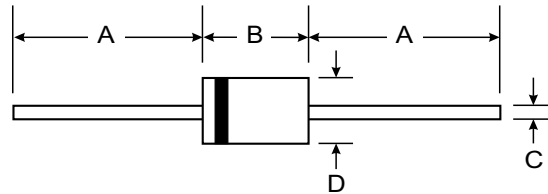


Features

- High temperature metallurgically bonded construction
- Cavity-free glass passivated junction
- Ultrafast recovery time for high efficiency
- Low forward voltage, high current capability
- Capable of meeting environmental standards of MIL-S-19500
- Hermetically sealed package
- Low leakage current • High surge current capability
- Specified reverse surge capability
- High temperature soldering guaranteed: 350°C/10 seconds, 0.375" (9.5mm) lead length, 5 lbs. (2.3kg) tension



Mechanical Data

- **Case:** JEDEC DO-41, molded plastic over glass body
- **Terminals:** Plated axial leads, solderable per MIL-STD-750, Method 2026
- **Polarity:** Color band denotes cathode end
- **Mounting Position:** Any
- **Weight:** 0.012 oz., 0.3 g

DO-41		
Dim	Min	Max
A	25.40	—
B	4.06	5.21
C	0.71	0.864
D	2.00	2.72
All Dimensions in mm		

Maximum Ratings and Electrical Characteristics @ T_A = 25°C unless otherwise specified

Parameter	Symbol	Value	Unit
Maximum repetitive peak reverse voltage	V _{RRM}	600	V
Maximum RMS voltage	V _{RMS}	420	V
Maximum DC blocking voltage	V _{DC}	600	V
Maximum average forward rectified current 0.375" (9.5mm) lead length at T _L = 85°C (See Fig. 1)	I _{F(AV)}	1.0	A
Peak forward surge current 10ms single half sine-wave superimposed on rated load	I _{FSM}	30	A
Non repetitive peak reverse energy (Note 1)	E _{RSM}	5	mJ
Typical thermal resistance (Note 2,3)	R _{θJA} R _{θJL}	70 16	°C/W
Operating junction and storage temperature range	T _J , T _{STG}	-65 to +175	°C
Minimum avalanche breakdown voltage at 100μA	V _{BR}	600	V
Maximum instantaneous forward voltage at 1.0A	V _F	T _J = 25°C 2.5	V
		T _J = 175°C 1.3	
Maximum DC reverse current at rated DC blocking voltage	I _R	T _A = 25°C 5.0	μA
		T _A = 165°C 150	
Max. reverse recovery time at I _F = 0.5A, I _R = 1.0A, I _{rr} = 0.25A	t _{rr}	30	ns
Maximum junction capacitance at 4.0V, 1MHz	C _J	45	pF
Maximum reverse recovery current slope at I _F = 1A, V _R = 30V, di _r /dt = -1A/μs	di _r /dt	7	A/μs

- Notes:** (1) Peak reverse energy measured with 8/20μs surge
(2) Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length, mounted on P.C.B. with 0.5 x 0.5" (12 x 12mm) copper pads
(3) Thermal resistance from junction to lead at 0.375" (9.5mm) lead length with both leads attached to heatsink

Fig. 1 – Maximum Forward Current Derating Curve

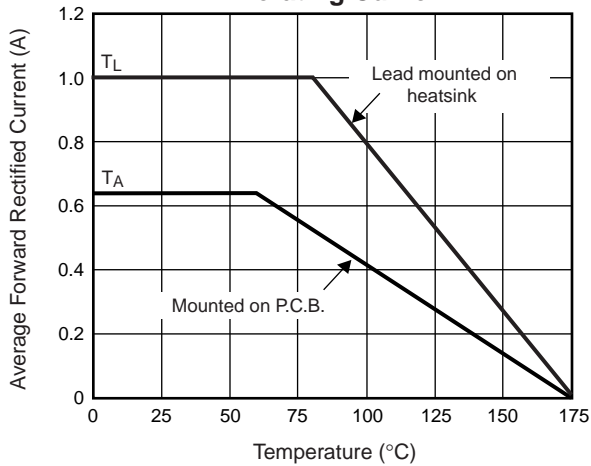


Fig. 2 – Maximum Non-Repetitive Peak Forward Surge Current

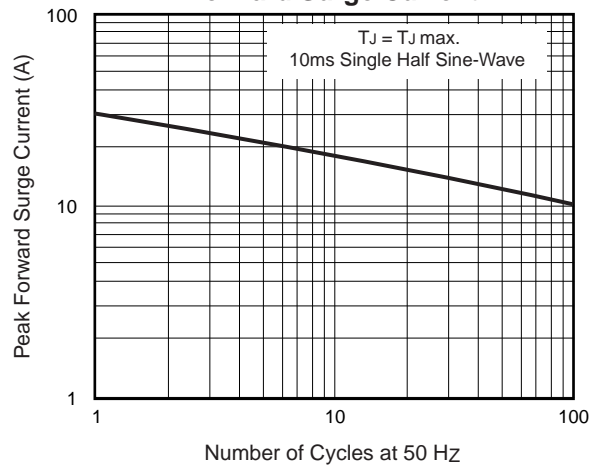


Fig. 3 – Typical Instantaneous Forward Characteristics

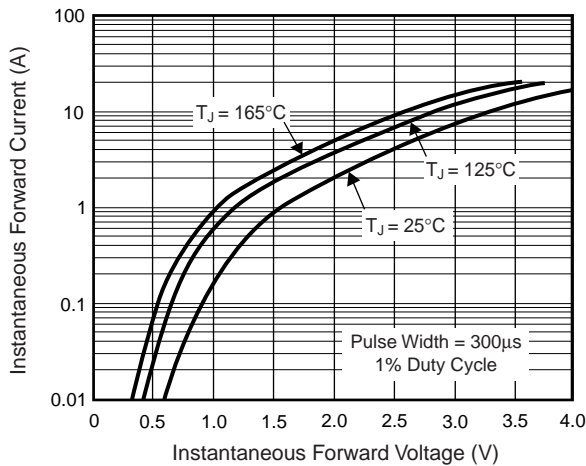


Fig. 4 – Typical Reverse Leakage Characteristics

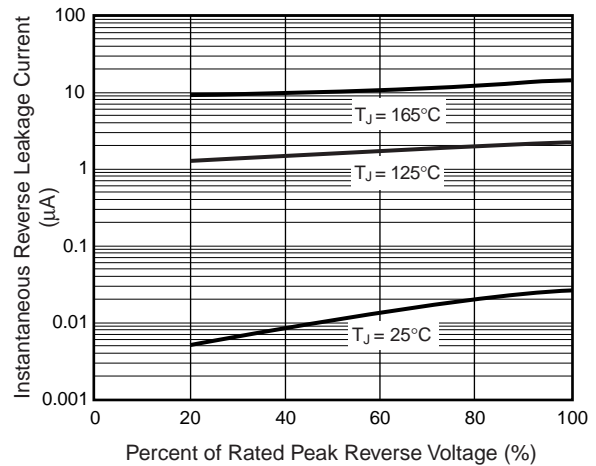


Fig. 5 – Typical Junction Capacitance

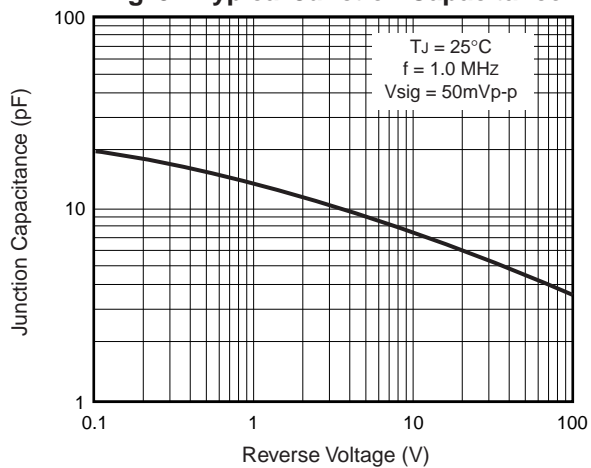


Fig. 6 – Typical Transient Thermal Impedance

