



Silicon Planar Power Zener Diodes

For use in stabilizing and clipping circuits with high power rating. Standard Zener voltage tolerance is $\pm 10\%$.

Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Value	Unit
Power Dissipation	P_D	1 ¹⁾	W
Operating Junction Temperature	T_j	175	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	- 65 to + 175	$^\circ\text{C}$

¹⁾ Valid provided that electrodes are kept at ambient temperature.

Thermal Characteristics

Parameter	Symbol	Max.	Unit
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	170 ¹⁾	$^\circ\text{C/W}$
Forward Voltage at $I_F = 200\text{ mA}$	V_F	1.2	V

¹⁾ Valid provided that electrodes are kept at ambient temperature.

Characteristics at $T_a = 25^\circ\text{C}$

Type	Zener Voltage ³⁾				Dynamic Resistance ¹⁾			Reverse Current		Maximum Surge Current ⁴⁾ at T _a = 25°C	Maximum Regulator Current ²⁾
	V _Z @I _{ZT} (V)			at I _{ZT}	Z _{ZT} at I _{ZT}	Z _{ZK}	at I _{ZK}	I _R (μA)	at V _R (V)	I _{ZSM} (mA)	I _{ZM} (mA)
	Nom	Min.	Max.	(mA)	Max. (Ω)	Max. (Ω)	(mA)	Max.			
ZMY5.1G	5.1	4.59	5.61	49	7	550	1	10	1	890	178

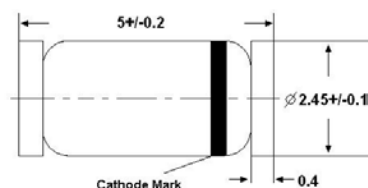
¹⁾ The dynamic resistance is derived from the 60 Hz AC voltage which results when an AC current having an RMS value equal to 10% of the Zener Current (I_{ZT} or I_{ZK}) is superimposed on I_{ZT} or I_{ZK} . Dynamic resistance is measured at two points to insure a sharp knee on the breakdown curve and to eliminate unstable units.

²⁾ Valid provided that electrodes are kept at ambient temperature.

³⁾ Tested with pulses $t_p = 20\text{ ms}$.

⁴⁾ The rating listed in the electrical characteristics table is maximum peak, non-repetitive, reverse surge current of 1/2 square wave or equivalent sine wave pulse of 1/120 second duration superimposed on the test current I_{ZT} .

LL-41(DO-213AB) Package Information



Glass case MELF
Dimensions in mm



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