

# FR101G THRU FR107G

## GLASS PASSIVATED FAST RECOVERY RECTIFIER

Reverse Voltage – 50 to 1000 V

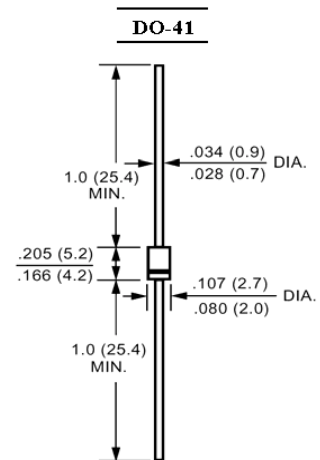
Forward Current – 1 A

### Features

- Fast switching for high efficiency
- High current capability

### Mechanical Data

- Case: Molded plastic, DO-41
- Epoxy: UL 94V-0 rate flame retardant
- Lead: Axial leads, solderable per MIL-STD-202, Method 208 guaranteed
- Polarity: Color band denotes cathode end
- Mounting Position: Any



Dimensions in inches and (millimeters)

### Maximum Ratings and Electrical Characteristics

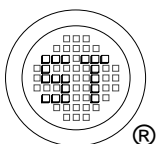
Ratings at 25 °C ambient temperature unless otherwise specified. Single phase, half-wave, 60 Hz, resistive or inductive load, for capacitive load, derate current by 20%.

Parameter	Symbols	FR101G	FR102G	FR103G	FR104G	FR105G	FR106G	FR107G	Units
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	$V_{RMS}$	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current 0.375" (9.5 mm) Lead Length at $T_A = 55\text{ }^\circ\text{C}$	$I_{F(AV)}$	1							A
Peak Forward Surge Current 8.3 ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method)	$I_{FSM}$	30							A
Maximum Forward Voltage at 1 A	$V_F$	1.3							V
Maximum Reverse Current at Rated DC Blocking Voltage $T_A = 25\text{ }^\circ\text{C}$ $T_A = 100\text{ }^\circ\text{C}$	$I_R$	5 50							$\mu\text{A}$
Typical Junction Capacitance <sup>1)</sup>	$C_J$	12							pF
Typical Thermal Resistance <sup>2)</sup>	$R_{\theta JA}$	50							$^\circ\text{C/W}$
Maximum Reverse Recovery Time <sup>3)</sup>	$t_{rr}$	150				250	500		nS
Operating and Storage temperature range	$T_j, T_{stg}$	- 55 to + 150							$^\circ\text{C}$

<sup>1)</sup> Measured at 1 MHz and applied reverse voltage of 4 V D.C.

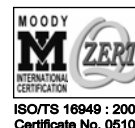
<sup>2)</sup> Thermal resistance from junction to ambient 0.375"(9.5 mm) lead length P.C.B mounted.

<sup>3)</sup> Reverse recovery test conditions:  $I_F = 0.5\text{ A}$ ,  $I_R = 1\text{ A}$ ,  $I_{rr} = 0.25\text{ A}$ .

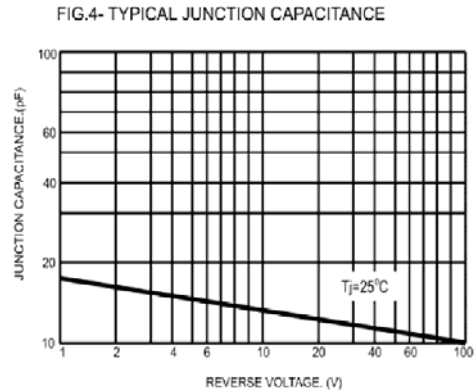
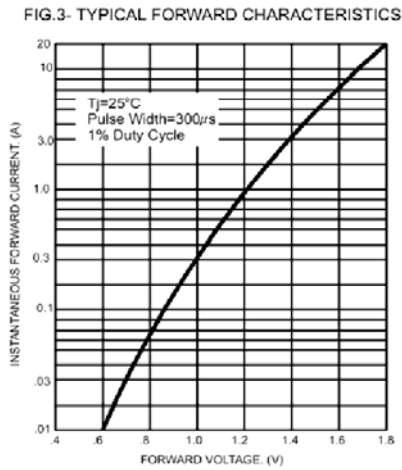
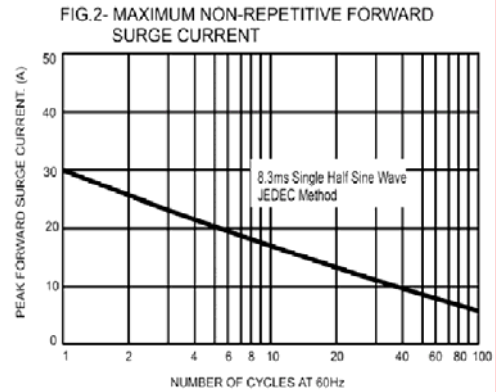
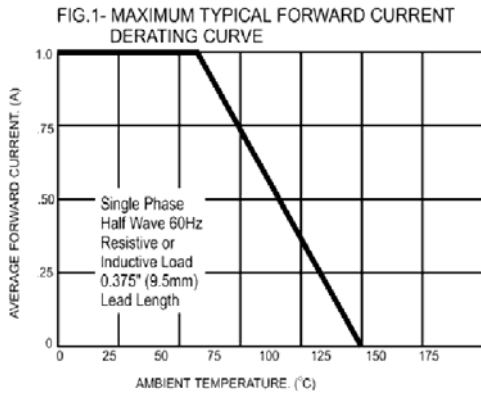


**SEMTECH ELECTRONICS LTD.**

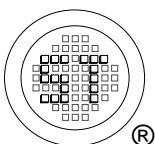
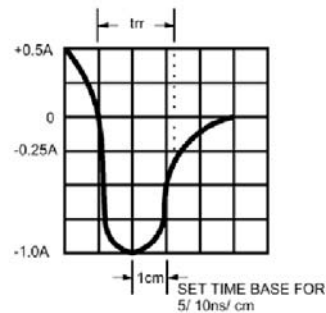
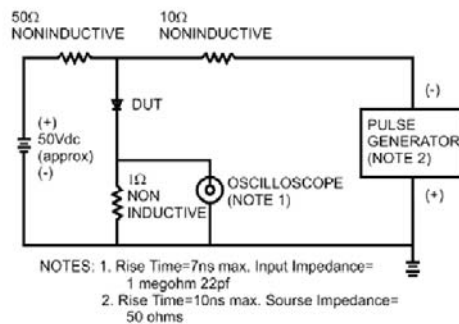
(Subsidiary of Sino-Tech International Holdings Limited, a company listed on the Hong Kong Stock Exchange, Stock Code: 724)



# FR101G THRU FR107G



**FIG.5- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM**



**SEMTECH ELECTRONICS LTD.**

(Subsidiary of Sino-Tech International Holdings Limited, a company listed on the Hong Kong Stock Exchange, Stock Code: 724)



ISO/TS 16949 : 2002  
Certificate No. 05103



ISO 14001:2004  
Certificate No. 7116



ISO 9001:2000  
Certificate No. 0506098