

# Schottky Barrier Rectifiers

## Reverse Voltage 20 to100V Forward Current 3.0A

### 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

### Mechanical Data

**Case:** JEDEC SMA-FL

molded plastic over glass die

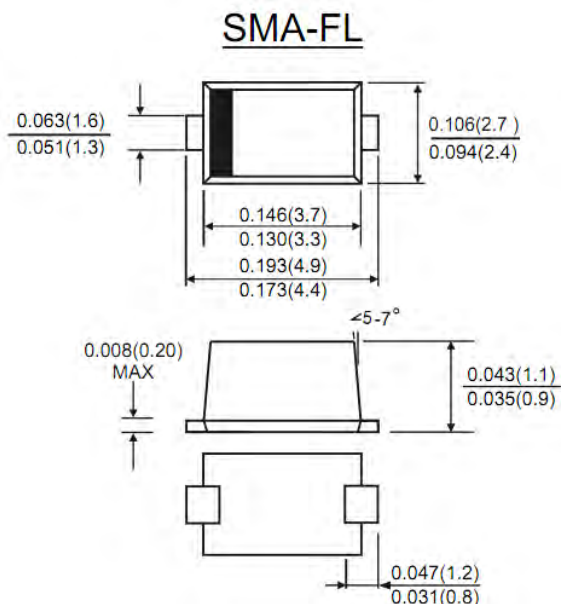
**Terminals:** Plated leads, solderable per MIL-STD-750, Method 2026

**Polarity:** Color band denotes cathode end

**Mounting Position:** Any

**Weight:** 0.0327 g

**Handling precautin:**None



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(Rating 25°C ambient temperature unless otherwise specified. Single phase half wave, 60Hz, resistive or inductive load. For capacitive load, de- rate current by 20%.)

Parameter	Symbol	Part Number						Unit
		SM 320AF	SM 340AF	SM 360AF	SM 3100AF	SM 3150AF	SM 3200AF	
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	20	40	60	100	150	200	V
Working Peak Reverse Voltage	$V_{RMS}$	14	28	42	70	105	140	V
Maximum DC Blocking Voltage	$V_R$	20	40	60	100	150	200	V
Maximum Instantaneous Forward Voltage @ 3A	$V_F$	0.45	0.5	0.7	0.85	0.87	0.9	V
Maximum Average Forward Rectified Current, See Fig.1	$I_o$	3						A
Peak Forward Surge Current, 8.3ms single half sine- wave superimposed on rated load (JEDEC method)	$I_{FSM}$	80						A
Maximum Reverse Current <sup>2</sup>	$I_R$	0.5			0.2			mA
	$T_C=25^\circ C$	10			5			
Typical Thermal Resistance	$R_{JA}$	120						°C/W
Typical Thermal Resistance	$R_{JC}$	90						
Diode Junction Capacitance (Typ. <sup>1</sup> )	$C_J$	180	150	110	100	80	pF	
Operating Temperature Range	$T_J$	- 50 ~ 125				- 50~ 150		°C
Storage Temperature Range	$T_{STG}$	- 50~ 150						°C

Note:

1.  $f=1\text{MHz}$  and applied 4V DC reverse voltage
2. Pulse Test : Pulse Width = 300us, Duty Cycle  $\leq 2.0\%$ .



## Ratings and Characteristic Curves (Ta = 25°C unless otherwise noted)

Fig. 1 - Forward Current Derating Curve

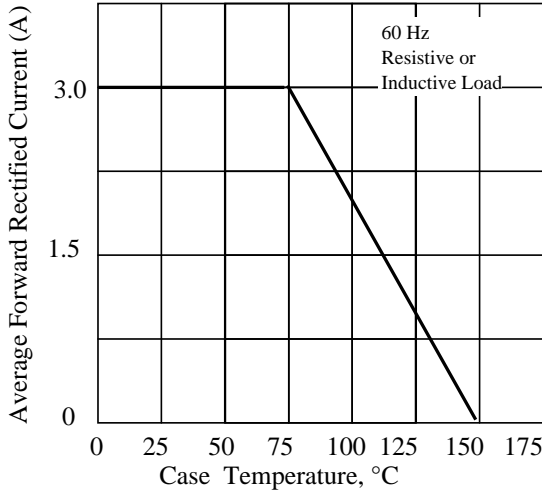


Fig. 2 - Maximum Non-repetitive Peak Forward Surge Current

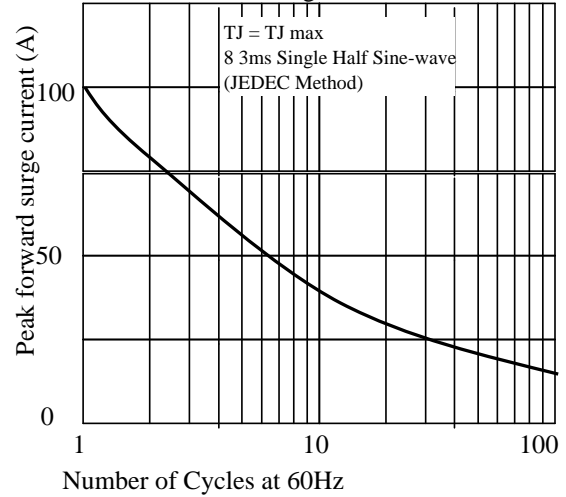


Fig. 3 - Typical Instantaneous Forward Characteristics

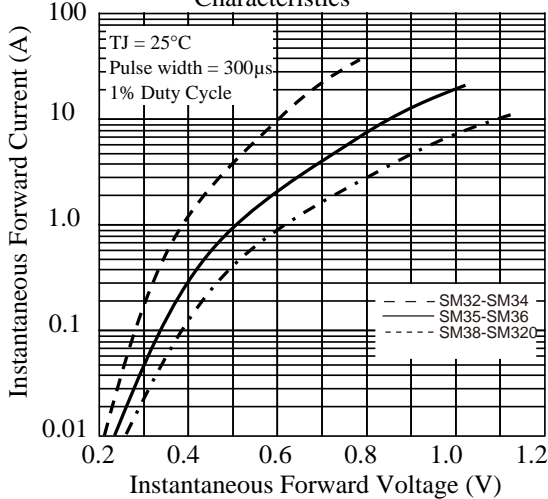


Fig. 4 - Typical Reverse Characteristics

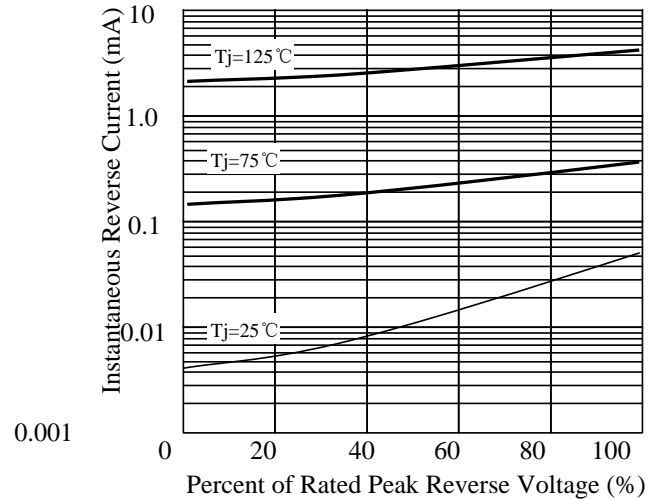


Fig. 5 - typical transient thermal impedance

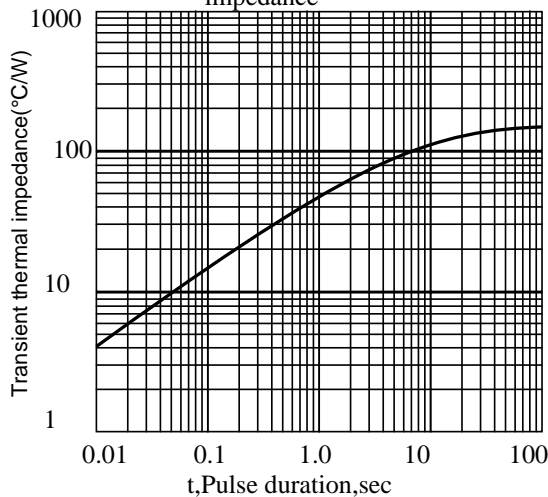


Fig. 6 - Typical Junction Capacitance

