

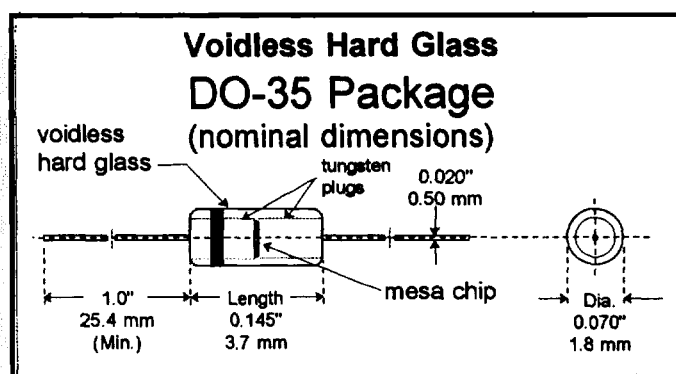
Use Advantages

High Rel. Voidless

General purpose fast diodes with rugged voidless hard glass tungsten design. Able to replace lower power, less robust types like 1N4150-1 and 1N4450-1. For use in hostile environments and applications where strength, thermal response and reliability are important i.e. (Military and Aero/Space). MIL-S- 19500/ 609 approval in process. Prior to DESC approval, now available in HR, HRX, HRV and HRS (space) levels to SCDs.

Features

- Six Sigma quality
- Humidity proof glass
- Metallurgically bonded
- Fast Thermal Response
- Thermally matched system
- High surge capability
- Sigma Bond™ plated contacts
- 100% guaranteed solderability
- Exceeds 2 million years MTBF



Absolute Maximum Ratings	Symbol	Value	Unit
Power Dissipation at 3/8" from the body, $T_L = 85^\circ\text{C}$	P_{tot}	625	mW
Average Forward Rectified Current at $T_L = 75^\circ\text{C}$	I_o	300	mAmps
Surge Current, $T_{AMB} @ 150^\circ\text{C}$, $t = 1/120$ Sec.	I_{FSM}^{***}	2.5	Amps
Operating Temperature Range	T_{OP}	-65 to 175	$^\circ\text{C}$
Storage Temperature Range	T_{ST}	-65 to 200	$^\circ\text{C}$
Thermal Resistance Junction to Lead @ $L = 3/8"$	$R_{\theta JL}$	160	$^\circ\text{C/W}$

ELECTRICAL CHARACTERISTICS ($T_{AMB} = 25^\circ\text{C}$, and Limits @ maximum unless otherwise specified)

TYPE	P_{IV} @ I_r	I_R @ V_R	I_R		I_R^*		V_F @ I_F	V_F @ I_F	V_F @ I_F	V_F		T_{rr} @	T_{rr} @ I_F	V_{rr} @ I_F	Cap @ V_r
	100 μA	20V	LM	@ V_r	LMT	@ V_r	1mA	50mA	100mA	LMT	@ I_F	=	200mA	200mA	0V
	Min.	nA	nA	V	μA	V	V	V	V	V	mA	nS	nS	V _{peak}	Pf
1N6639	100V	20	100	75	100	75				1.2	500	4	10	5	2.5
1N6640	75V	20	100	50	100	50	0.54 to 0.62	0.75 to 0.86	0.82 to 0.92	0.87 to 1	200	4	10	5	2.5
1N6641	75V	20	100	50	160	50				1.1	200	5	10	5	3

* $T_{AMB} = 150^\circ\text{C}$, ** $I_F = I_R = 10$ to 100mA , recover to 1mA , $R_L = 100$ ohms. *** For 1N6639 $I_{FSM} = 3.0$ Amps.

To order High Rel. parts, use the above numbers with the desired HR, HRX, HRV or HRS suffix.