



ES1AF THRU ES1JF

SURFACE MOUNT SUPER FAST RECTIFIER

Reverse Voltage - 50 to 600 Volts Forward Current - 1.0 Ampere

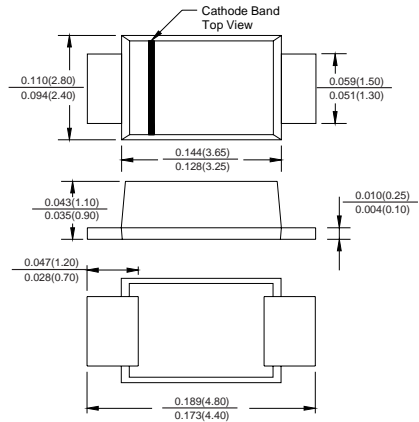
FEATURES

The plastic package carries Underwriters Laboratory
Flammability Classification 94V-0
For surface mounted applications
Super fast switching for high efficiency
Low reverse leakage
Built-in strain relief, ideal for automated placement
High forward surge current capability
High temperature soldering guaranteed:
260°C/10 seconds at terminals
Glass passivated chip junction

MECHANICAL DATA

Case: JEDEC SMAF molded plastic body over passivated chip
Terminals: Solder plated, solderable per MIL-STD-750,
Method 2026
Polarity: Color band denotes cathode end
Mounting Position: Any
Weight: 0.0011 ounce, 0.029 grams

SMAF



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.
Single phase half wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

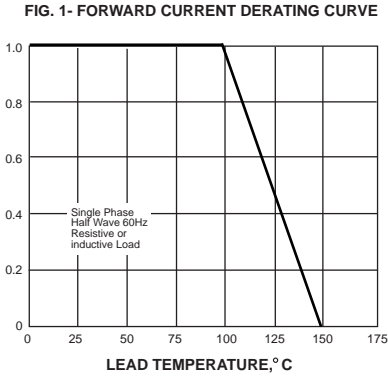
	SYMBOLS	ES1AF	ES1BF	ES1CF	ES1DF	ES1EF	ES1GF	ES1JF	UNITS	
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	150	200	300	400	600	VOLTS	
Maximum RMS voltage	V_{RMS}	35	70	105	140	210	280	420	VOLTS	
Maximum DC blocking voltage	V_{DC}	50	100	150	200	300	400	600	VOLTS	
Maximum average forward rectified current at $T_L=100^\circ\text{C}$	$I_{(AV)}$	1.0							Amp	
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	30.0							Amps	
Maximum instantaneous forward voltage at 1.0A	V_F	0.95			1.25		1.7		Volts	
Maximum DC reverse current $T_A=25^\circ\text{C}$ at rated DC blocking voltage $T_A=125^\circ\text{C}$	I_R	5.0				100.0				μA
Maximum reverse recovery time (NOTE 1)	t_{rr}	35								ns
Typical junction capacitance (NOTE 2)	C_J	15.0								pF
Typical thermal resistance (NOTE 3)	$R_{\theta JA}$	95.0								$^\circ\text{C/W}$
Operating junction and storage temperature range	$T_{J,STG}$	-55 to +150							$^\circ\text{C}$	

Note: 1. Reverse recovery condition $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{rr}=0.25\text{A}$
2. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
3. P.C.B. mounted with 0.2x0.2" (5.0x5.0mm) copper pad areas

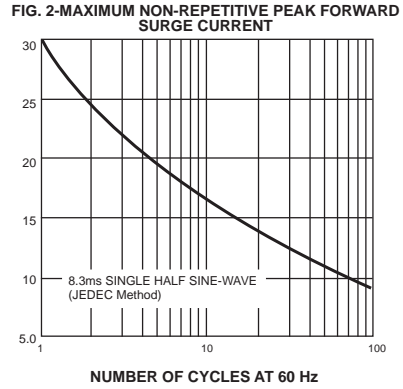


RATINGS AND CHARACTERISTIC CURVES ES1AF THRU ES1JF

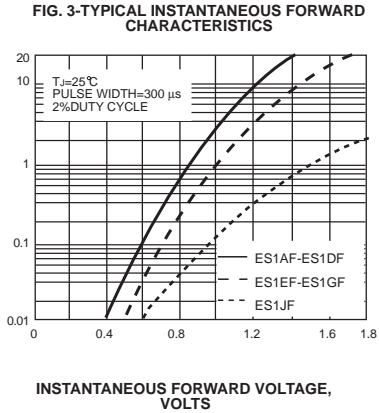
AVERAGE FORWARD RECTIFIED CURRENT, AMPERES



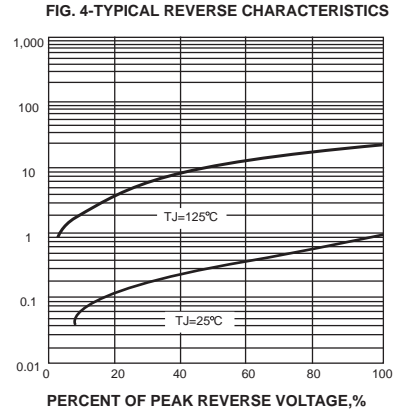
PEAK FORWARD SURGE CURRENT, AMPERES



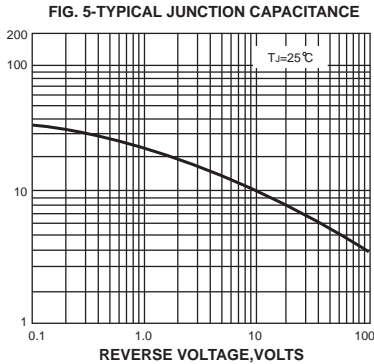
INSTANTANEOUS FORWARD CURRENT, AMPERES



INSTANTANEOUS REVERSE CURRENT, MICROAMPERES



JUNCTION CAPACITANCE, pF



TRANSIENT THERMAL IMPEDANCE, °C/W

