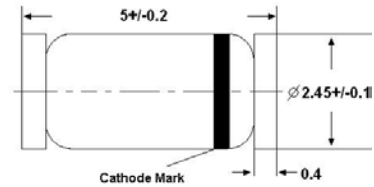




### Silicon Planar Power Zener Diodes

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

LL-41(DO-213AB)



Glass case MELF  
Dimensions in mm

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

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

<sup>1)</sup> Valid provided that electrodes are kept at ambient temperature.

### Thermal Characteristics

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

<sup>1)</sup> Valid provided that electrodes are kept at ambient temperature.

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

Type	Zener Voltage <sup>3)</sup>			Dynamic Resistance <sup>1)</sup>			Reverse Current		Maximum Surge Current <sup>4)</sup> at $T_a = 25^\circ\text{C}$	Maximum Regulator Current <sup>2)</sup>	
	$V_Z@I_{ZT}$ (V)			$Z_{ZT}$ at $I_{ZT}$	$Z_{ZK}$	at $I_{ZK}$	$I_R(\mu\text{A})$	at $V_R$			
	Nom	Min.	Max.	(mA)	Max. ( $\Omega$ )	Max. ( $\Omega$ )	(mA)	Max.	(V)	$I_{ZSM}$ (mA)	$I_{ZM}$ (mA)
ZMY5.1G	5.1	4.59	5.61	49	7	550	1	10	1	890	178

<sup>1)</sup> 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.

<sup>2)</sup> Valid provided that electrodes are kept at ambient temperature.

<sup>3)</sup> Tested with pulses  $t_p = 20\text{ ms}$ .

<sup>4)</sup> 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  $I_{ZT}$ .



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