

Schottky Surface Mount Rectifiers

Reverse Voltage: 20 to 200V

Forward Current: 1.0 Amp

Features

- Low profile package
- For surface mounted applications
- Schottky Barrier Chip
- High forward surge capability
- High temperature soldering guaranteed
260°C/10 seconds at terminals

Mechanical Data

• Package: SMAF

Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant, halogen-free

• Terminals: Tin plated leads, solderable per

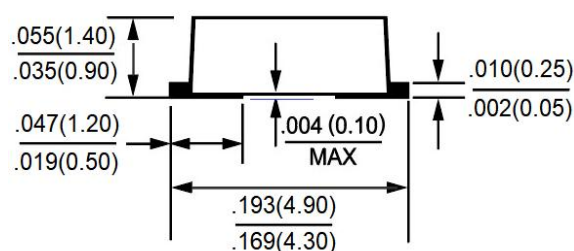
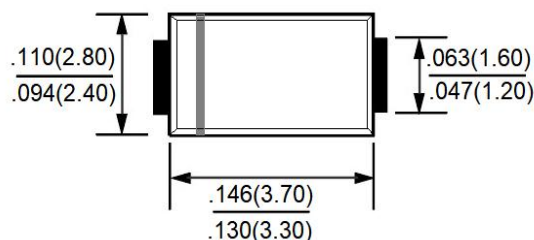
MIL-STD-750, Method 2026

• Polarity: Cathode line denotes the cathode end

Typical Applications

For use in low voltage high frequency inverters, freewheeling, DC/DC converters, and polarity protection applications.

SMAF



Package Outline Dimensions in Inches (Millimeters)

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%.

Parameter&Test Conditions	SYM.	SS 12F	SS 13F	SS 14F	SS 15F	SS 16F	SS 18F	SS 110F	SS 115F	SS 120F	Unit
Device marking code		SS 12F	SS 13F	SS 14F	SS 15F	SS 16F	SS 18F	SS 110F	SS 115F	SS 120F	
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	20	30	40	50	60	80	100	150	200	V
Maximum RMS Voltage	V _{RMS}	14	21	28	35	42	56	70	105	140	V
Maximum DC Blocking Voltage	V _{DC}	20	30	40	50	60	80	100	150	200	V
Average rectified output current @60Hz sine wave, Resistance load, TL (FIG.1)	I _{O(AV)}	1.0									A
Peak Forward Surge Current 8.3ms Single Half Sine-wave Superimposed On Rated Load	I _{FSM}	30									A
Maximum Thermal Resistance, Junction To Ambient (Note1)	R _{θJA}	85									℃/W
Operating junction range	T _J	-55 to+125			-55 to+150						℃
Storage temperature range	T _{STG}	-55 to+150									℃

Electrical Characteristics (Ta=25°C Unless otherwise specified)

Parameter&Test Conditions		SYM.	SS 12F	SS 13F	SS 14F	SS 15F	SS 16F	SS 18F	SS 110F	SS 115F	SS 120F	Unit
Maximum Instantaneous Forward Voltage IFM =1A		V _{FM}	0.55			0.70		0.85		0.95		V
Maximum DC reverse current at rated DC blocking voltage	TA = 25℃	I _R	0.2					0.05				mA
	TA = 100℃		10					5				

Notes:

1. Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.2" x 0.2" (5.0 mm x 5.0 mm) copper pad areas.
2. The typical data above is for reference only.

Rating and Characteristic Curves

FIG. 1- DERATING CURVE OUTPUT RECTIFIED

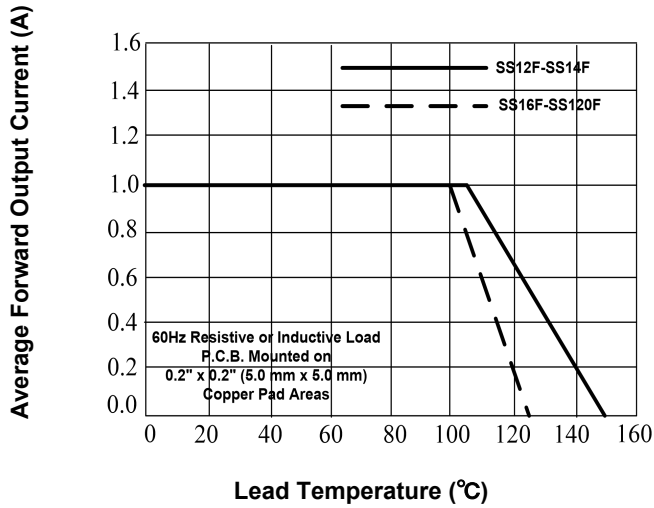


FIG. 2- -MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

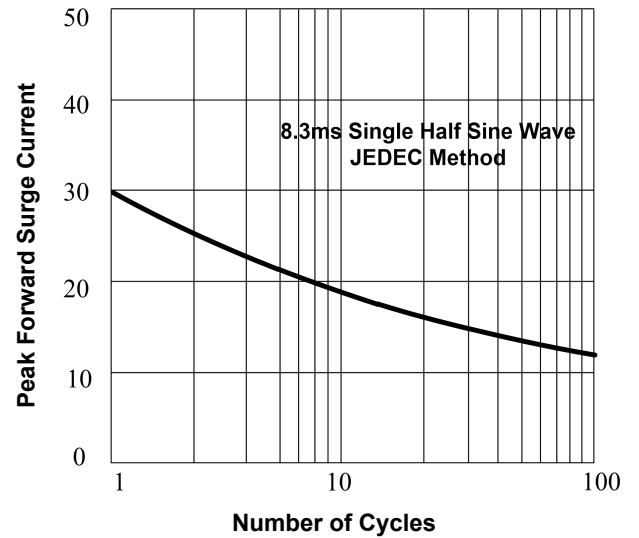


FIG. 3- TYPICAL FORWARD VOLTAGE

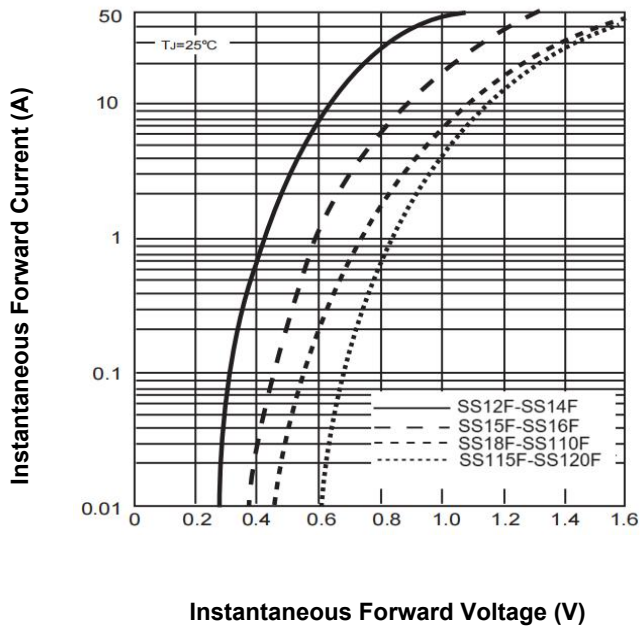
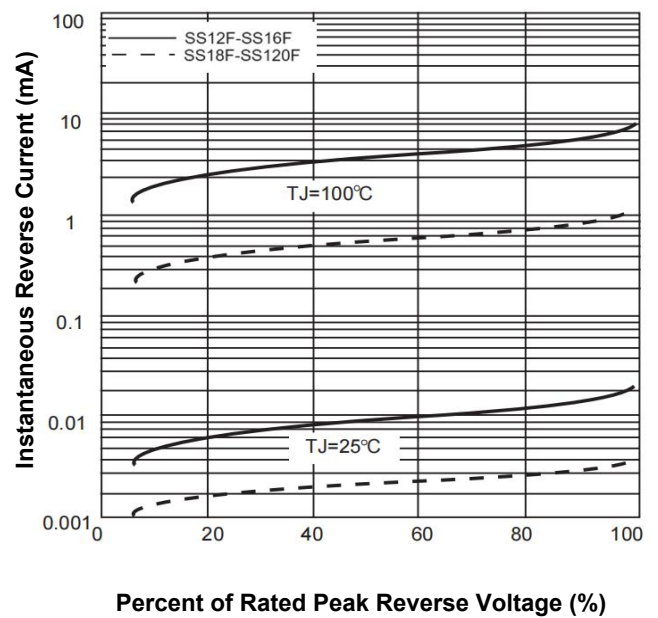
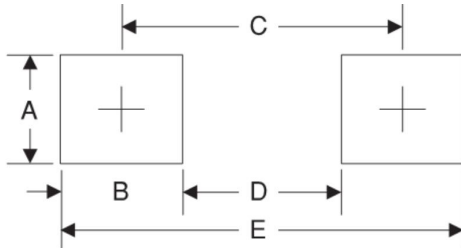


FIG. 4- TYPICAL REVERSE LEAKAGE



The curve above is for reference only.

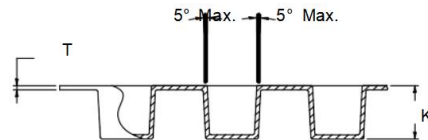
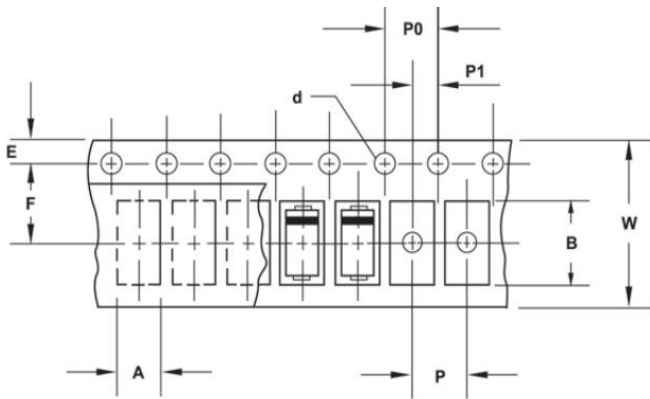
Recommended Pad Layout



SYMBOL	Millimeters
A	1.70
B	2.50
C	3.90
D	1.50
E	6.50

Package Information

Carrier Dimension(mm)



W	F	d	E
12.0	5.5	∅ 1.55	1.75
A	B	K	T
2.9	4.95	1.35	0.25
P0	P1	P	Tolerance
4.0	2.0	4.0	0.10

Package Specifications

Package	Reel Size	Reel DIA. (mm)	Q'TY/Reel (Kpcs)	Box Size (mm)	QTY/Box (Kpcs)	Carton Size (mm)	Q'TY/Carton (Kpcs)
SMAF	11'	278	5	290	10	310*310*400	100
	13'	330	10	340	20	370*360*360	200

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