

SURFACE MOUNT SUPERFAST RECTIFIER

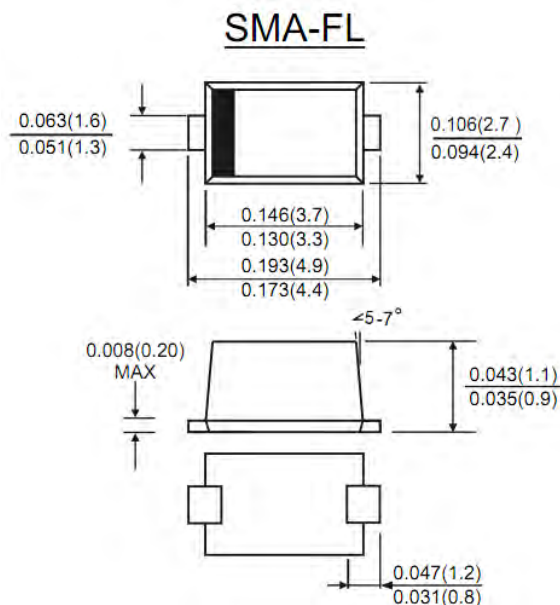
Reverse Voltage 50 to 600 Volts Forward Current 1.0 Amperes

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	ES1AF	ES1BF	ES1DF	ES1GF	ES1JF	UNITS
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	V
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	V
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	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	0.95		1.3	1.7	V	
Maximum reverse recovery time (Note 1)	t_{rr}	35					nS
Maximum DC reverse current at rated DC blocking voltage	I_R	5.0 50					μA
Typical junction capacitance (Note 2)	C_j	10					pF
Typical thermal resistance	R_{JA}	80					°C/W
Operating junction temperature range	T_J	-55 to +150					°C
Storage temperature range	T_{STG}	-55 to +150					°C

Notes:

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



ES1AF THRU ES1JF

Ratings and Characteristic Curves

FIG. 1 – TYPICAL FORWARD CURRENT DERATING CURVE

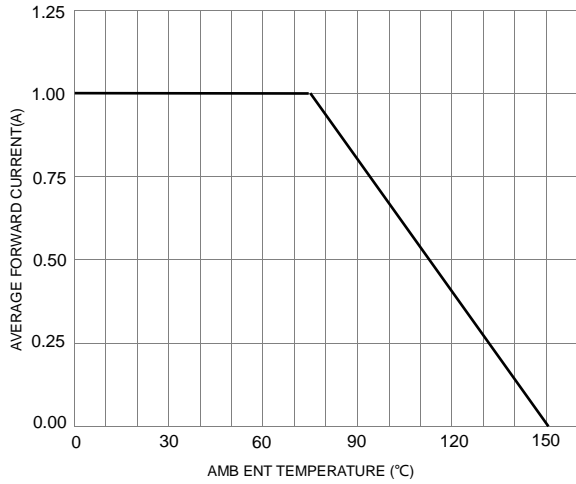


FIG. 2 – TYPICAL FORWARD CHARACTERISTICS

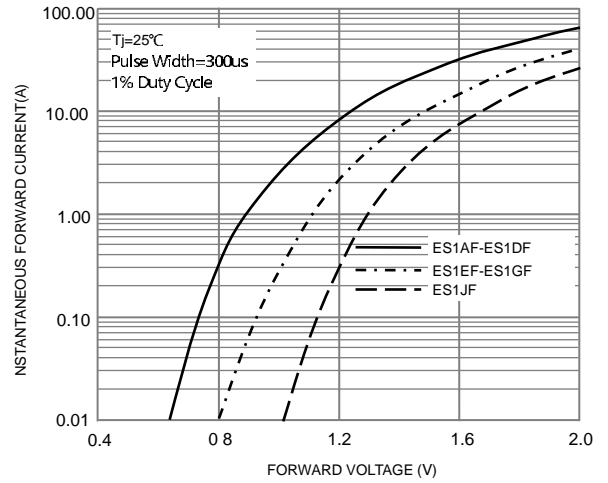


FIG. 3 – MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

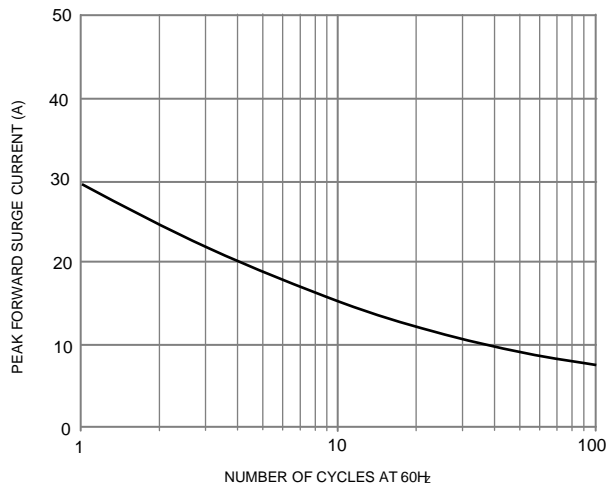


FIG. 4 – TYPICAL REVERSE CHARACTERISTICS

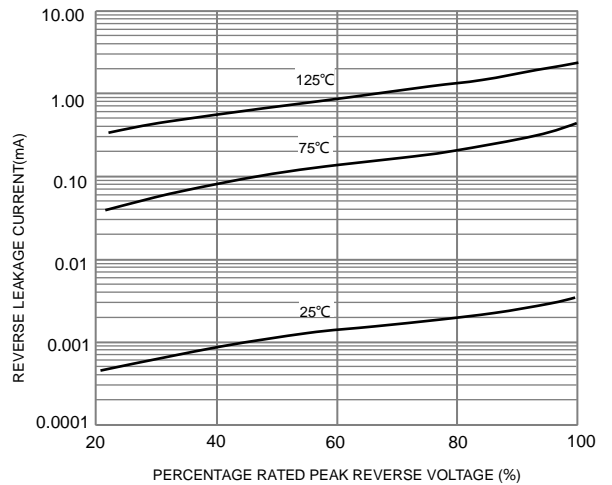


FIG. 5 – TYPICAL JUNCTION CAPACITANCE

