

Super Fast Rectifier



RoHS
Compliant



Features:

- Super fast switching time for high efficiency
- Low leakage current
- High forward surge capability
- Solder dip 260°C, 40s

Mechanical Data:

Case	: JEDEC R-6 molded plastic body
Terminals	: Plated axial leads, solderable per MIL-STD-750, method 2026
Polarity	: Colour band denotes cathode end
Weight	: 1.2 grams
Mounting Position	: Any
Weight	: 1.2 grams
Reverse Voltage	: 150 Volts
Forward Current	: 6 Amperes

Maximum Ratings and Electrical Characteristics:

Rating at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

Characteristics	Symbol	Values	Unit
Max. Recurrent Peak Reverse Voltage	V_{RRM}	150	V
Max. RMS Voltage	V_{RMS}	105	
Max. DC Blocking Voltage	V_{DC}	150	
Max. Average Forward Rectified Current 0.375"(9.5mm) lead length at $T_A = 55^\circ\text{C}$	$I_{(AV)}$	6	A
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Super Imposed on Rated Load (JEDEC method)	I_{FSM}	150	
Max. Instantaneous Forward Voltage at 6A	V_F	0.95	V
Max. DC Reverse Current at Rated DC Blocking Voltage	I_R	$T_A = 25^\circ\text{C}$ 5	μA
		$T_A = 100^\circ\text{C}$ 50	
Max. Reverse Recovery Time (Note 1)	T_{RR}	35	nS
Typical Junction Capacitance (Note 2)	C_J	120	pF
Typical Thermal Resistance (Note 3)	$R_{\theta JA}$	30	$^\circ\text{C/W}$
Operating Temperature Range	T_J	-65 to +150	$^\circ\text{C}$
Storage Temperature Range	T_{STG}		

Notes:

1. Measured with $I_F = 0.5\text{A}$, $I_R = 1\text{A}$, $I_{RR} = 0.25\text{A}$.
2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
3. Thermal resistance from junction to ambient at 0.375"(9.5mm) lead length, P.C.B. mounted
4. The typical data above is for reference only

Ratings and Characteristic Curves

FIG.1-FORWARD CURRENT DERATING CURVE

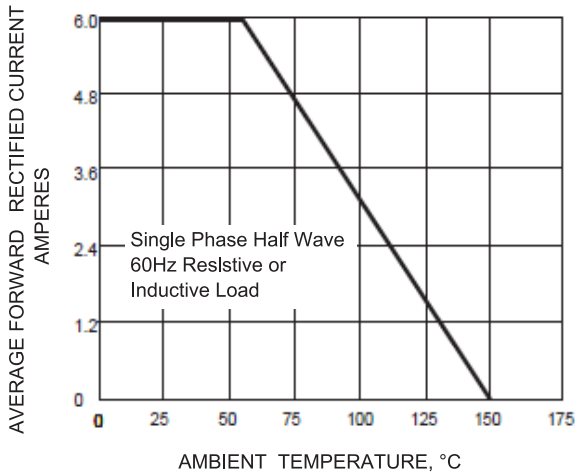


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARDSURGE CURRENT

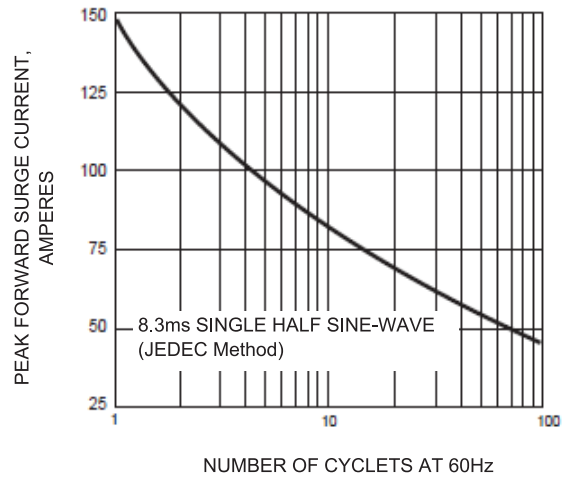


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

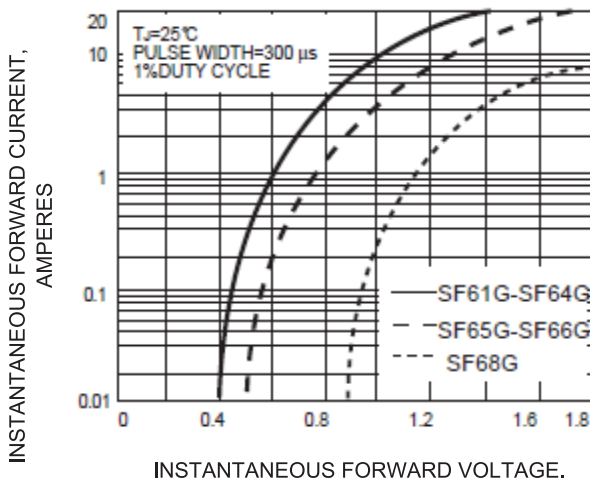
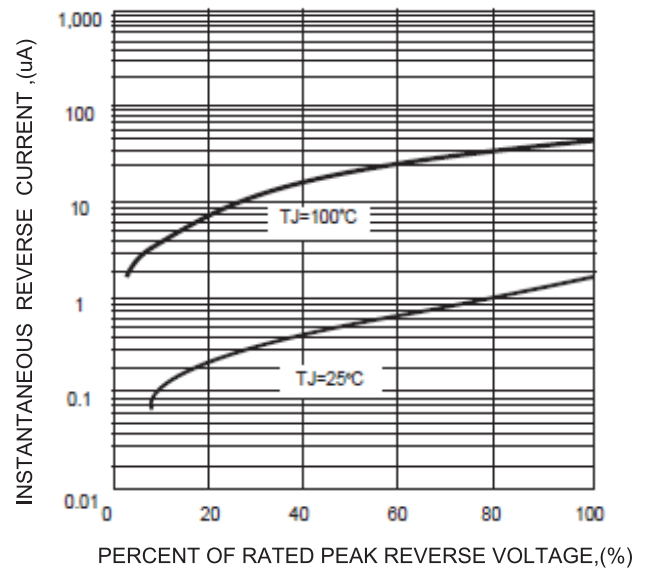


FIG.4-TYPICAL REVERSE CHARACTERISTICS

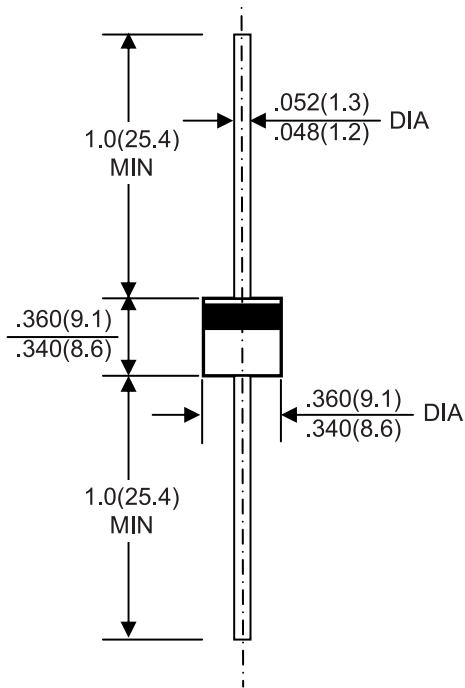


Super Fast Rectifier



Dimensions:

R - 6



Dimensions : Inches (Millimetres)

Part Number Table

Description	Part Number
Super Fast Rectifier	SF63G

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