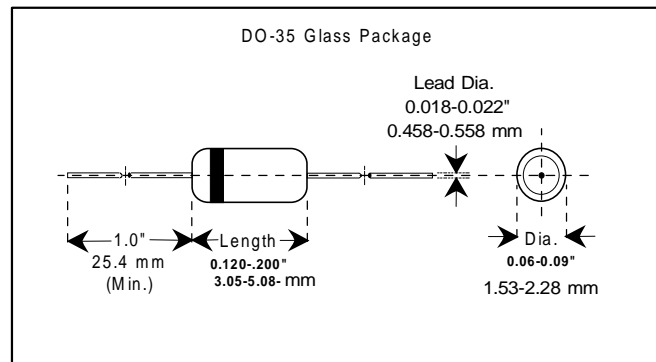


## Use Advantages

- Used as a general purpose rectifier in power supplies, or for clipping and steering applications.
- High performance alternative to small signal diodes where space does not permit use of power rectifiers.
- May be used in hostile environments where hermeticity and reliability are important i.e. (Military and Aero/Space). MIL-S- 19500/ 240 approvals. Available up to JANTXV-1 level.
- "S" level screening capability to Source Control Drawings.

## Features

- Six Sigma quality
- Humidity proof glass
- Metallurgically bonded
- Thermally matched system
- No thermal fatigue
- High surge capability
- Sigma Bond™ plated contacts
- 100% guaranteed solderability
- (DO-213AA) SMD MELF commercial (LL) and MIL (UR-1) types available



Absolute Maximum Ratings	Symbol	Value	Unit
Power Dissipation at 3/8" from the body, $T_L = 75^\circ\text{C}$	$P_{tot}$	600	mWatts
Average Forward Rectified Current at $T_L = 75^\circ\text{C}$	$I_{AV}$	400	mAmps
Operating and Storage Temperature Range	$T_{O\&S}$	-65 to 175	$^\circ\text{C}$
Thermal Impedance	$Z_{\theta JX}$	35	$^\circ\text{C/W}$

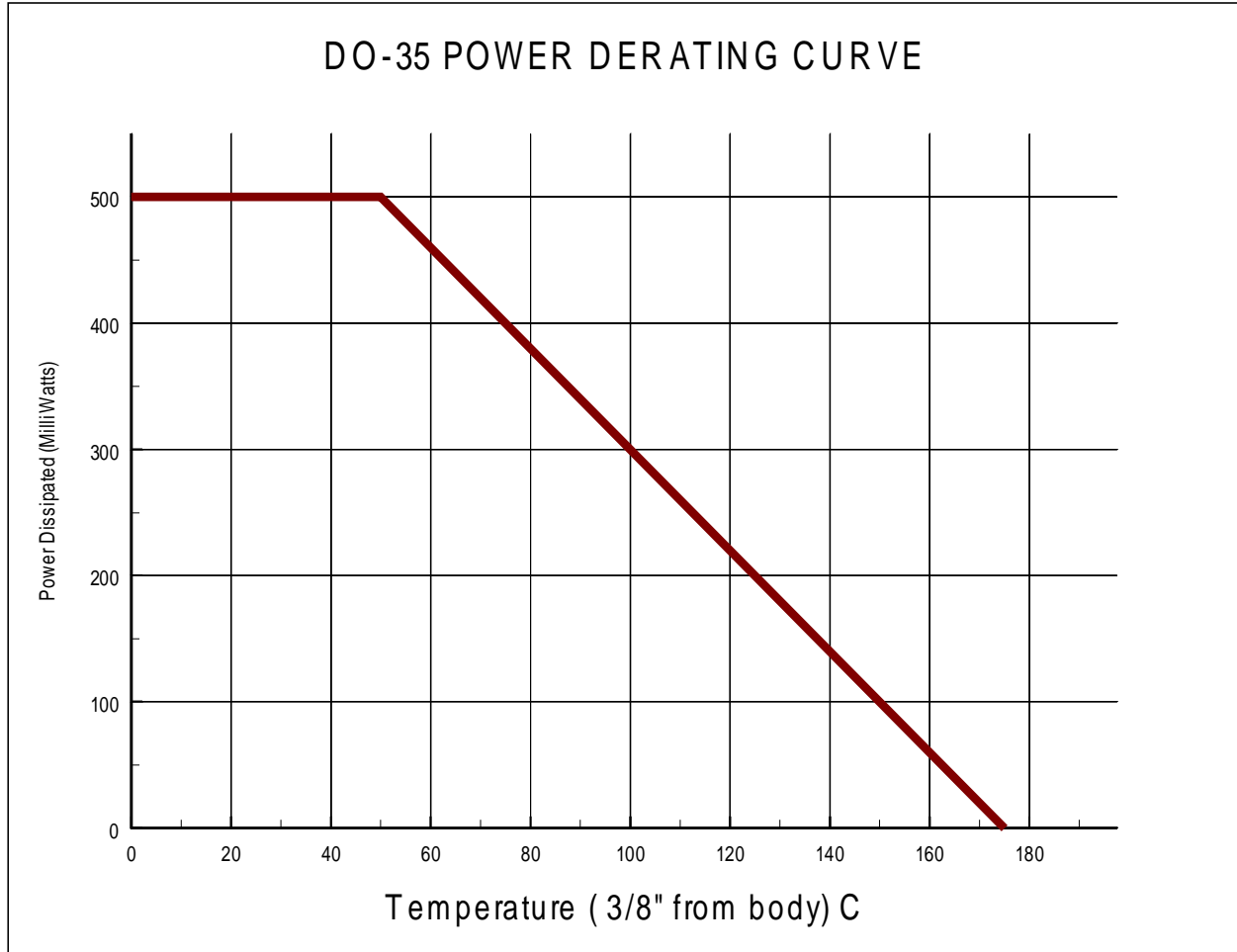
### Detail Specifications

Type	Reverse Voltage	Breakdown Voltage (MIN.) @ 100 $\mu\text{A}$	Maximum Average Rectified Current		Forward Voltage Drop	Maximum Reverse Leakage Current		Maximum Surge Current	Typical Junction Capacitance
	( $V_R$ )	( $B_V$ )	( $I_O$ ) 25 $^\circ\text{C}$	( $I_O$ ) 150 $^\circ\text{C}$	( $V_F$ ) @ $I_F = 400\text{mA}$	( $I_R$ ) @ $V_R$ 25 $^\circ\text{C}$	( $I_R$ ) @ $V_R$ 100 $^\circ\text{C}$	( $I_{FSM}$ ) (NOTE 1)	@ -12V ( $C_O$ )
	Volts	Volts	Amps	Amps	Volts	$\mu\text{A}$	$\mu\text{A}$	Amps	pF
1N645,-1	225	275	0.4	0.15	1.0	0.2	15	3	9
1N646,-1	300	360	0.4	0.15	1.0	0.2	15	3	9
1N647,-1	400	480	0.4	0.15	1.0	0.2	20	3	9
1N648,-1	500	600	0.4	0.15	1.0	0.2	20	3	9
1N649,-1	600	720	0.4	0.15	1.0	0.2	25	3	9

Note 1: Surge Current @  $T_A = +25^\circ\text{C}$  to  $+150^\circ\text{C}$ , for 1 Second

For MELF DO-213AA surface mount package, replace "1N" prefix with "LL" for commercial.

# DO-35 DERATING (175 C Tj)



# Silicon Rectifier Diodes

## 1N645-1 thru 1N649-1

