

# SSM520AF thru SSM5100AF

Schottky Barrier Rectifiers  
Reverse Voltage 20 to 100V Forward Current 5.0A

## 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
- \* MSL: 1

## 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

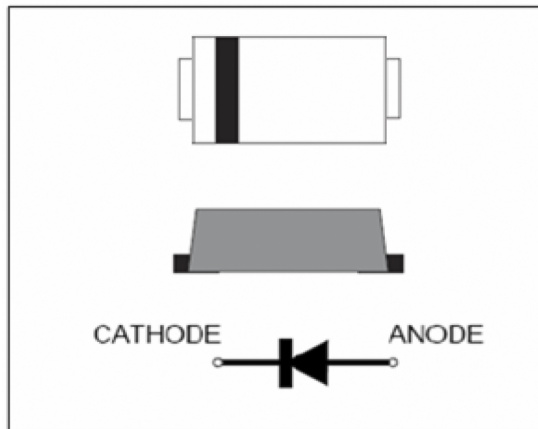
**Weight:** 0.026 g

**Handling precaution:** None

## 1. Electrical Characteristics

**Maximum & Thermal Characteristics Ratings** at 25°C ambient temperature unless otherwise specified.

Parameter Symbol	symbol	SSM520 AF	SSM530 AF	SSM540 AF	SSM545 AF	SSM550 AF	SSM560 AF	SSM580 AF	SSM5100 AF	Unit
device marking code		S52	S53	S54	S545	S55	S56	S58	S510	
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	20	30	40	45	50	60	80	100	V
Maximum RSM voltage	V <sub>RSM</sub>	14	21	28	31.5	35	42	56	70	V
Maximum DC blocking voltage	V <sub>DC</sub>	20	30	40	45	50	60	80	100	V
Maximum average forward rectified current lead length (See fig. 1) at TC = 75°C	IF(AV)	5.0								A
Peak forward surge current 8.3ms single half sine- wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	120								A
Typical thermal resistance (Note 1)	RθJA	150								°C/W
	RθJC	25								
Operating junction and storage temperature range	TJ, TSTG	−40 to +150								°C



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

**Electrical Characteristics Ratings** at 25°C ambient temperature unless otherwise specified.

Parameter Symbol	symbol	SSM520 AF	SSM530 AF	SSM540 AF	SSM545 AF	SSM550 AF	SSM560 AF	SSM580 AF	SSM5100 AF	Unit
Maximum instantaneous forward voltage at 5.0A	V <sub>F</sub>	0.50				0.70		0.85		V
Maximum DC reverse current TA = 25°C at rated DC blocking voltage TJ = 100°C	IR	0.5 30.0								mA
Typical junction capacitance at 4.0V, 1MHz	CJ	110								PF

NOTES:

1. 8.0mm2 (.013mm thick) land areas

# SSM520AF thru SSM5100AF

## 2.Ratings and Characteristic Curves ( TA = 25°C unless otherwise noted )

Fig. 1 - Forward Current Derating Curve

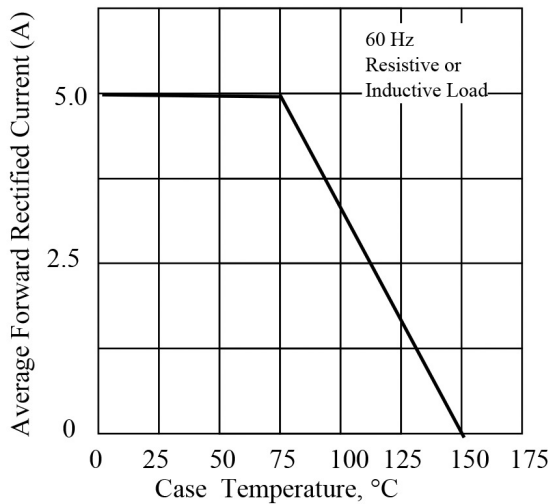


Fig. 2 - Maximum Non-repetitive Peak Forward Surge Current

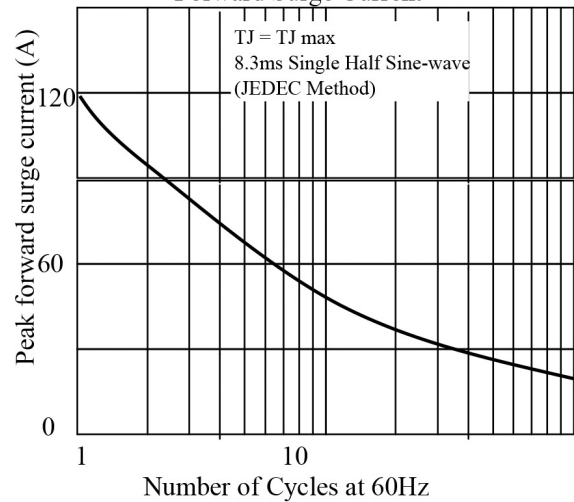


Fig 3. - Typical Instantaneous Forward Characteristics

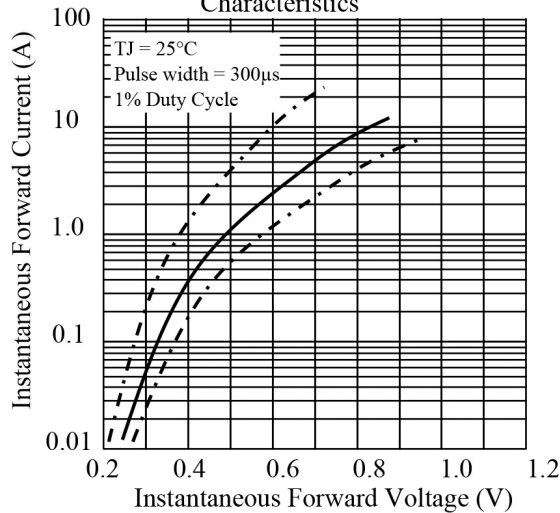


Fig 4. - Typical Reverse Characteristics

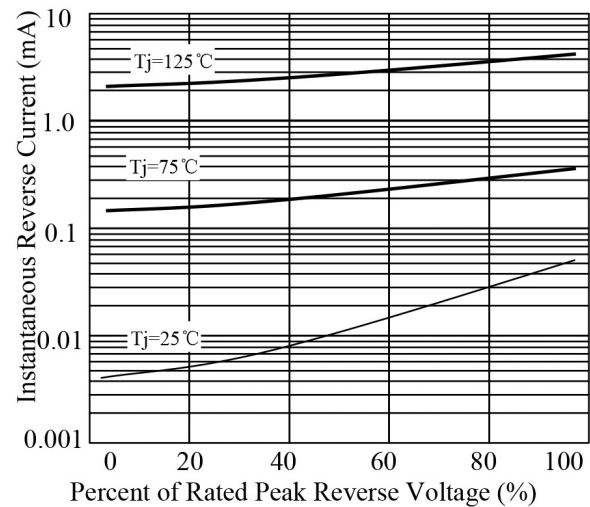


Fig 5. - typical transient thermal impedance

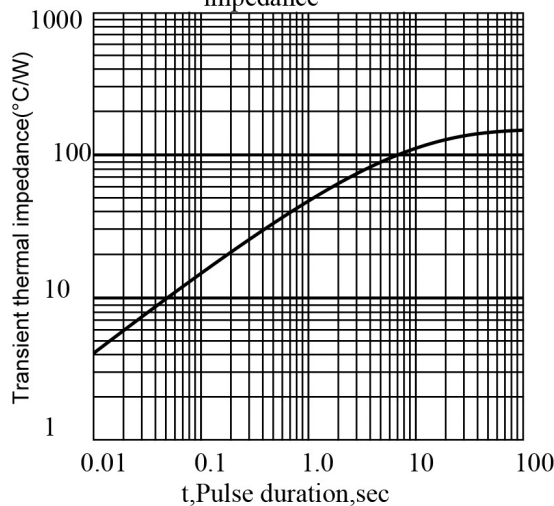
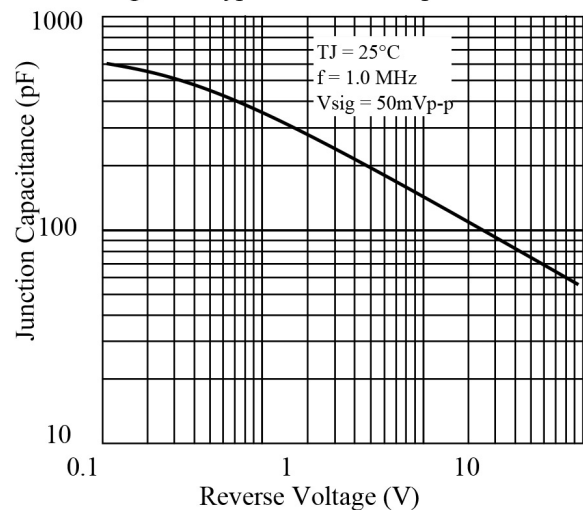


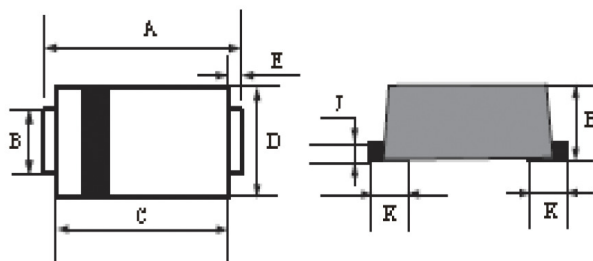
Fig 6. - Typical Junction Capacitance



# SSM520AF thru SSM5100AF

## 3. dimension:

SMA-FL



DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	4.4	4.8	0.173	0.189
B	1.3	1.5	0.051	0.059
C	3.3	3.7	0.130	0.146
D	2.3	2.7	0.091	0.106
E	0.90Typ		0.035Typ	
H	0.9	1.2	0.036	0.047
J	0.11	0.21	0.005	0.009

## Mounting Pad Layout

SMA-FL

