

5.0 Amp Super Fast 50 to 600 Volts Rectifier

SF51 THRU SF57

Features

- Superfast recovery times-epitaxial construction
- Low forward voltage, high current capability
- Low leakage
- High surge capability

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

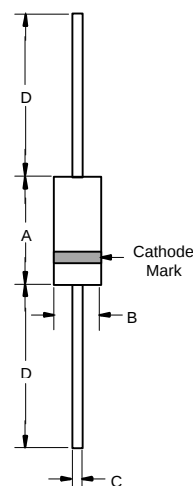
MCC Part Number	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
SF51	50V	35V	50V
SF52	100V	70V	100V
SF53	150V	105V	150V
SF54	200V	140V	200V
SF35	300V	210V	300V
SF56	400V	280V	400V
SF57	600V	420V	600V

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 SF57	V_F	0.95V 1.25V 1.70V	$I_{FM} = 5.0\text{A};$ $T_A = 25^\circ\text{C}$
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	5.0uA 300uA	$T_A = 25^\circ\text{C}$ $T_A = 125^\circ\text{C}$
Typical Junction Capacitance	C_J	45pF	Measured at 1.0MHz, $V_R=4.0\text{V}$
Maximum Reverse Recovery Time	T_{RR}	35nS	$I_F=0.5\text{A}, I_R=1.0\text{A},$ $I_{RR}=0.25\text{A}$

Pulse Test: Pulse width 300 usec, Duty cycle 1%.

DO-201AD



DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	---	.370	---	9.50	
B	---	.250	---	6.40	
C	.048	.052	1.20	1.30	
D	1.000	---	25.40	---	

SF51 thru SF57

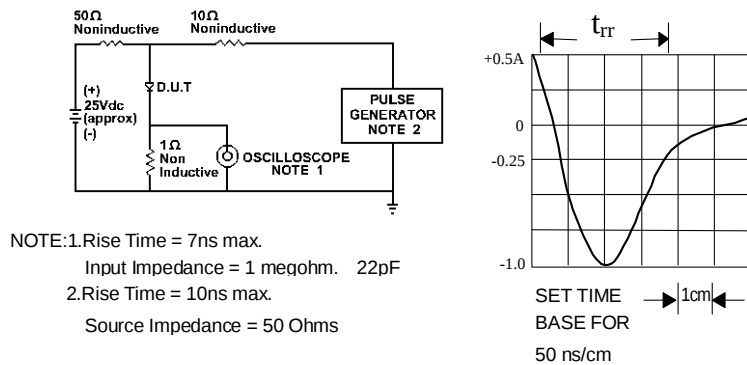


Fig. 1-REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

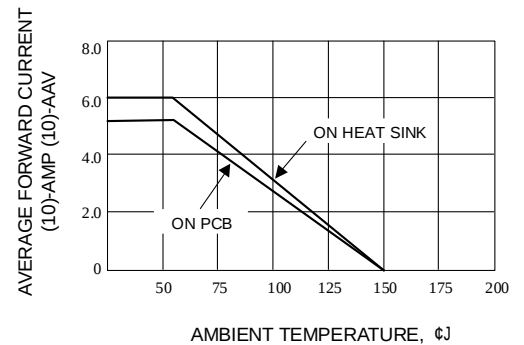


Fig. 2-MAXIMUM AVERAGE FORWARD CURRENT RATING

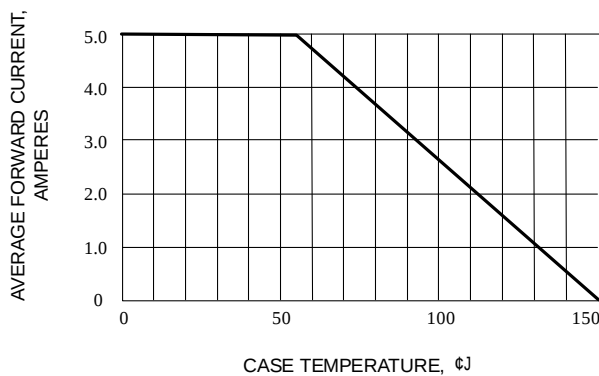


Fig. 3-MAXIMUM AVERAGE FORWARD CCURRENT RATING

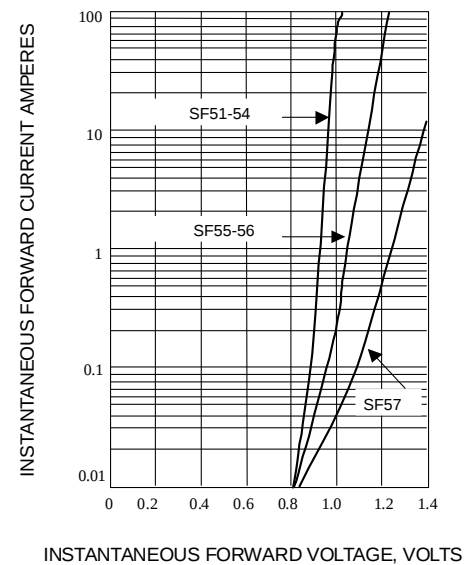


Fig. 4-FORWARD CURRENT DERATING CURVE

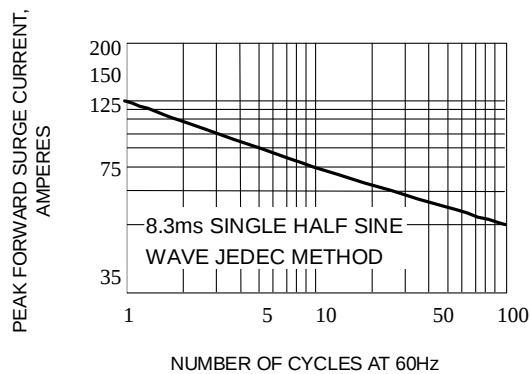


Fig. 5-MAXIMUM NON-REPETITIVE SURGE CURRENT

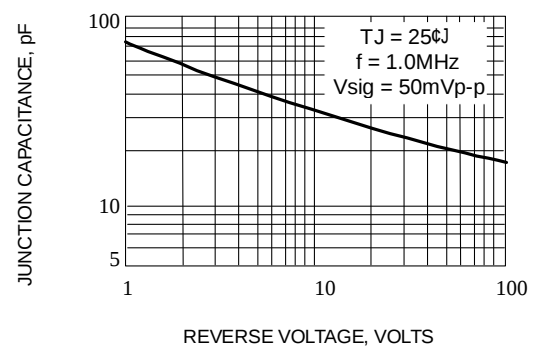


Fig. 6-TYPICAL JUNCTION CAPACITANCE