

1.0A FAST RECOVERY RECTIFIER

FR101 – FR107 Vishaymas General Semiconductor

Features

- Diffused Junction
- Low Forward Voltage Drop
- High Current capability
- High Reliability
- High Surge Current Capability

Mechanical Data

Case: Molded Plastic

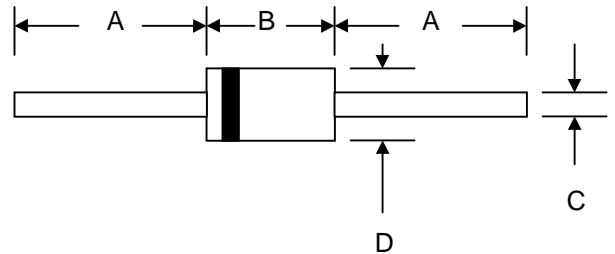
Terminals: Plated Leads Solderable per
MIL-STD-202, Method 208

Polarity: Cathode Band

Weight: 0.34 grams (approx.)

Mounting Position: Any

Marking: Type Number



DO-41		
Dim	Min	Max
A	25.4	—
B	4.06	5.21
C	0.71	0.864
D	2.00	2.72
All Dimensions in mm		

Maximum Ratings and Electrical Characteristics

@ $T_A=25^{\circ}\text{C}$ unless otherwise specified Single Phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Characteristic	Symbol	FR101	FR102	FR103	FR104	FR105	FR106	FR107	Unit
Peak Repetitive Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Working Peak Reverse Voltage	V_{RWM}								
DC Blocking Voltage	V_R								
RMS Reverse Voltage	$V_{R(RMS)}$	35	70	140	280	420	560	700	V
Average Rectified Output Current (Note 1) @ $T_A = 55^{\circ}\text{C}$	I_O	1.0							A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	30							A
Forward Voltage @ $I_F = 1.0\text{A}$	V_{FM}	1.2							V
Peak Reverse Current @ $T_A = 25^{\circ}\text{C}$ At Rated DC Blocking Voltage @ $T_A = 100^{\circ}\text{C}$	I_{RM}	5.0 100							μA
Reverse Recovery Time (Note 2)	t_{rr}	150			250	500		nS	
Typical Junction Capacitance (Note 3)	C_j	15							pF
Operating Temperature Range	T_j	-65 to +125							$^{\circ}\text{C}$
Storage Temperature Range	T_{STG}	-65 to +150							$^{\circ}\text{C}$

*Glass passivated forms are available upon request

- Note: 1. Leads maintained at ambient temperature at a distance of 9.5mm from the case
2. Measured with $I_F = 0.5\text{A}$, $I_R = 1.0\text{A}$, $I_{RR} = 0.25\text{A}$. See figure 5.
3. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.

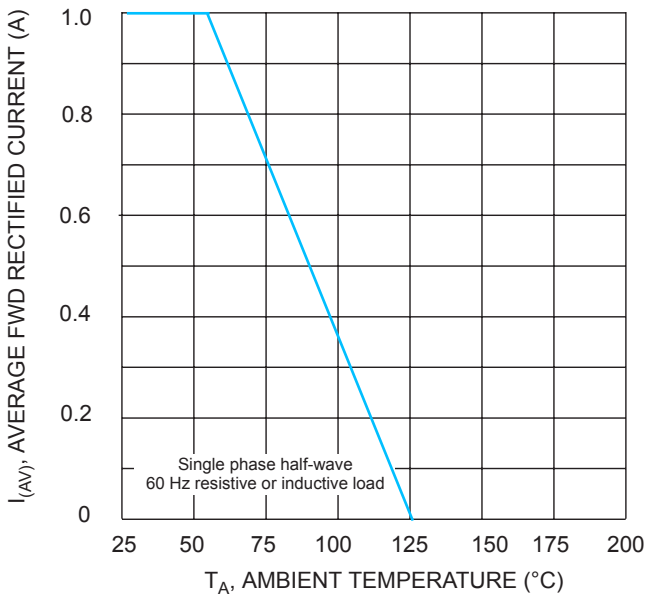


Fig. 1 Forward Derating Curve

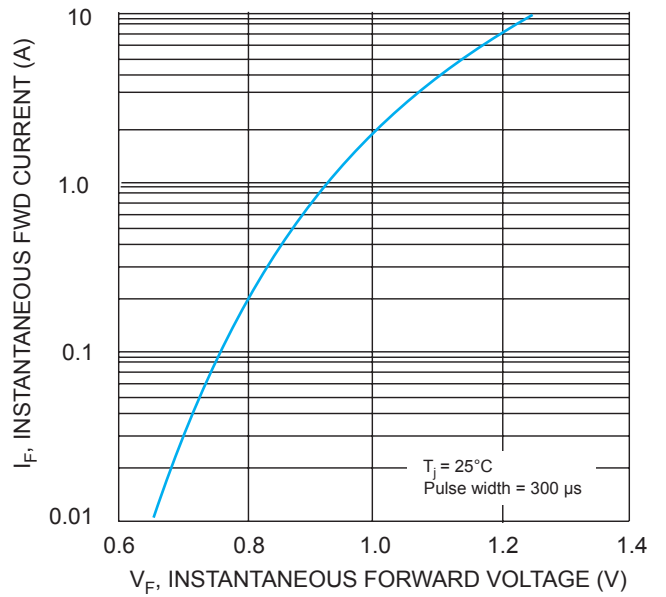


Fig. 2 Typical Forward Characteristics

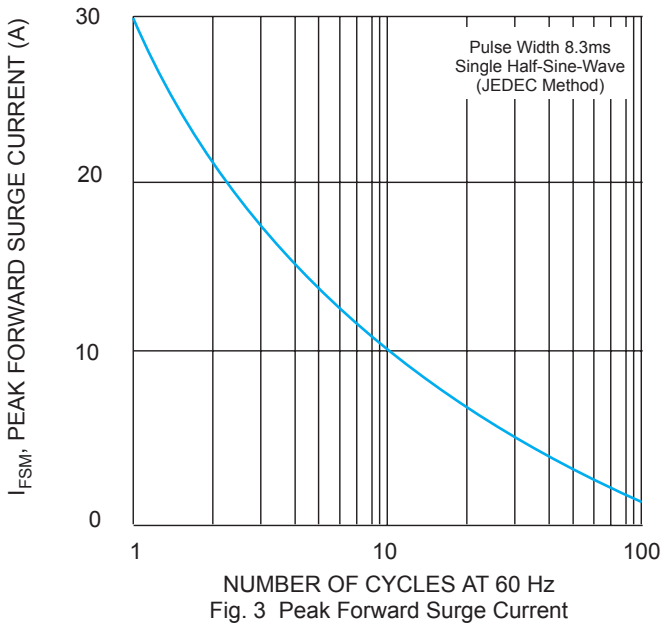


Fig. 3 Peak Forward Surge Current

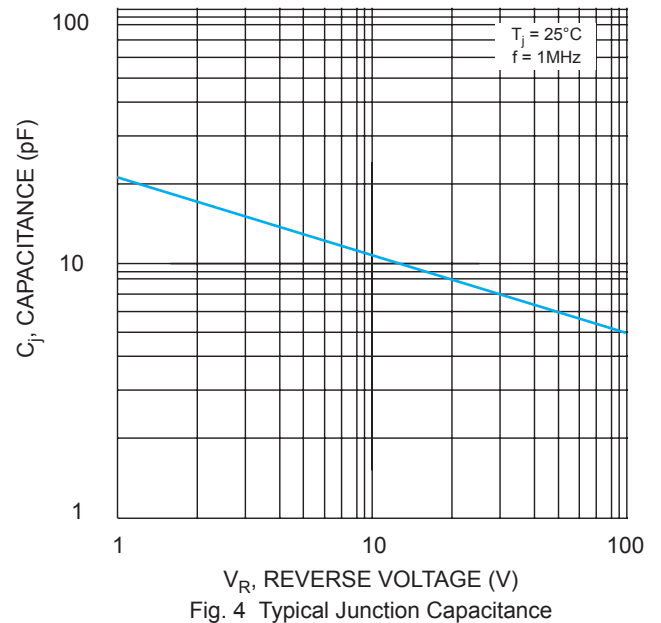


Fig. 4 Typical Junction Capacitance

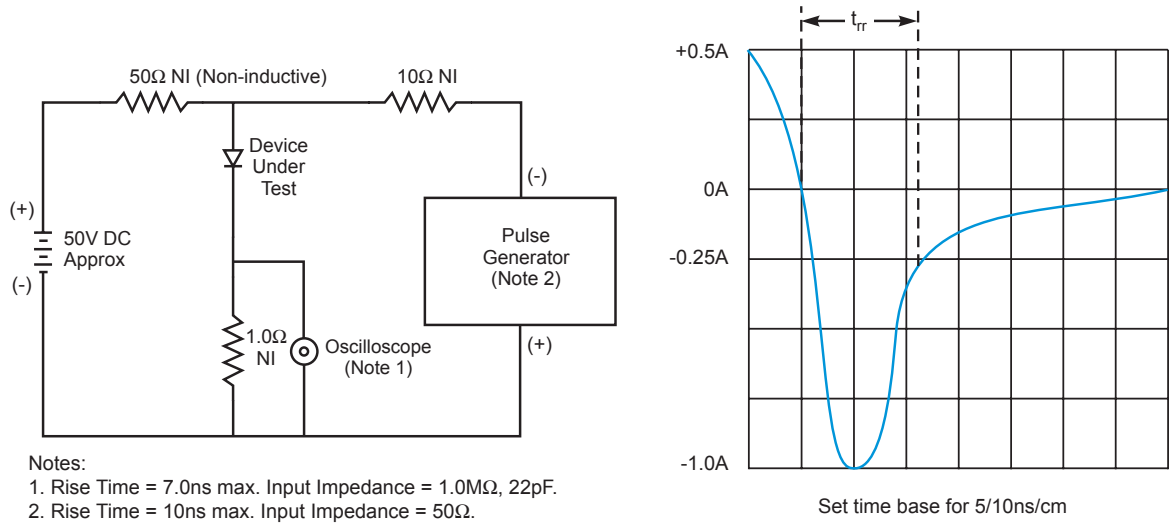


Fig. 5 Reverse Recovery Time Characteristic and Test Circuit

