

Voltage Regulator Zener Diode



Features:

- Hermetically Sealed, Glass Passivated Silicon Diodes

Specifications:

Zener Voltage V_z Typ	: 12V
Power Dissipation P_d	: 800mW
Operating Temperature Range	: -65°C to +175°C
Diode Case Style	: SOD-87
No. of Pins	: 2
Power Dissipation Max	: 2.3W
Termination Type	: SMD
Test Current	: 50mA
Polarity	: Cathode is indicated by a blue band

Absolute Maximum Ratings

Description	Symbol	Value	Unit
Power Dissipation $T_{tp} = 105^\circ\text{C}$	P_{tot}	2.3	W
Power Dissipation PCB mounted $T_{amb} = 55^\circ\text{C}$	P_{tot}	0.8	
Non-Repetitive Peak Reverse Power Dissipation $t_p = 100\mu\text{s}$, square pulse; $T_j = 25^\circ\text{C}$ prior to surge	P_{ZSM}	300	
Non-Repetitive Peak Reverse Power Dissipation; 10/100 μs , exponential pulse; $T_j = 25^\circ\text{C}$ prior to surge	P_{RSM}	150	
Storage Temperature	T_{stg}	- 65 to + 175	°C
Junction Temperature	T_j		

Thermal Resistance

Junction to Tie Point	$R_{th(j-t-p)}$	30	k/W
Junction to Ambient	$*R_{th(j-s)}$	150	

* Device mounted on an epoxy glass printed circuit board, 1.5mm thick; thickness of Cu layer $\geq 40\mu\text{m}$
Per type when used as Voltage Regulator Diodes

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Electrical Characteristics (T_a = 25°C unless specified otherwise) VF <1.2V at 200mA

Working Voltage			Differential Resistance r _{diff} (Ω) at I _Z Max.	Temperature Coefficient S _Z (%/K) at I _Z		Test Current at I _Z (mA)	Reverse Current at Reverse Voltage	
Min,	V _Z (V) at I _Z Nom,	Max,		Min.	Max.		I _R (μA) Max.	at
11.4	12	12.7	7	0.05	0.1	50	3	9.1
20.8	22	23.3	15	0.06	0.11	25	1	16

Part Number Table

Description	Part Number
Diode, Zener	BZD27-C12
	BZD27-C22

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