

Surface Mount Schottky Barrier Rectifier

Reverse Voltage - 20 to 200 V

Forward Current - 5 A

FEATURES

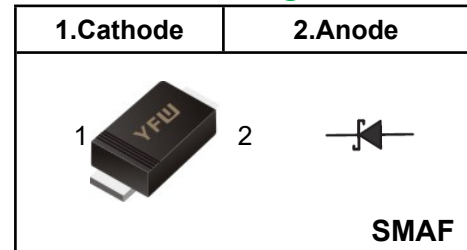
- ◆Metal silicon junction, majority carrier conduction
- ◆For surface mounted applications
- ◆Low power loss, high efficiency
- ◆High forward surge current capability
- ◆For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications
- ◆Lead free in comply with EU RoHS 2011/65/EU directives



MECHANICAL DATA

- ◆Case: SMAF
- ◆Terminals: Solderable per MIL-STD-750, Method 2026
- ◆Approx. Weight: 27mg / 0.00095oz

Pinning



Marking Code

SS52F	SS52
SS54F	SS54
SS56F	SS56
SS58F	SS58
SS510F	SS510
SS512F	SS512
SS515F	SS515
SS520F	SS520

Absolute 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 by 20 %

Parameter	Symbols	SS52F	SS54F	SS56F	SS58F	SS510F	SS512F	SS515F	SS520F	Units	
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	20	40	60	80	100	120	150	200	V	
Maximum RMS voltage	V_{RMS}	14	28	42	56	70	84	105	140	V	
Maximum DC Blocking Voltage	V_{DC}	20	40	60	80	100	120	150	200	V	
Maximum Average Forward Rectified Current	$I_{F(AV)}$	5.0								A	
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed On Rated Load (JEDEC method)	I_{FSM}	175				150					A
Maximum Instantaneous Forward Voltage at 5 A	V_F	0.45	0.55	0.70		0.85				V	
Maximum Instantaneous Reverse Current at Rated DC Reverse Voltage $T_A = 25^{\circ}C$ $T_A = 100^{\circ}C$	I_R					1.0		50			mA
Typical Junction Capacitance ⁽¹⁾	C_j	700			500						pF
Typical Thermal Resistance ⁽²⁾	$R_{\theta JA}$					50					°C/W
Operating Junction Temperature Range	T_j	-55 ~ +150									°C
Storage Temperature Range	T_{stg}	-55 ~ +150									°C

(1) Measured at 1 MHz and applied reverse voltage of 4 V D.C

(2) P.C.B. mounted with 2.0" X 2.0" (5 X 5 cm) copper pad areas.

Fig.1 Forward Current Derating Curve

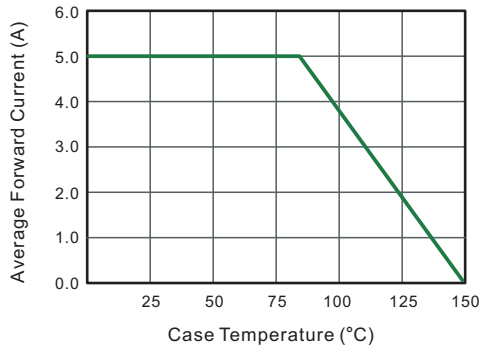


Fig.2 Typical Reverse Characteristics

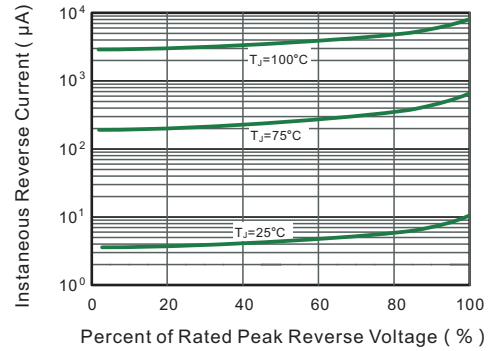


Fig.3 Typical Forward Characteristic

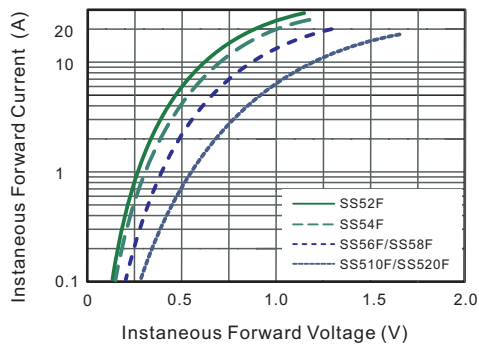


Fig.4 Typical Junction Capacitance

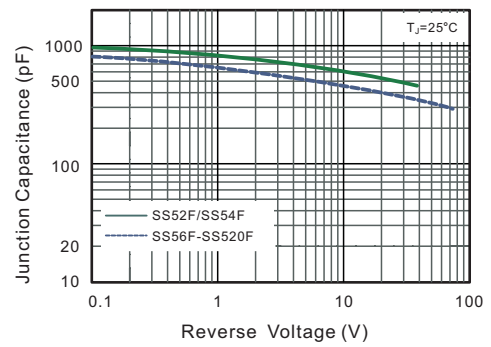


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

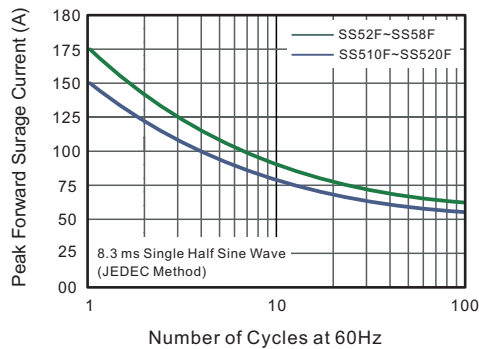
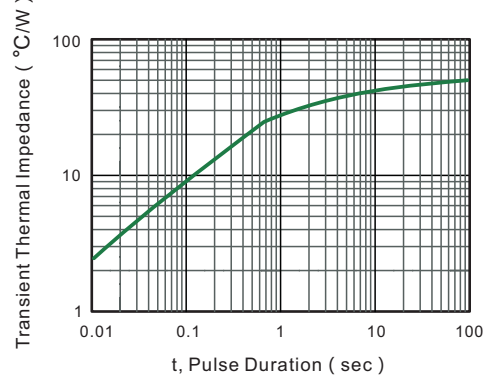
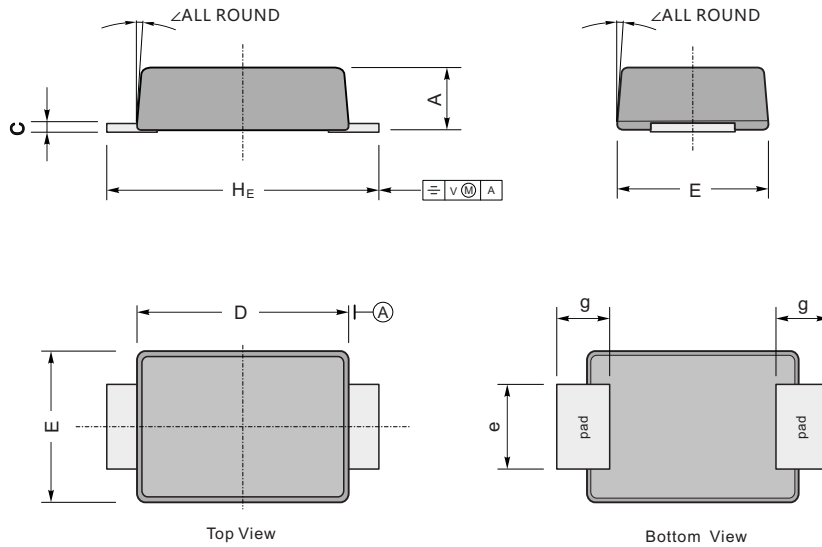


Fig.6- Typical Transient Thermal Impedance



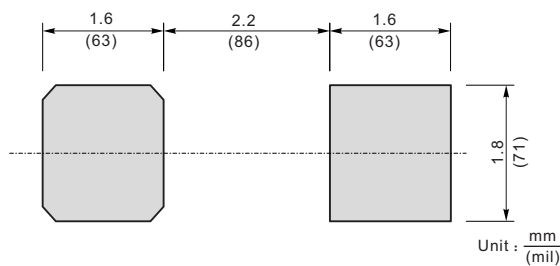
Package Outline SMAF

Plastic surface mounted package; 2 leads



UNIT		A	C	D	E	e	g	H _E	∠
mm	max	1.1	0.20	3.7	2.7	1.6	1.2	4.9	7°
	min	0.9	0.12	3.3	2.4	1.3	0.8	4.4	
mil	max	43	7.9	146	106	63	47	193	
	min	35	4.7	130	94	51	31	173	

The recommended mounting pad size



Summary of Packing Options

Package	Packing Description	Packing Quantity	Industry Standard
SMAF	Tape/Reel, 13" reel	10000	EIA-481-1
	Tape/Reel, 7" reel	3000	EIA-481-1

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