WEE Technology Company Limited

Ultra-Fast Recovery Rectifiers

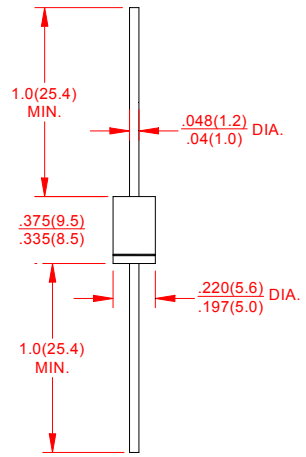
SF51G THRU SF58G

VOLTAGE RANGE 50 to 600 Volts
CURRENT 5.0 Ampere

FEATURES

- Super fast speed switching speed
- Low forward voltage drop
- Low leakage current
- High forward surge capability
- High reliability
- High temperature soldering guaranteed
  260℃/10 seconds,0.375”(9.5mm)lead length at 5 lbs(2.3kg) tension

DO-201AD(DO-27)



Dimensions in inches and (millimeters)

MECHANICAL DATA

- Case: Transfer molded plastic
- Epoxy: UL94V-0 rate flame retardant
- Polarity: Color band denotes cathode end
- Lead: Plated axial lead, solderable per MIL-STD-202E method 208C
- Mounting position: Any

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

- Ratings at 25℃ambient temperature unless otherwise specified
- Single Phase, half wave, 60Hz, resistive or inductive load
- For capacitive load derate current by 20%

	SYMBOLS	SF51G	SF52G	SF53G	SF54G	SF55G	SF56G	SF58G	UNITS
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	50	100	150	200	300	400	600	Volts
Maximum RMS Voltage	V_{RMS}	35	70	105	140	210	280	420	Volts
Maximum DC Blocking Voltage	V_{DC}	50	100	150	200	300	400	600	Volts
Maximum Average Forward Rectified Current at T_A=55℃	$I_{(AV)}$	5.0							Amps
Peak Forward Surge Current 8.3mS single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	150							Amps
Maximum Instantaneous Forward Voltage at 5.0A	V_F	0.95				1.25		1.7	Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage T_A = 25℃	I_R	5.0							μA
Maximum DC Reverse Current at Rated DC Blocking Voltage T_A = 150℃	I_R	100							μA
Maximum Reverse Recovery Time(NOTE1)	T_{RR}	35							nS
Typical Junction Capacitance (NOTE 2)	C_J	50				30			pF
Typical TSFmal Resistance (NOTE 3)	$R_{\theta JA}$	30							℃/W
Operating and Storage Temperature Range	T_J,T_{STG}	-55 to +150							℃

Notes:
1.Reverse Recovery Test Conditions:If=0.5A,Ir=1.0A,Irr=0.25A.
2.Measured at 1.0MHz and applied reverse voltage of 4.0 Volts.
3.Thermal Resistance From Junction to Ambient at. 375”(9.5mm)lead length, P.C. board mounted.

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FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

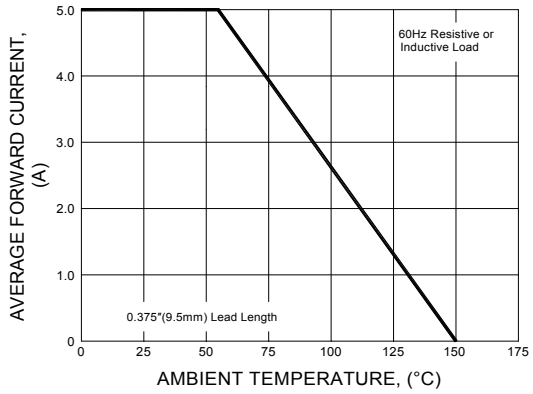


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

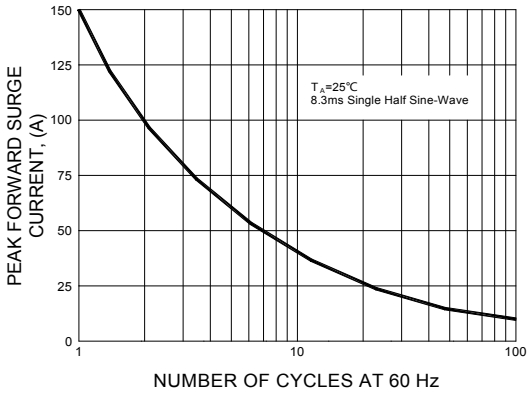


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

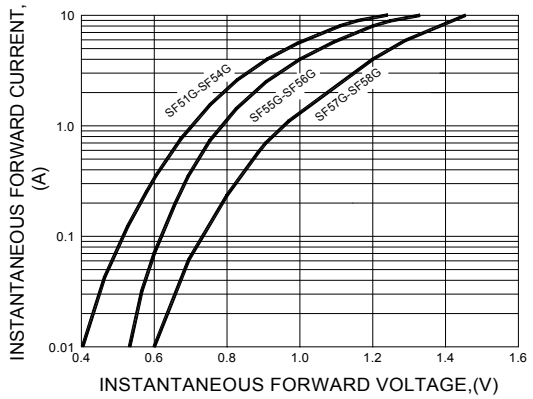


FIG.3-TYPICAL REVERSE CHARACTERISTICS

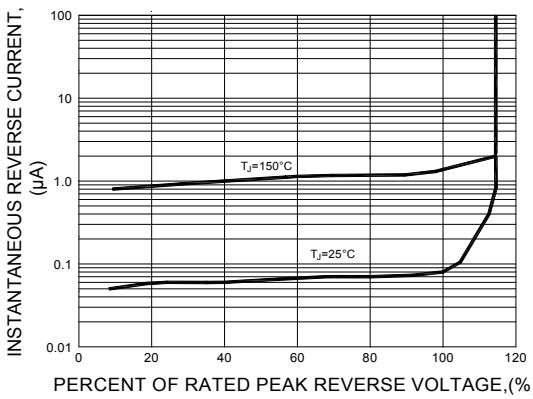
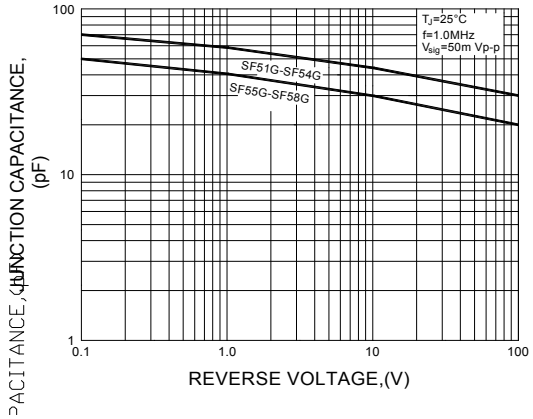
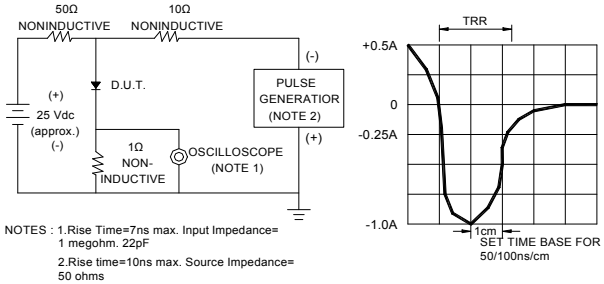


FIG.5-TYPICAL JUNCTION CAPACITANCE



F1G.6-TEST CIRCUIT DIAGRAM AND FORWARD SURGE CURRENT



Note: Specifications are subject to change without notice. For more detail and update, please visit our website.