

Features

- * Maximum Output Current I_O : 0.1 A
- * Output Voltage V_O : 5 V
- * Continuous Total Dissipation P_D : 0.25 W ($T_a = 25^\circ C$)

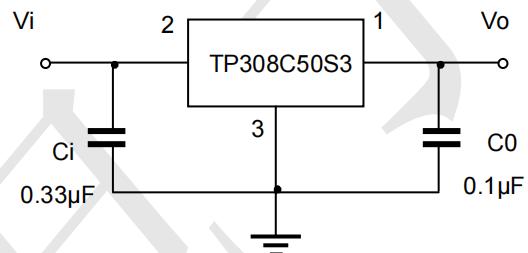
Mechanical Characteristics

- * Package: SOD-23
- * Lead Finish: Matte Tin
- * Case Material: "Green" Molding Compound.
- * Shipping Qty :3000 /7Inch Tape & Reel

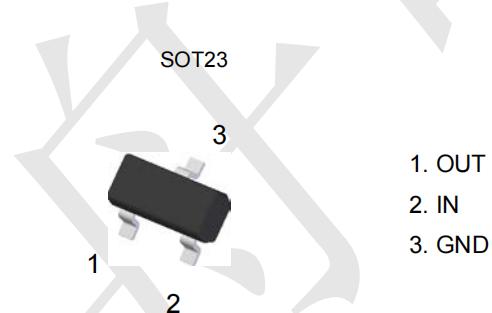
Applications

- * PostRegulatorfor SwitchingDC-DCConverter
- * BiasSupplyfor Digitaland AnalogCircuits
- * HomeAppliances
- * Factoryand BuildingAutomation

Typical Application



Dimensions and Pin Configuration



- 1. OUT
- 2. IN
- 3. GND

Marking :P8xx

P8= is part number,fixed
xx= is internal code



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TP308C50S3
Voltage Regulator

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Absolute Maximum Ratings (Tamb=25°C unless otherwise specified)

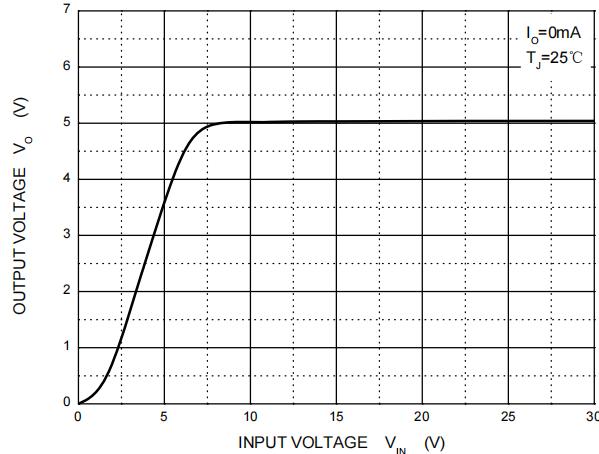
Parameter	Symbol	Value	Unit
Input Voltage	V _i	30	V
Thermal Resistance from Junction to Ambient	R _{θJA}	160	°C/W
Operating Junction Temperature Range	T _{OPR}	-40~+125	°C
Storage Temperature Range	T _{STG}	-65~+150	°C

Electrical Characteristics (TA=25°C unless otherwise specified)

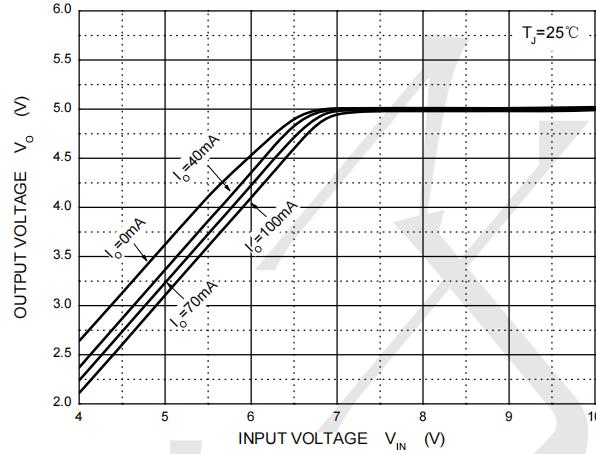
Parameter	Symbol	Test conditions		Min	Typ	Max	Unit	
Output voltage	V _o	7V≤V _i ≤20V, I _o =1mA~40mA I _o =1mA~70mA	25°C 0-125°C	4% 3% 2%	4.80 4.85 4.90	5.0 5.0 5.0	5.20 5.15 5.10	V
				4.75	5.0	5.25	V	
				4.75	5.0	5.25	V	
Load Regulation	ΔV _o	I _o =1mA~100mA	25°C		15	60	mV	
		I _o =1mA~40mA	25°C		8	30	mV	
Line regulation	ΔV _o	7V≤V _i ≤20V			32	150	mV	
		8V≤V _i ≤20V	25°C		26	100	mV	
Quiescent Current	I _q		25°C		3.8	6	mA	
Quiescent Current Change	ΔI _q	8V≤V _i ≤20V	0-125°C			1.5	mA	
	ΔI _q	1mA≤V _i ≤40mA	0-125°C			0.1	mA	
Output Noise Voltage	V _N	10Hz≤f≤100KHz	25°C		42		μV/V _o	
Ripple Rejection	RR	8V≤V _i ≤20V, f=120Hz	0-125°C	41	49		dB	
Dropout Voltage	V _d		25°C		1.7		V	

Characteristic Curves

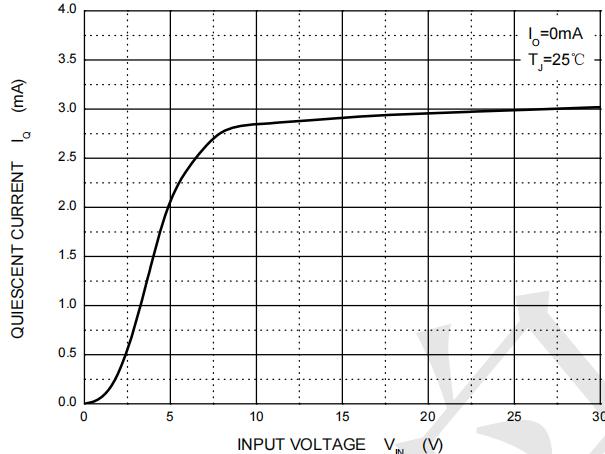
Output Characteristics



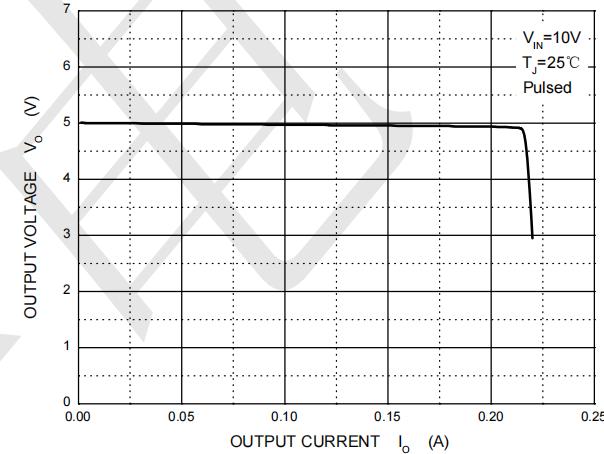
Dropout Characteristics



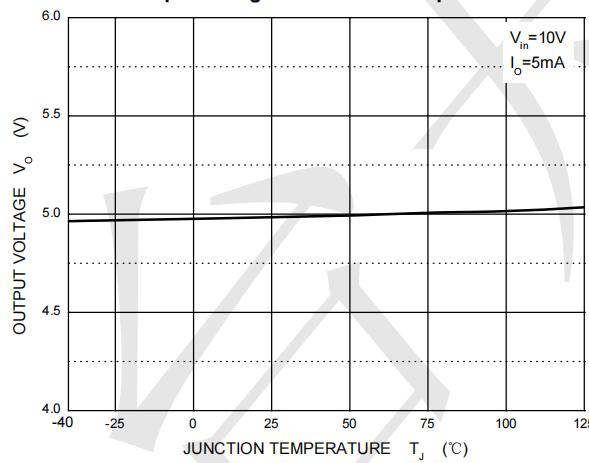
Quiescent Current vs Input Voltage



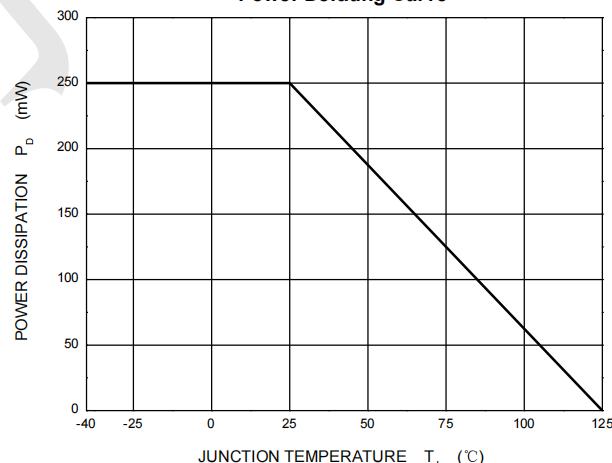
Current Cut-off Grid Voltage



Output Voltage vs Junction Temperature



Power Derating Curve



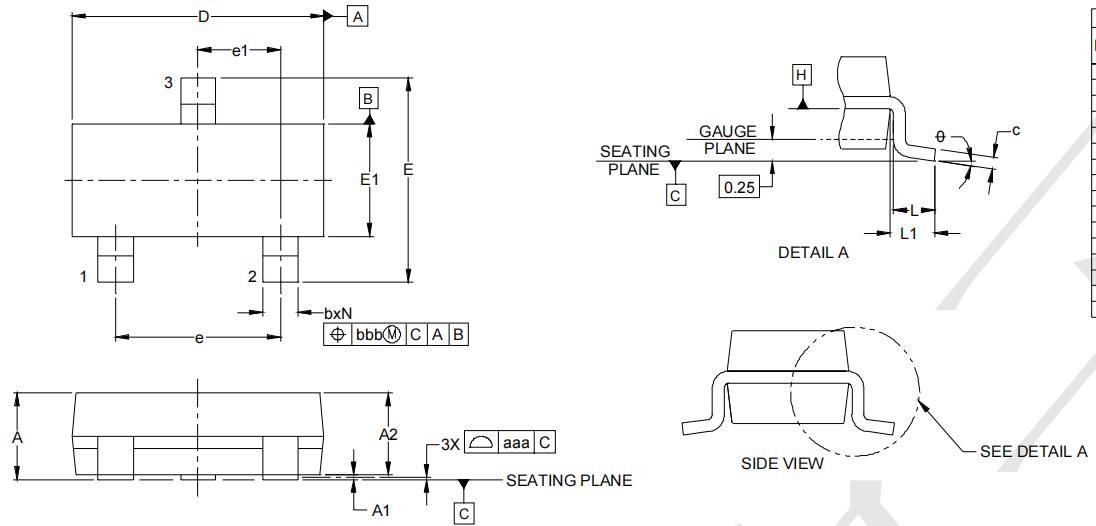


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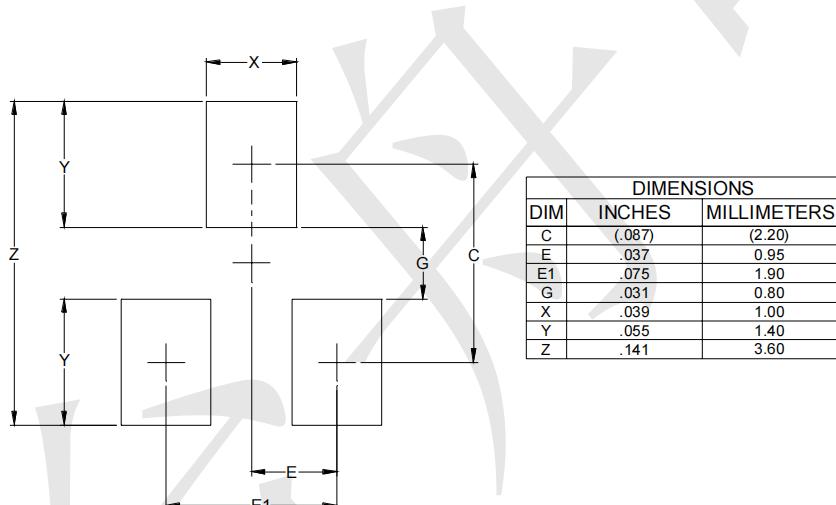
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Outline Drawing - SOT23



DIMENSIONS						
DIM	INCHES	NOM	MAX	MILLIMETERS	NOM	MAX
A	.035		.044	.89		1.12
A1	.000		.004	.01		.10
A2	.035	.037	.040	.88	.95	1.02
b	.012		.020	.30		.51
c	.003		.007	.08		.18
D	.110	.114	.120	2.80	2.90	3.04
E	.082	.093	.104	2.10	2.37	2.64
E1	.047	.051	.055	1.20	1.30	1.40
e	.075			1.90	BSC	
e1	.037			0.95	BSC	
L	.015	.020	.024	.40	.50	.60
L1	.022				(.55)	
N	3			3		
-θ	0°	-	8°	0°	-	8°
aaa	.004				0.10	
bbb	.008					0.20

Land Pattern - SOT23



DIMENSIONS		
DIM	INCHES	MILLIMETERS
C	(.087)	(2.20)
E	.037	0.95
E1	.075	1.90
G	.031	0.80
X	.039	1.00
Y	.055	1.40
Z	.141	3.60

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