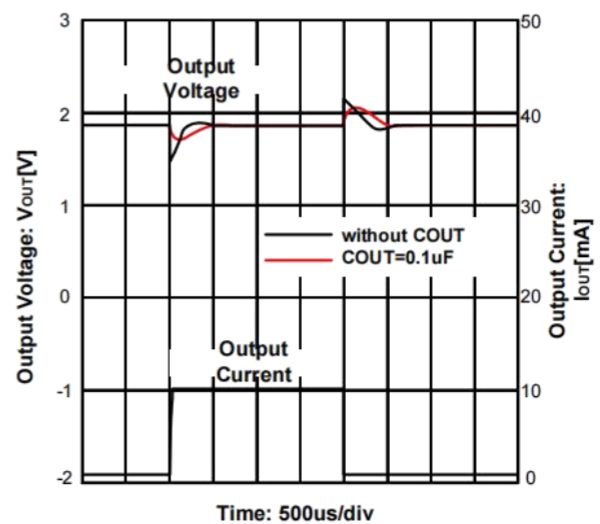
Unless otherwise specified: $T_A = 25^\circ\text{C}$, $V_{IN} = V_O(\text{NOM}) + 1\text{ V}$, $C_{OUT} = 1\text{ }\mu\text{F}$, $C_{IN} = 1\text{ }\mu\text{F}$ all voltage options, EN pin tied to V_{IN} .



$I_{OUT}=1\text{mA} \leftrightarrow 10\text{mA}$, $t_R=t_F=5\text{us}$, without C_{OUT}

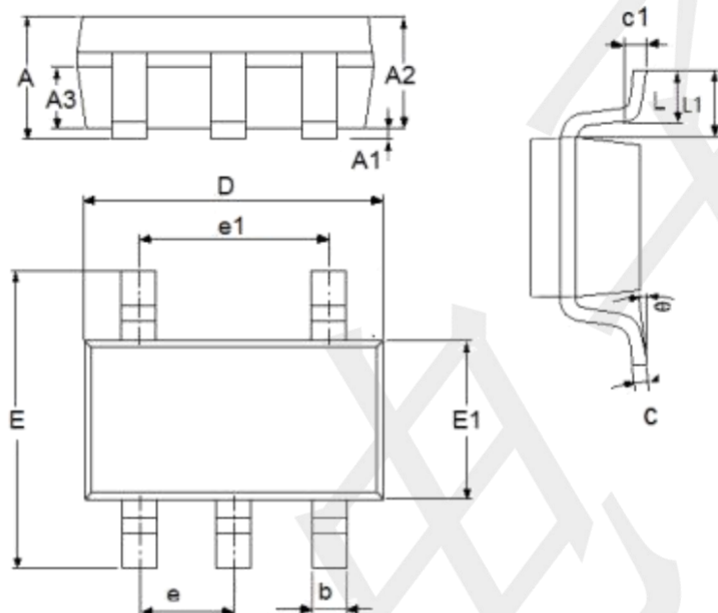


$I_{OUT}=1\text{mA} \leftrightarrow 10\text{mA}$, $t_R=t_F=5\text{us}$



Package informantion

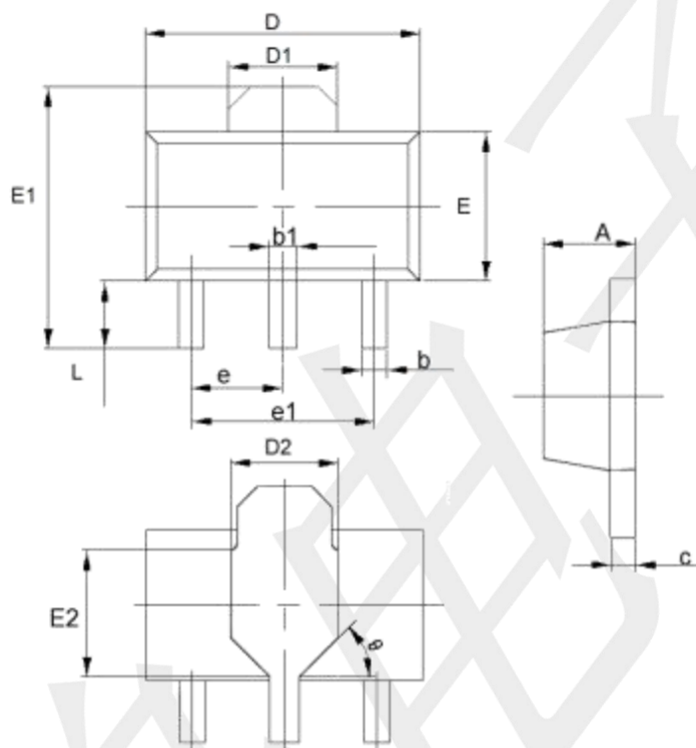
SOT23-5



参数	尺寸 (mm)		尺寸 (Inch)	
	最小值	最大值	最小值	最大值
A	1.05	1.45	0.0413	0.0571
A1	0	0.15	0.0000	0.0059
A2	0.9	1.3	0.0354	0.0512
A3	0.6	0.7	0.0236	0.0276
b	0.25	0.5	0.0098	0.0197
c	0.1	0.23	0.0039	0.0091
D	2.82	3.05	0.1110	0.1201
e1	1.9(TYP)		0.0748(TYP)	
E	2.6	3.05	0.1024	0.1201
E1	1.5	1.75	0.0512	0.0689
e	0.95(TYP)		0.0374(TYP)	
L	0.25	0.6	0.0098	0.0236
L1	0.59(TYP)		0.0232(TYP)	
θ	0	8°	0.0000	8°
c1	0.2(TYP)		0.0079(TYP)	

Package informantion

SOT89-3



参数	尺寸 (mm)		尺寸 (Inch)	
	最小值	最大值	最小值	最大值
A	1.4	1.6	0.0551	0.0630
b	0.32	0.52	0.0126	0.0205
b1	0.4	0.58	0.0157	0.0228
c	0.35	0.45	0.0138	0.0177
D	4.4	4.6	0.1732	0.1811
D1	1.55(TYP)		0.061(TYP)	
D2	1.75(TYP)		0.0689(TYP)	
e1	3.0(TYP)		0.1181(TYP)	
E	2.3	2.6	0.0906	0.1023
E1	3.94	4.4	0.1551	0.1732
E2	1.9(TYP)		0.0748(TYP)	
e	1.5(TYP)		0.0591(TYP)	
L	0.8	1.2	0.0315	0.0472
θ	45°		45°	