

1F1G THRU 1F7G

Fast Recovery Glass Passivated Rectifiers

Reverse Voltage - 50 to 1000 V

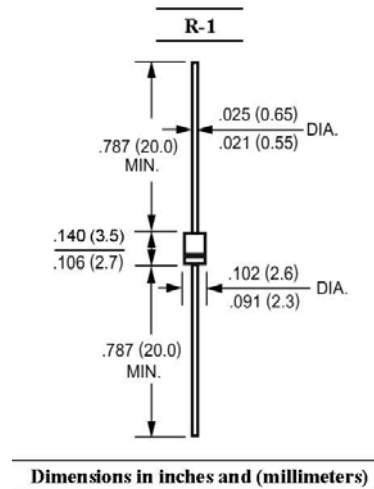
Forward Current - 1 A

Features

- The plastics package carries UL Flammability Classification 94V-0
- High switching for high efficiency
- Low reverse leakage
- High forward surge current capability

Mechanical Data

- Case: Molded plastic, R-1
- Terminals: Plated axial leads, solderable per MIL-STD-750, Method 2026
- Polarity: color band denotes cathode end
- Mounting Position: Any



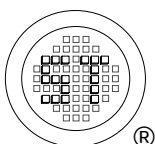
Absolute Maximum Ratings and Characteristics

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	1F1G	1F2G	1F3G	1F4G	1F5G	1F6G	1F7G	Units
Maximum Repetitive 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 = 25 °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}	25							A
Maximum Instantaneous Forward Voltage at 1 A	V _F	1.3							V
Maximum Reverse Current T _A = 25 °C at Rated DC Blocking Voltage T _A = 100 °C	I _R	5 100							μA
Typical Junction Capacitance ¹⁾	C _J	15							pF
Maximum Reverse Recovery Time ²⁾	t _{rr}	150				250	500		ns
Operating and Storage Temperature Range	T _j , T _{stg}	- 55 to + 150							°C

¹⁾ Measured at 1 MHz and applied reverse voltage of 4 V DC.

²⁾ Reverse recovery test conditions: $I_F = 0.5\text{ A}$, $I_R = 1\text{ A}$, $I_{rr} = 0.25\text{ A}$.



SEMTECH ELECTRONICS LTD.

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ISO/TS 16949 : 2002
Certificate No. 05103



ISO14001 : 2004
Certificate No. 7116



ISO 9001 : 2008
Certificate No. 0508098



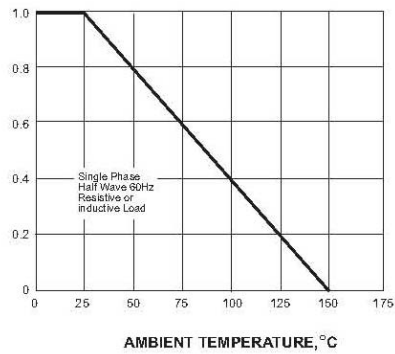
BS-OHSAS 18001 : 2007
Certificate No. 7116



IECQ QC 080000
Certificate No. PRC-080000-0801

AVERAGE FORWARD RECTIFIED CURRENT,
AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



PEAK FORWARD SURGE CURRENT,
AMPERES

FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

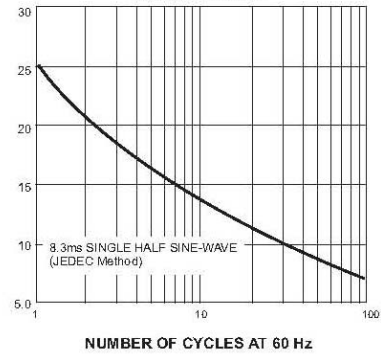
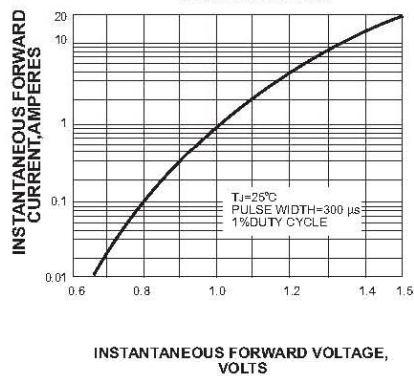


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



INSTANTANEOUS REVERSE CURRENT,
MICROAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS

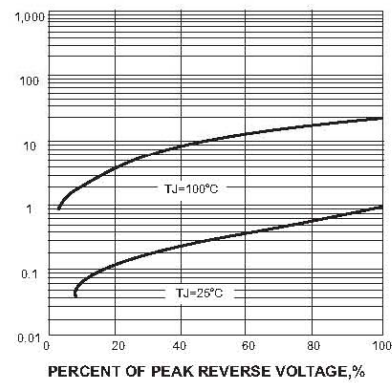
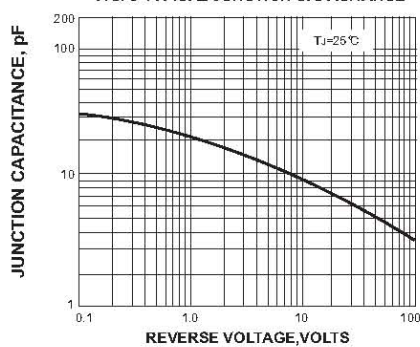
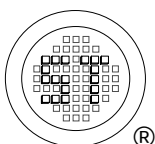
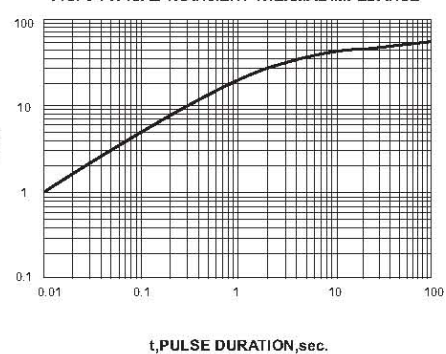


FIG. 5-TYPICAL JUNCTION CAPACITANCE



TRANSIENT THERMAL IMPEDANCE,
°C/W

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



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