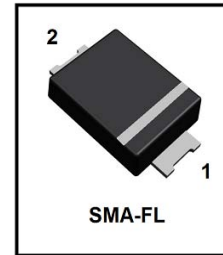


5A SCHOTTKY BARRIER RECTIFIER

Reverse Voltage 150 to 200 Volts Forward Current 5.0 Amperes

Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Low power loss,high efficiency
- For use in low voltage high frequency inverters, free wheeling,and polarity protection applications
- Guardring for over voltage protection
- High temperature soldering guaranteed: 260°C/10 seconds at terminals



We declare that the material of product is Halogen free (green epoxy compound)

Mechanical Data

- **Case:** JEDEC SMA-FL molded plastic over glass die
- **Terminals:** Plated leads, solderable per MIL-STD-750, Method 2026
- **Polarity:** Color band denotes cathode end
- **Mounting Position :** Any
- **Weight:** 28mg
- **Handling precautin:** None

1.Electrical Characteristic

Maximum& Thermal Characteristics Ratings (25°C ambient temperature unless otherwise specified.)

Parameter	symbol	SM5150AF	SM5200AF	Unit
device marking code		S515	S520	
Maximum repetitive peak reverse voltage	V_{RRM}	150	200	V
Maximum RMS voltage	V_{RMS}	105	140	V
Maximum DC blocking voltage	V_{DC}	150	200	V
Maximum average forward rectified current lead length (See fig. 1) at TC = 75°C	$I_{F(AV)}$	5.0		A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	120		A
Typical thermal resistance (Note 1)	$R\theta_{JA}$	150		°C/W
	$R\theta_{JL}$	35		
Operating junction and storage temperature range	T_J, T_{STG}	-40 to +150		°C

Electrical Characteristics Ratings (25°C ambient temperature unless otherwise specified.)

Parameter	symbol	SM5150AF	SM5200AF	Unit
Maximum instantaneous forward voltage at 5.0A	V_F	0.87		V
Maximum DC reverse current TA = 25°C at rated DC blocking voltage TJ = 100°C	I_R	0.1	30.0	mA
Typical junction capacitance at 4.0V, 1MHz	C_J	110		PF

NOTES:

1. 8.0mm² (.013mm thick) land areas



SM5150AF ~ SM5200AF

2. Ratings and Characteristic Curves ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Fig. 1– Forward Current Derating Curve

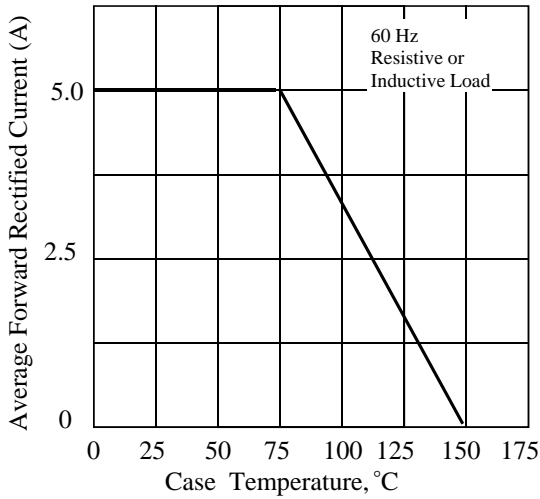


Fig. 2– Maximum Non-repetitive Peak Forward Surge Current

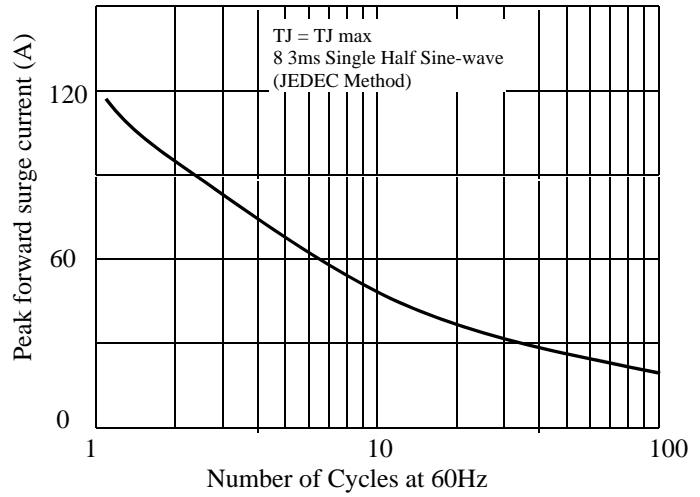


Fig 3.– Typical Instantaneous Forward Characteristics

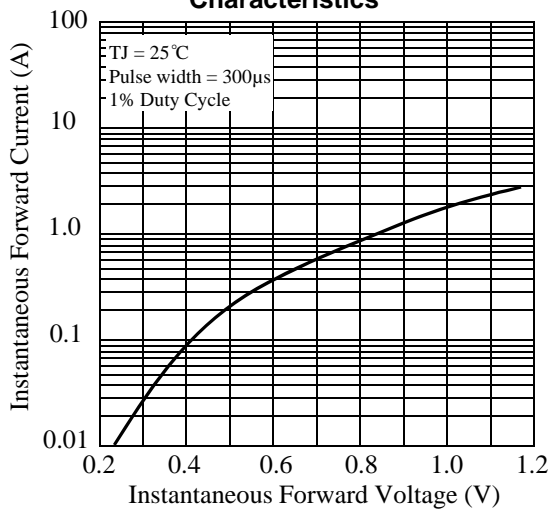


Fig 4.– Typical Reverse Characteristics

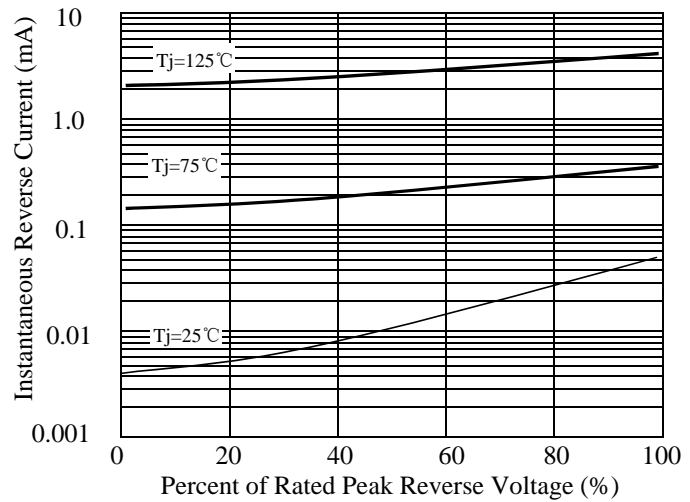


Fig 5.– typical transient thermal impedance

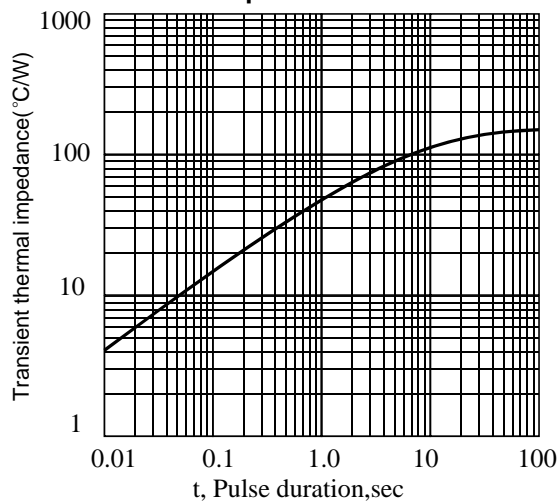
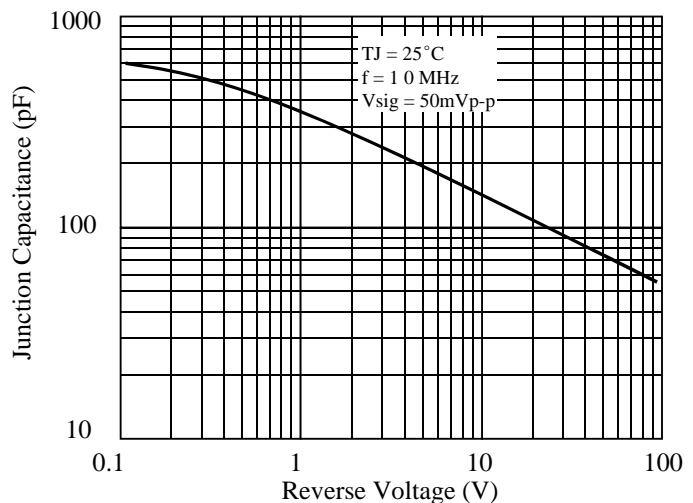
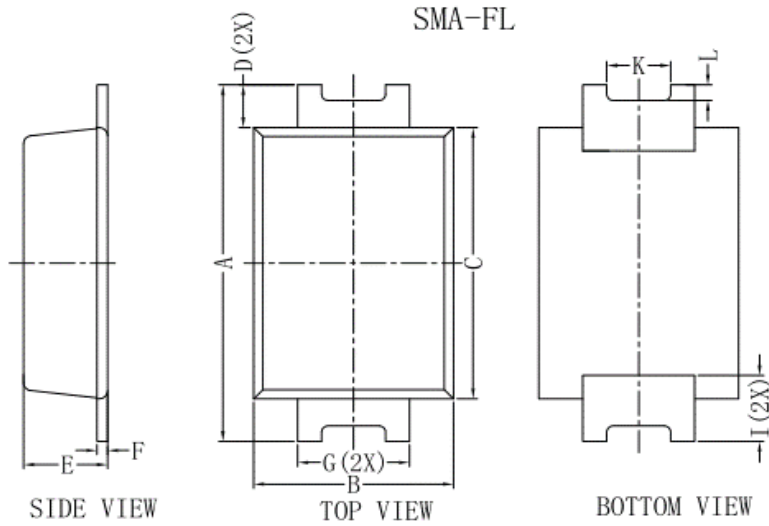


Fig 6.– Typical Junction Capacitance

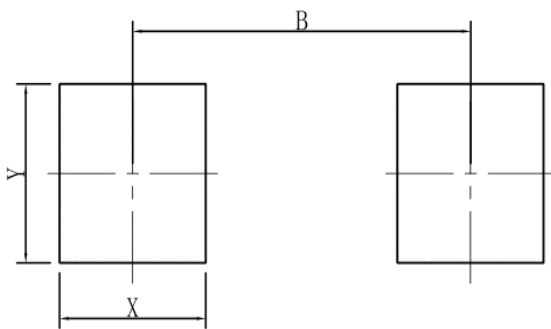


3. OUTLINE AND DIMENSIONS



SMA-FL			
DIM	MIN	MAX	Typ.
A	4.40	4.80	4.60
B	2.30	2.70	2.60
C	3.30	3.70	3.50
D			0.55
E	0.90	1.20	1.05
F	0.11	0.21	0.17
G	1.30	1.50	1.40
I	-	-	0.90
K	-	-	0.80
L	-	-	0.20
All Dimensions in mm			

4. SOLDERING FOOTPRINT



SMA-FL	
DIM	(mm)
X	1.60
Y	1.80
B	3.70