TPXC6216B Series

WIDE INPUT VOLTAGE RANGE, 250mA LDO REGULATOR

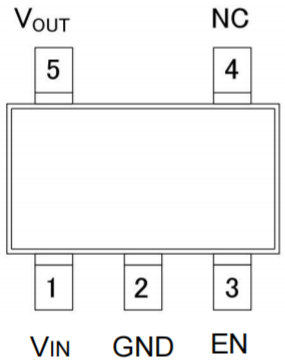
Features

- 3μA Current at no Load
- ±2% Output Accuracy
- 250mA 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		
1	VIN	Input of Supply Voltage
2	GND	Ground
3	EN	Enable ControlInput
4	NC	No Internal Connection
5	VOUT	Output of the Regulator

Ordering Information

TPXC6216B302MR

OUTPUT VOLTAGE

30:3.0V
33:3.3V
50:5.0V

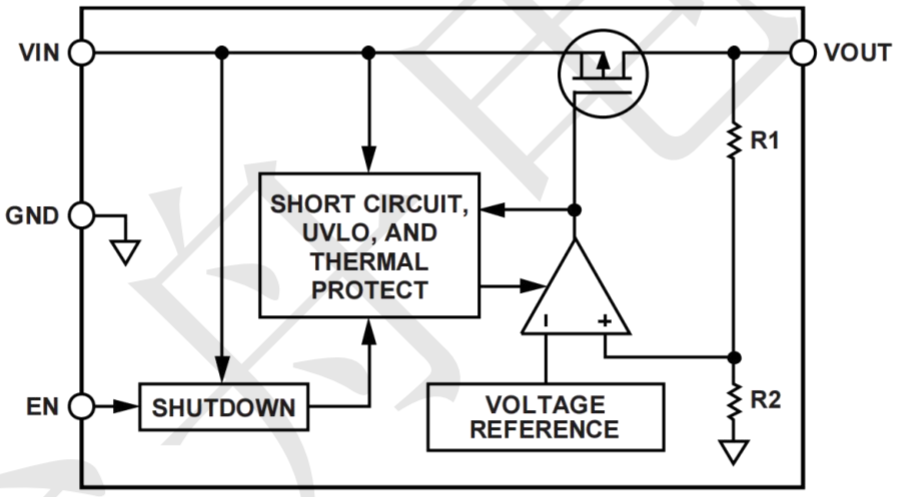
Example: TPXC6216B302MR
→ 3.0V Version, in SOT23-5 Package
&Tape & Reel Packing Type

Absolute Maximum Ratings

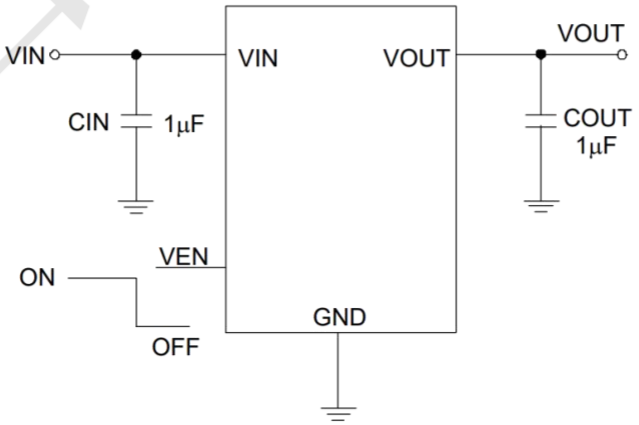
over operating free-air temperature range (unless otherwise noted)

SYMBOL	PARAMETER	MIN	MAX	UNIT
VIN	Continuous input voltage range	-0.3	28	V
VOUT	Output voltage range	-0.3	6.0	
EN	EN pin voltage range	-0.3	28	
IOUT	Output pin current	Internally limited		mA
Temperature	Operating Temperature Range ,Topr	-40	+85	℃
	Storage, Tstg	-40	+125	

BLOCK DIAGRAM



Typical Application Circuit



Electrical Characteristics

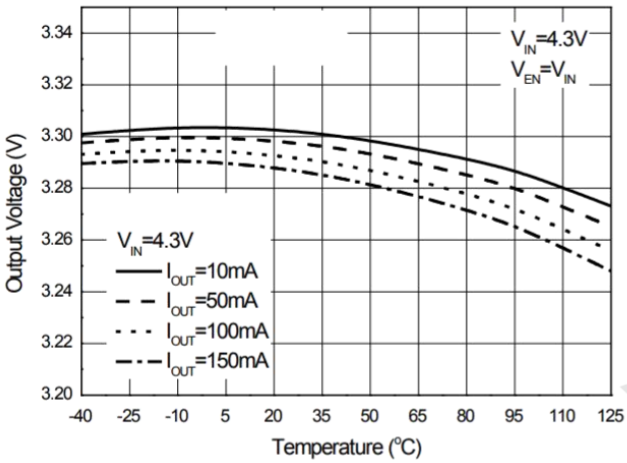
(TA=25℃, unless otherwise specified)

PARAMETER	SYMBOL	TEST Conditions	MIN	TYP	MAX	UNIT
Supply Voltage	VIN		2.0	--	24	V
Output current	IOUT		250	--	--	mA
DC Output Voltage Accuracy		IOUT = 1mA	-2	--	2	%
Dropout Voltage（VIN-VOUT）	IOUT = 100mA	VOUT = 3.3V	--	400	--	mV
		VOUT = 5.0V	--	320	--	
Ground Current (IOUT = 0mA)	IQ	VOUT = 3.3V	--	1.5	3	uA
Shutdown Ground Current	ISD	VEN = 0V, VOUT = 0V	--	0.01	1	
VOUT Shutdown Leakage Current	ILEAK		--	0.01	1	
Enable Threshold Voltage	VIH	EN Rising	1.1	--	--	V
	VIL	EN Falling	--	--	0.4	
EN Input Current	IEN	VEN = 5V	--	10	100	nA
Line Regulation	ΔLINE	IOUT =1mA, 2≤VIN≤5V	--	0.3	--	%
Load Regulation	ΔLOAD	10mA≤ IOUT ≤ 100mA	--	0.3	--	
Output Current Limit	ILIM	VOUT=0.9× VOUT(NOM)	300	--	--	mA
Power Supply Rejection Ratio	PSRR	VOUT =3.3V, IOUT =40mA, VIN = 5.5V, f = 1kHz	--	70	--	dB
Thermal Shutdown Temperature	T_{SD}	I_{OUT} =10mA	--	160	--	℃
Thermal Shutdown Hysteresis	ΔT_{SD}	I_{OUT} =10mA	--	15	--	℃
Package Thermal Resistance θJA (Note 1)	Thermal Resistance Junction-to Ambient		--	210	--	℃/W
Total Power Dissipation T_C=25℃	P_{DTOT}		--	0.2	--	W

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

Typical Operating Characteristics

Output Voltage vs. Temperature



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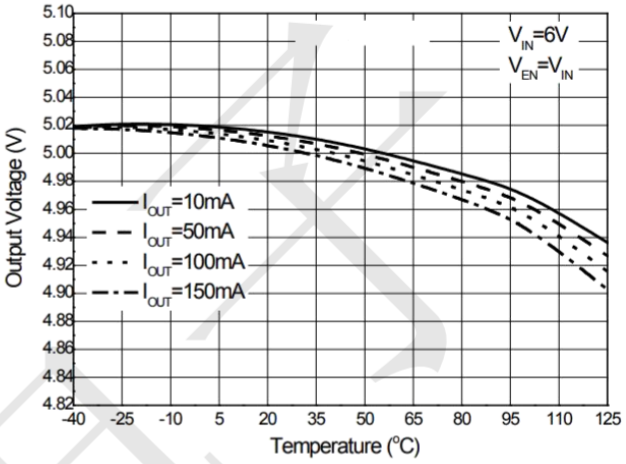
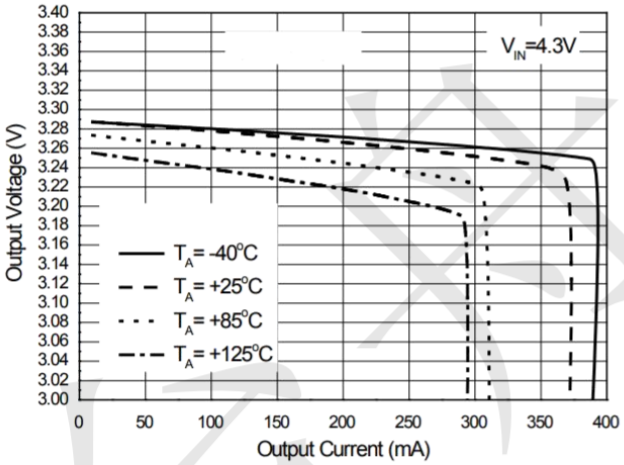


Output Voltage vs. Output Current



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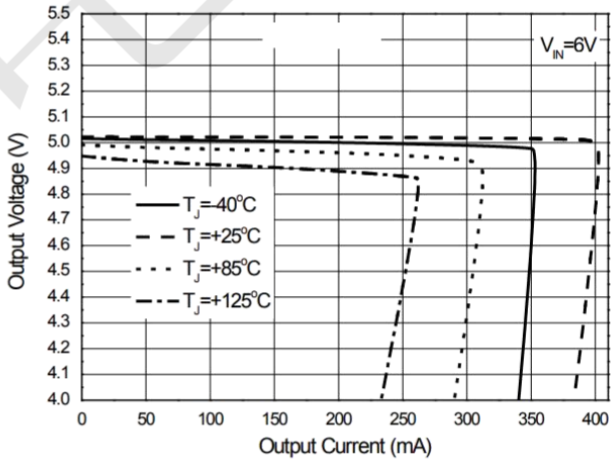
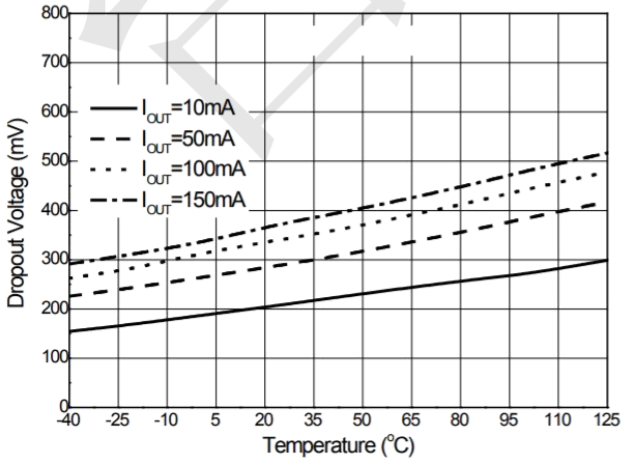


Dropout Voltage vs. Temperature



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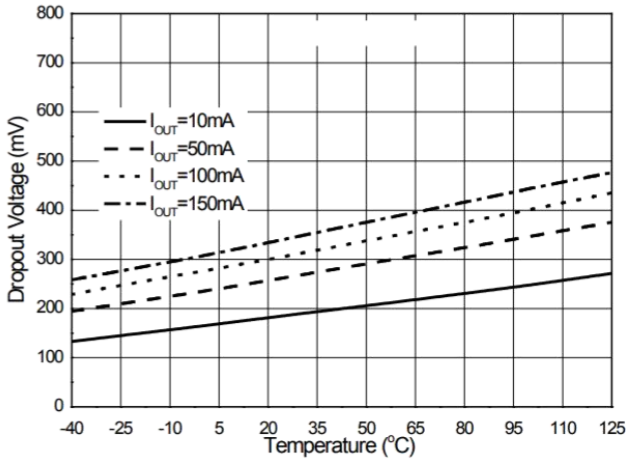
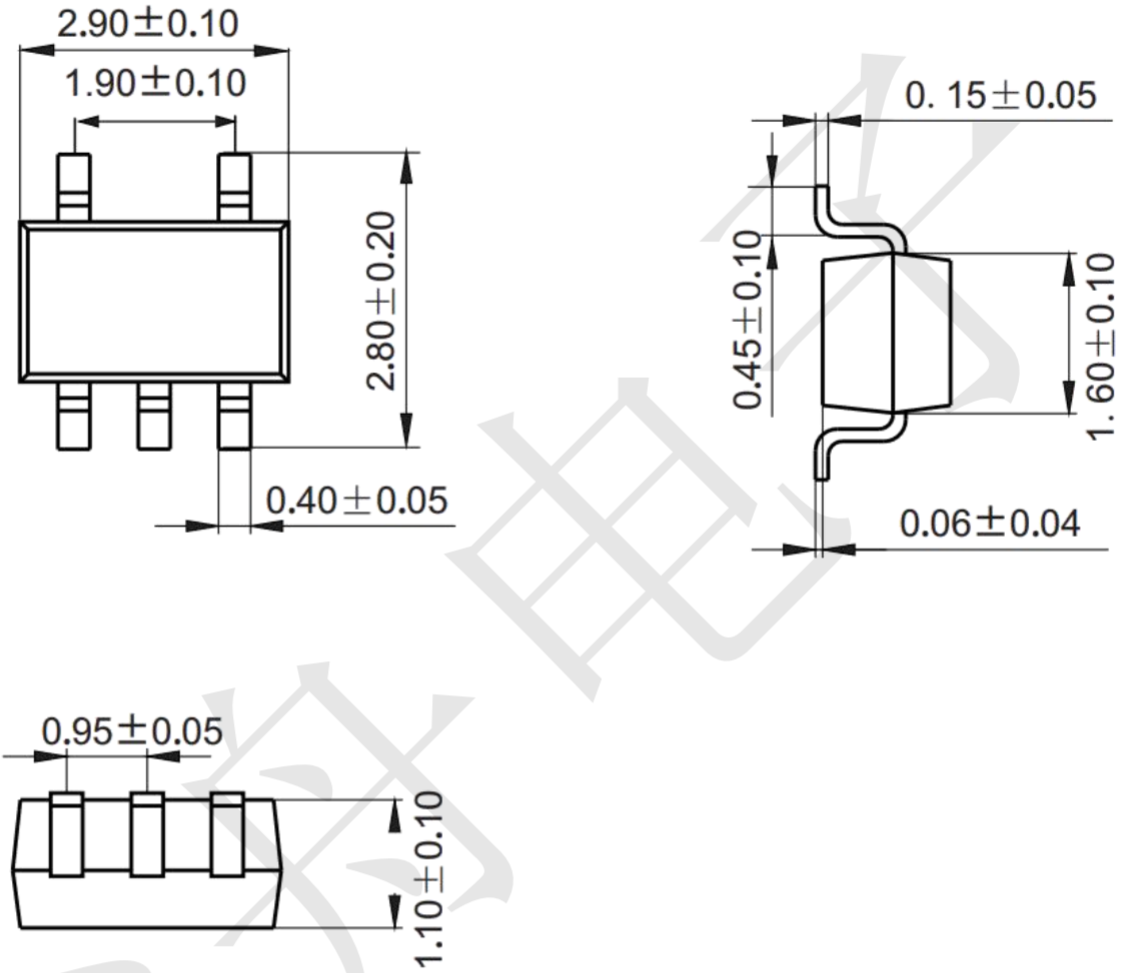
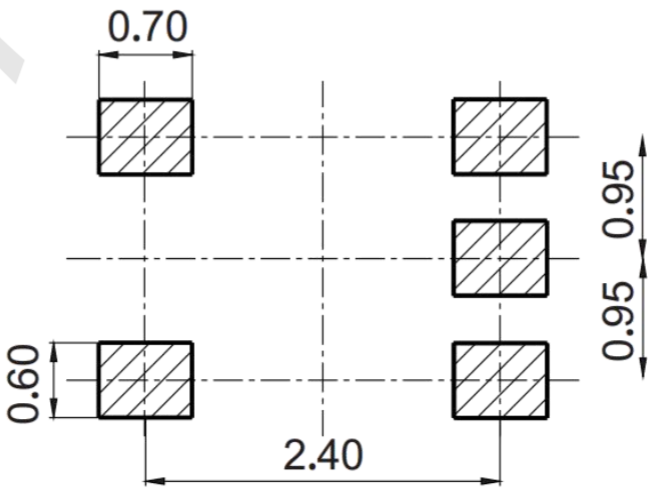


Package Outline Dimensions (unit: mm)

SOT23-5



Mounting Pad Layout (unit: mm)