

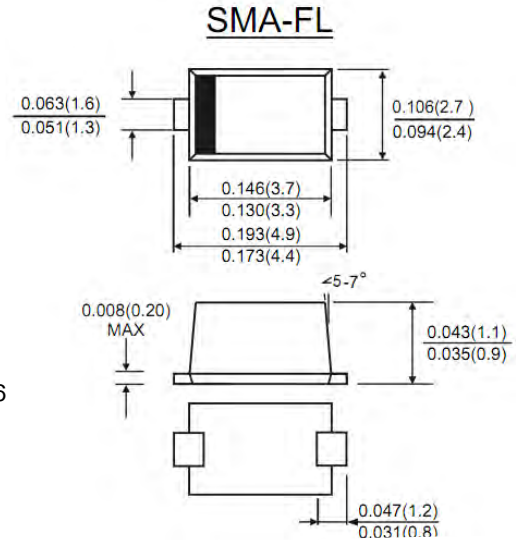
## 1A SURFACE MOUNT ULTRA FAST RECOVERY RECTIFIER Reverse Voltage 50 to 1000 Volts Forward Current 1.0 Amperes

### Features

- Glass passivated junction
- Low forward voltage drop
- High current capability
- Low reverse leakage
- High surge current capability
- High reliability
- Plastic package has Underwriters  
Laboratory Flammability Classification 94V-0

### Mechanical Data

- Case: SMA-FL molded plastic body
- Terminals: Plated axial leads, solderable per MIL-STD-750, method 2026
- Polarity: Color band denotes cathode end
- Mounting Position: Any
- Weight: 0.0027 grams (approximate)



### Maximum Ratings and Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

PARAMETER	SYMBOL	HS1AF	HS1BF	HS1DF	HS1GF	HS1JF	HS1KF	HS1MF	UNITS
Maximum repetitive peak reverse voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V
Maximum RMS voltage	$V_{RMS}$	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	$V_{DC}$	50	100	200	400	600	800	1000	V
Average Rectified Output Current 0.375" (9.5mm) lead length	$I_o$	1.0							A
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load	$I_{FSM}$	30							A
Maximum instantaneous forward voltage at $I_o$	$V_F$	1.0		1.3		1.7		V	
Maximum DC reverse current @ $T_J = 25^\circ\text{C}$ at rated DC blocking voltage @ $T_J = 100^\circ\text{C}$	$I_R$	5.0 50							$\mu\text{A}$
Maximum reverse recovery time (Note 1)	$t_{rr}$	50				75			ns
Typical junction capacitance (Note 2)	$C_j$	10							pF
Typical thermal resistance	$R_{JA}$	80							$^\circ\text{C}/\text{W}$
Operating junction temperature range	$T_J$	-55 to +150							$^\circ\text{C}$
Storage temperature range	$T_{STG}$	-55 to +150							$^\circ\text{C}$

Notes:

1. Reverse Recovery Time test condition:  $I_F=0.5\text{A}$ ,  $I_R=1.0\text{A}$ ,  $I_{RR}=0.25\text{A}$ .
2. Measured at 1 MHz and applied reverse voltage of 4.0 VDC.

## Ratings and Characteristic Curves

FIG.1 – TYPICAL FORWARD CURRENT DERATING CURVE

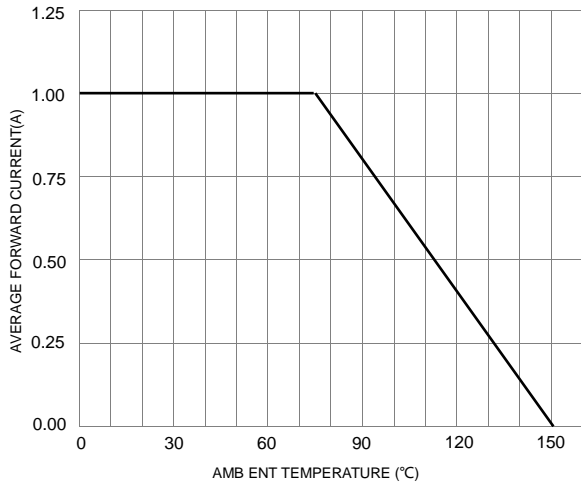


FIG. 2 – TYPICAL FORWARD CHARACTERISTICS

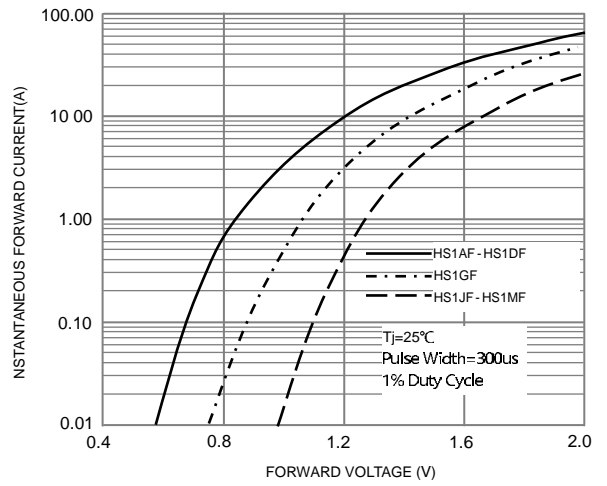


FIG. 3 – MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

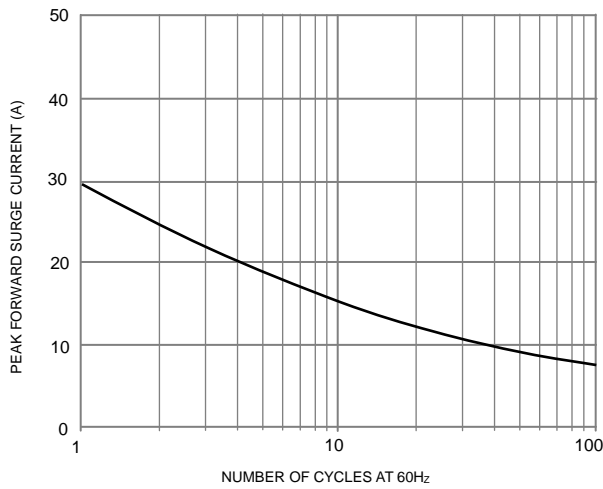


FIG.4 – TYPICAL REVERSE CHARACTERISTICS

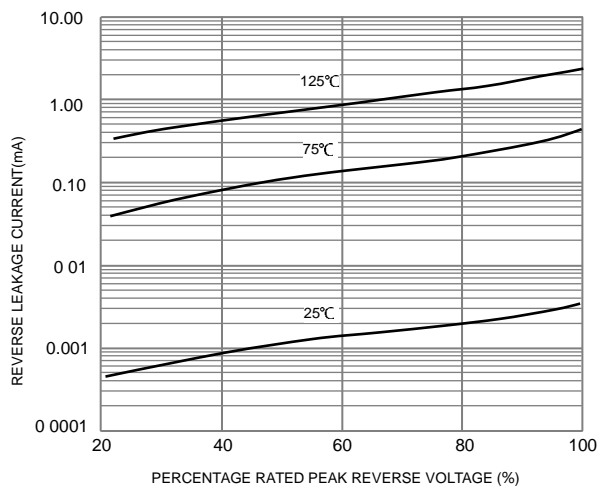


FIG. 5 – TYPICAL JUNCTION CAPACITANCE

