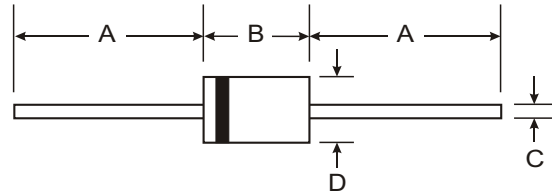


Features

- Diffused Junction
- Fast Switching for High Efficiency
- High Current Capability and Low Forward Voltage Drop
- Surge Overload Rating to 50A Peak
- Low Reverse Leakage Current
- Plastic Material: UL Flammability Classification Rating 94V-0



Mechanical Data

- Case: Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Marking: Type Number
- DO-41 Weight: 0.3 grams (approx.)
- DO-15 Weight: 0.4 grams (approx.)

	DO-41 Plastic		DO-15	
Dim	Min	Max	Min	Max
A	25.40	—	25.40	—
B	4.06	5.21	5.50	7.62
C	0.71	0.864	0.686	0.889
D	2.00	2.72	2.60	3.60
All Dimensions in mm				

"S" Suffix Designates DO-41 Package
 No Suffix Designates DO-15 Package

Maximum Ratings and Electrical Characteristics @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Single phase, half wave, 60Hz, resistive or inductive load.
 For capacitive load, derate current by 20%.

Characteristic	Symbol	PR 1501/S	PR 1502/S	PR 1503/S	PR 1504/S	PR 1505/S	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	50	100	200	400	600	V
RMS Reverse Voltage	$V_{R(RMS)}$	35	70	140	280	420	V
Average Rectified Output Current (Note 1) @ $T_A = 50^\circ\text{C}$	I_O	1.5					A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave Superimposed on Rated Load (JEDEC Method)	I_{FSM}	50					A
Forward Voltage @ $I_F = 1.5\text{A}$	V_{FM}	1.2					V
Peak Reverse Current @ $T_A = 25^\circ\text{C}$ @ $T_A = 100^\circ\text{C}$	I_{RM}	5.0 100					μA
Reverse Recovery Time (Note 3)	t_{rr}	150				250	ns
Typical Junction Capacitance (Note 2)	C_j	20				10	pF
Typical Thermal Resistance Junction to Ambient	$R_{\theta JA}$	35					K/W
Operating and Storage Temperature Range	T_j, T_{STG}	-65 to +150					$^\circ\text{C}$

- Notes:
1. Valid provided that leads are maintained at ambient temperature at a distance of 9.5mm from the case.
 2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
 3. Measured with $I_F = 0.5\text{A}$, $I_R = 1.0\text{A}$, $I_{rr} = 0.25\text{A}$. See figure 5.

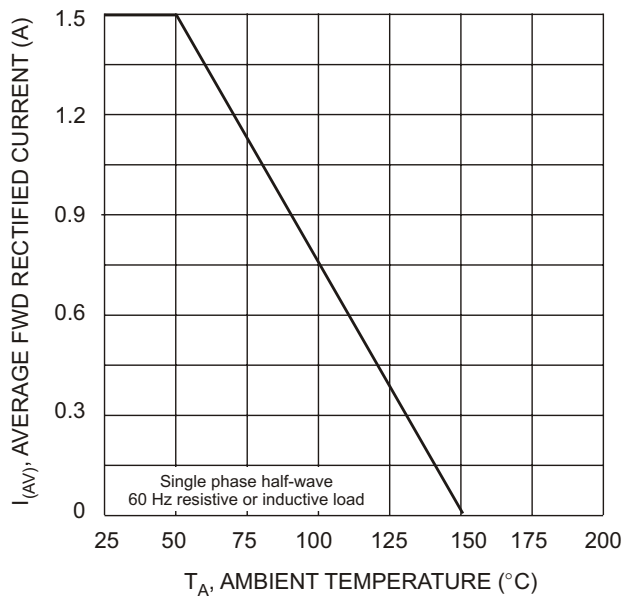


Fig. 1 Forward Derating Curve

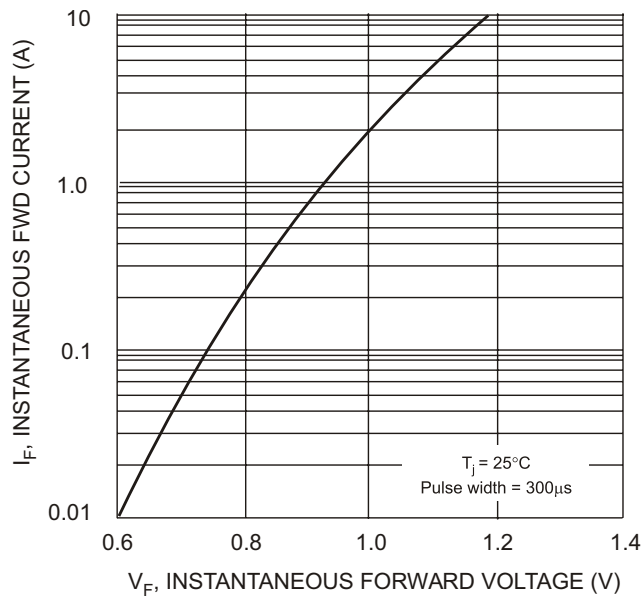


Fig. 2 Typical Forward Characteristics

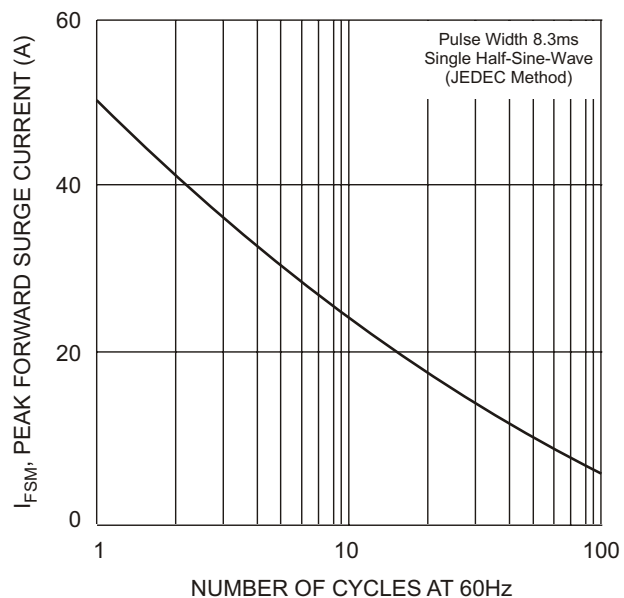


Fig. 3 Peak Forward Surge Current

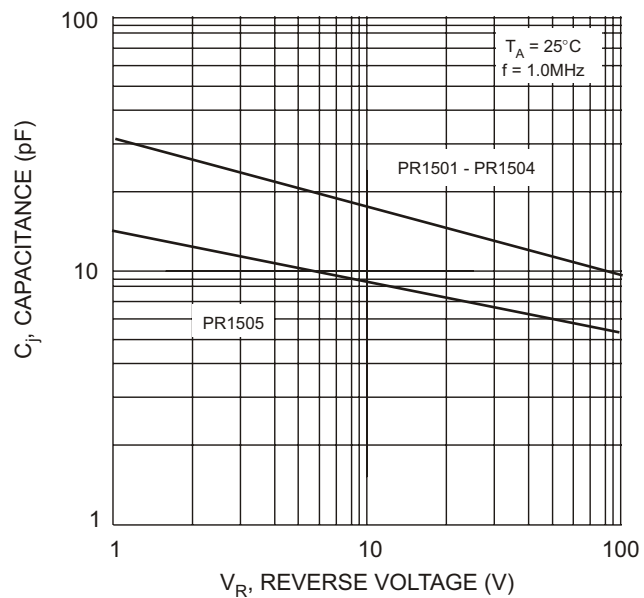
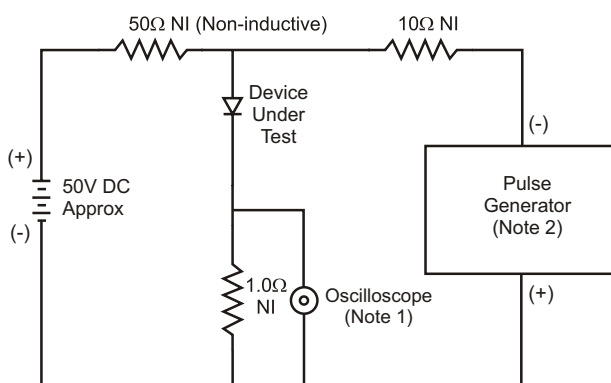
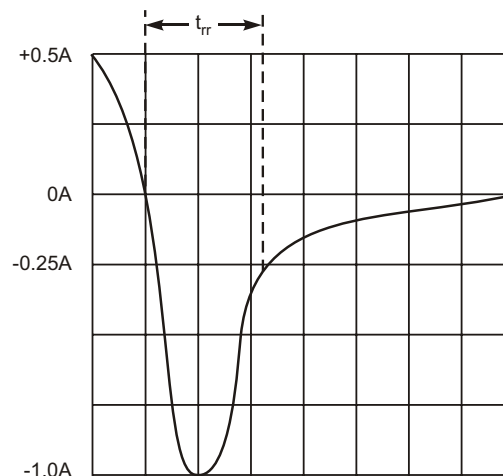


Fig. 4 Typical Junction Capacitance



- Notes:
1. Rise Time = 7.0ns max. Input Impedance = 1.0MΩ, 22pF.
 2. Rise Time = 10ns max. Input Impedance = 50Ω.



Set time base for 50/100 ns/cm

Fig. 5 Reverse Recovery Time Characteristic and Test Circuit