

SF51 THRU SF58

5.0 Amp Super Fast Rectifier 50 to 600 Volts

Features

- Lead Free Finish/RoHS Compliant(Note 1) ("P" Suffix designates RoHS Compliant. See ordering information)
- Low forward voltage, high current capability and Low leakage
- Superfast recovery times-epitaxial construction
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Halogen free available upon request by adding suffix "-HF"

Maximum Ratings

- Operating Junction Temperature: -55°C to +150°C
- Storage Temperature: -55°C to +150°C
- Maximum Thermal Resistance; 25°C/W Junction To Ambient

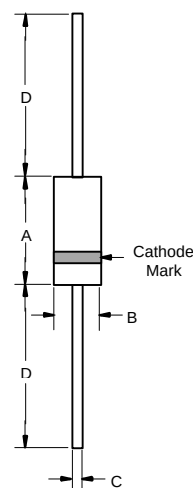
MCC Part Number	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
SF51	50V	35V	50V
SF52	100V	70V	100V
SF53	150V	105V	150V
SF54	200V	140V	200V
SF55	300V	210V	300V
SF56	400V	280V	400V
SF58	600V	420V	600V

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	5.0A	$T_A = 55^\circ\text{C}$
Peak Forward Surge Current	I_{FSM}	150A	8.3ms, half sine
Maximum Instantaneous Forward Voltage SF51-SF54 SF55-SF56 SF58	V_F	0.95V 1.25V 1.70V	$I_{FM} = 5.0A$; $T_A = 25^\circ\text{C}$
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	5.0μA 150μA	$T_A = 25^\circ\text{C}$ $T_A = 125^\circ\text{C}$
Typical Junction Capacitance	C_J	45pF	Measured at 1.0MHz, $V_R=4.0V$
Maximum Reverse Recovery Time	T_{RR}	35nS	$I_F=0.5A$, $I_R=1.0A$, $I_{RR}=0.25A$

Notes:1.High Temperature Solder Exemption Applied, see EU Directive Annex 7.

DO-201AD



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.287	.374	7.30	9.50	
B	.189	.208	4.80	5.30	
C	.048	.052	1.20	1.30	
D	1.000	---	25.40	---	

SF51 thru SF58

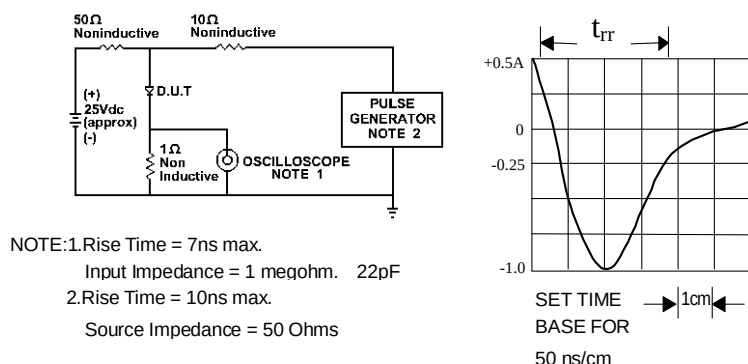


Fig. 1-REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

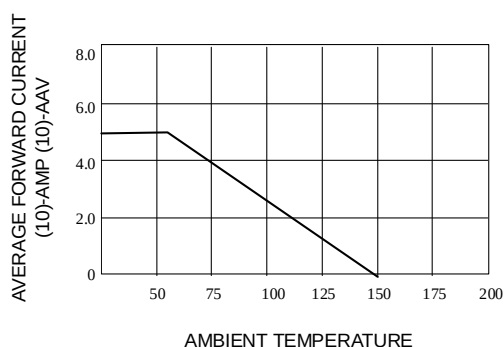


Fig. 2-MAXIMUM AVERAGE FORWARD CURRENT RATING

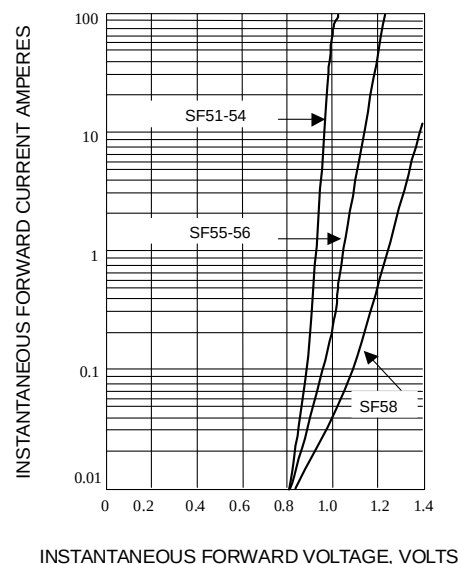


Fig. 3-FORWARD CURRENT DERATING CURVE

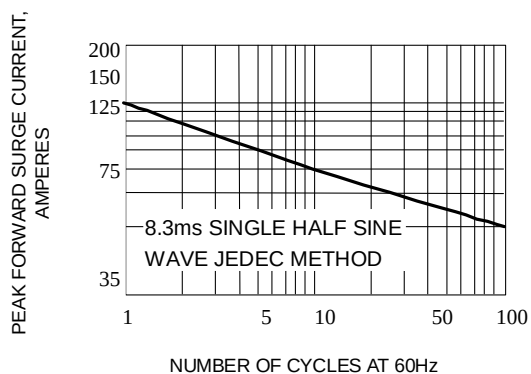


Fig. 4-MAXIMUM NON-REPETITIVE SURGE CURRENT

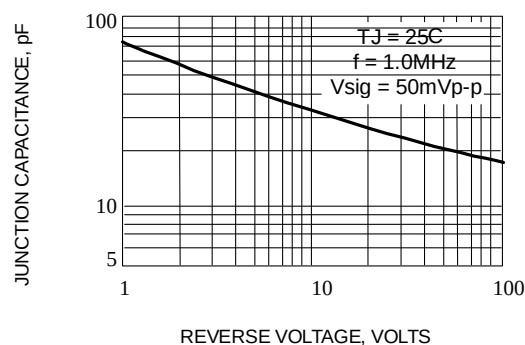


Fig. 5-TYPICAL JUNCTION CAPACITANCE

Ordering Information :

Device	Packing
Part Number-TP	Tape&Reel: 1.2Kpcs/Reel
Part Number-AP	Ammo Packing: 1.2Kpcs/Ammo Box
Part Number-BP	Bulk: 12Kpcs/Carton

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

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