

## Use Advantages

Used as a general purpose rectifier in power supplies, or for clipping and steering applications.

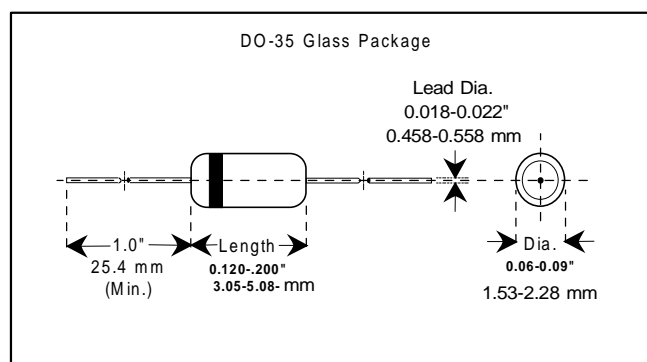
High performance alternative to small signal diodes where space does not permit use of power rectifiers.

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, $T_L = 75^\circ\text{C}$	$P_{\text{tot}}$	600	mWatts
Average Forward Rectified Current at $T_L = 75^\circ\text{C}$	$I_{\text{AV}}$	400	mAmps
Operating and Storage Temperature Range	$T_{\text{O\&S}}$	-65 to 175	$^\circ\text{C}$
Thermal Impedance	$Z_{\text{gJX}}$	35	$^\circ\text{C/W}$

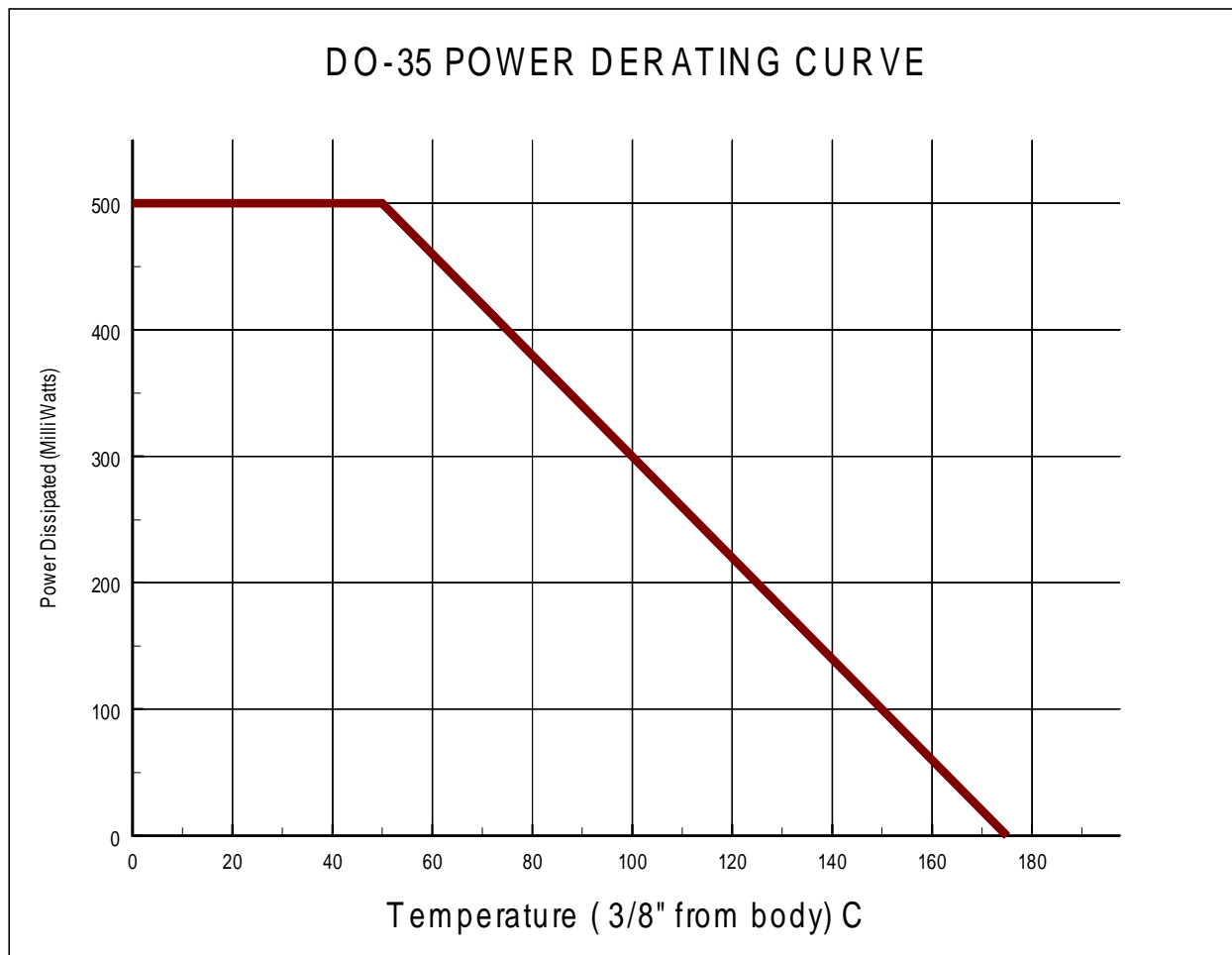
### Detail Specifications

Type	Reverse Voltage ( $V_R$ )	Breakdown Voltage (MIN.) @ 100 $\mu\text{A}$ ( $B_V$ )	Average Maximum Rectified Current		Forward Voltage Drop ( $V_F$ ) @ $I_F = 400\text{mA}$ (MAX.)	Maximum Reverse Leakage Current		Maximum Surge Current ( $I_{\text{FSM}}$ ) (NOTE 1)	Typical Junction Capacitance ( $C_O$ ) @ -12V
	Volts	Volts	( $I_O$ ) 25 $^\circ\text{C}$ Amps	( $I_O$ ) 150 $^\circ\text{C}$ Amps	Volts	( $I_R$ ) @ $V_R$ 25 $^\circ\text{C}$ $\mu\text{A}$	100 $^\circ\text{C}$ $\mu\text{A}$	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

