SS52F THRU SS5200F

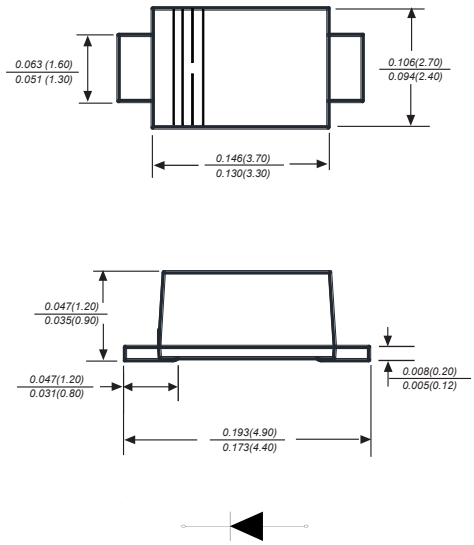
Reverse Voltage - 20 to 200 Volts Forward Current - 5.0 Ampere

SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

Features

- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- For surface mounted applications
- Metal silicon junction,majority carrier conduction
- Low power loss,high efficiency
- Built-in strain relief,ideal for automated placement
- High forward surge current capability
- High temperature soldering guaranteed: 260 °C/10 seconds at terminals

SMAF RoHS COMPLIANT



Dimensions in inches and (millimeters)

Mechanical Data

Case : JEDEC SMAF molded plastic body
Terminals : Solderable per MIL-STD-750,Method 2026
Polarity : Color band denotes cathode end
Mounting Position : Any
Weight : 0.0018 ounce, 0.064 grams

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 current derate by 20%.

Parameter	SYMBOLS	SS52F	SS53F	SS54F	SS55F	SS56F	SS58F	SS510F	SS5150F	SS5200F	UNITS
Marking Code		MDD SS52F	MDD SS53F	MDD SS54F	MDD SS55F	MDD SS56F	MDD SS58F	MDD SS510F	MDD SS5150F	MDD SS5200F	
Maximum repetitive peak reverse voltage	V_{RMM}	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
Maximum average forward rectified current at TL(see fig.1)	$I_{(AV)}$	5.0									A
Peak forward surge current 8.3ms single half sine-wave superimposed onrated load (JEDEC Method)	I_{FSM}	150									A
Maximum instantaneous forward voltage at 5.0A	V_F	0.55			0.70		0.85			0.95	V
Maximum DC reverse current T_A=25℃	I_R	0.5							0.2		mA
at rated DC blocking voltage T_A=125℃		20.0					10.0		2.0		
Typical junction capacitance (NOTE 1)	C_J	200									pF
Typical thermal resistance (NOTE 2)	$R_{\theta JA}$	75.0									℃/W
Operating junction temperature range	T_J	-55 to +125									℃
Storage temperature range	T_{STG}	-55 to +150									℃

Note:1.Measured at 1.0MHz and applied reverse voltage of 4.0V D.C.
2.P.C.B. mounted with 2.0x2.0"(5.0x5.0cm) copper pad areas.
3.The typical data above is for reference only.

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Typical Characterisitics

FIG. 1- FORWARD CURRENT DERATING CURVE

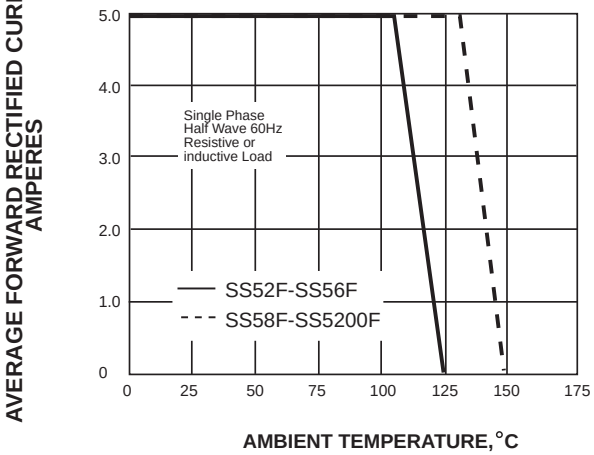


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

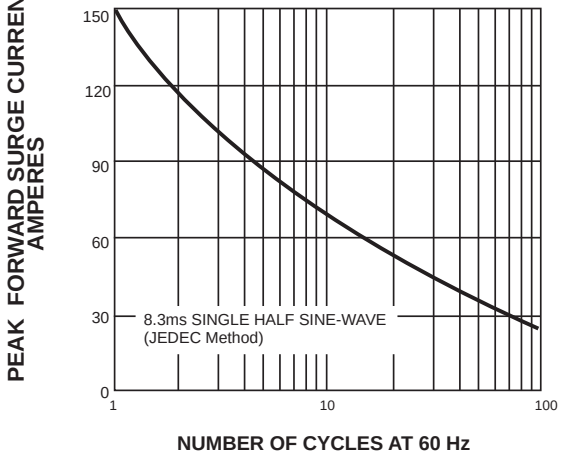


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

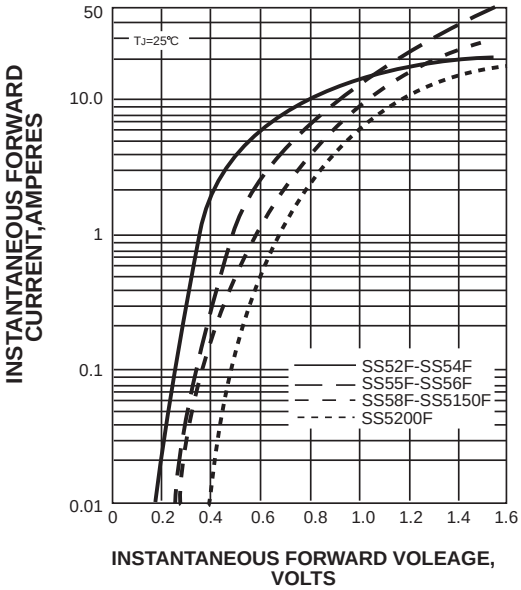


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

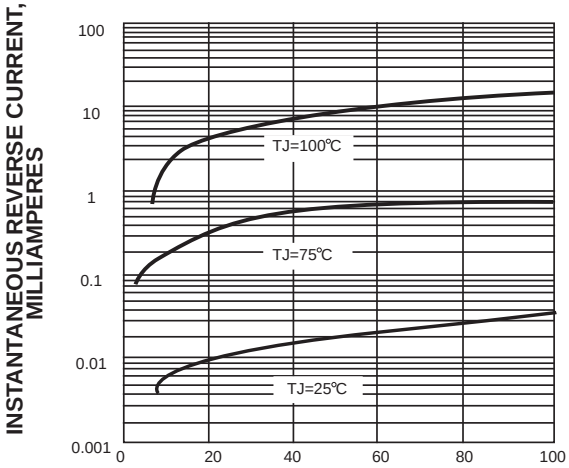


FIG. 5-TYPICAL JUNCTION CAPACITANCE

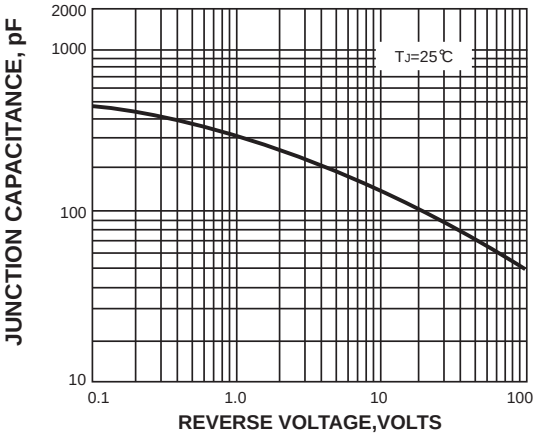
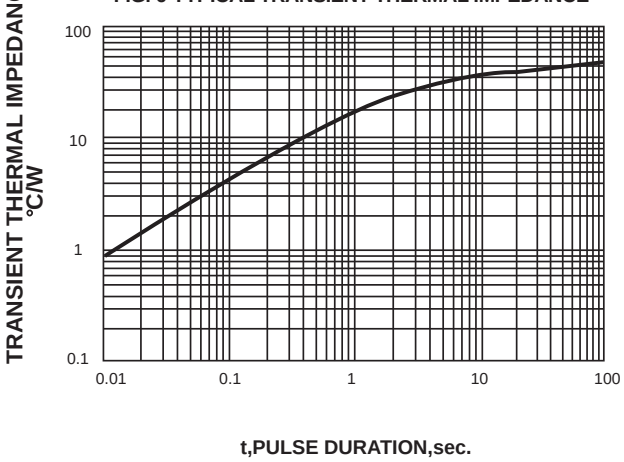


FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



The curve above is for reference only.

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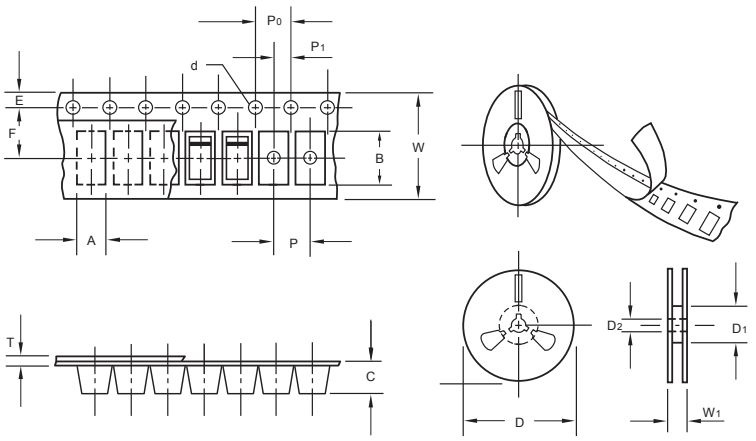
Packing information



unit:mm

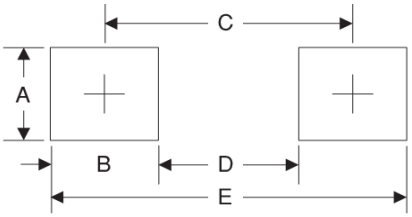
Item	Symbol	Tolerance	SMAF
Carrier width	A	0.1	2.80
Carrier length	B	0.1	4.75
Carrier depth	C	0.1	1.42
Sprocket hole	d	0.05	1.50
7" Reel outside diameter	D	2.0	178.00
7" Reel inner diameter	D_1	min	54.40
Feed hole diameter	D_2	0.5	13.00
Sprocket hole position	E	0.1	1.75
Punch hole position	F	0.1	5.05
Punch hole pitch	P	0.1	4.00
Sprocket hole pitch	P_0	0.1	4.00
Embossment center	P_1	0.1	2.00
Overall tape thickness	T	0.1	0.30
Tape width	W	0.3	8.00
Reel width	W_1	1.0	12.30

Note:Devices are packed in accor dance with EIA standar RS-481-A and specifications listed above.

Reel packing

PACKAGE	REEL SIZE	REEL (pcs)	COMPONENT SPACING (m/m)	BOX (pcs)	INNER BOX (m/m)	REEL DIA, (m/m)	CARTON SIZE (m/m)	CARTON (pcs)	APPROX. GROSS WEIGHT (kg)
SMAF	7"	3,000	4.0	6,000	210*208*203	178	400*265*400	120,000	10.0

Suggested Pad Layout



Symbol	Unit (mm)	Unit (inch)
A	1.8	0.071
B	1.6	0.063
C	3.8	0.150
D	2.2	0.087
E	5.4	0.213

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