

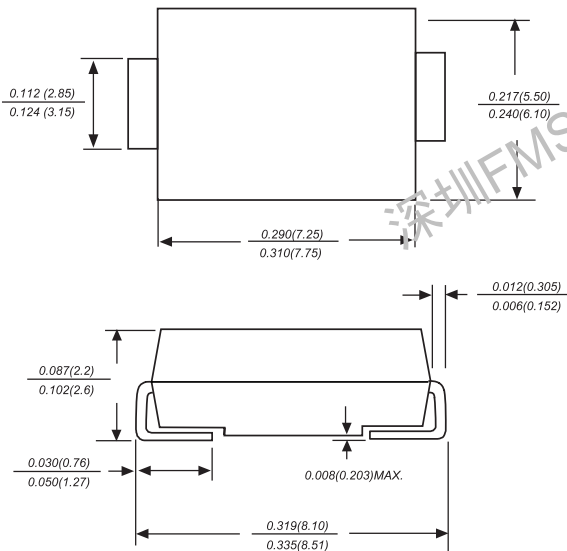
# SURFACE MOUNT SUPER FAST RECTIFIER

# Formosa MS

## ES3J THRU ES3M

Reverse Voltage - 600 to 1000 Volts Forward Current - 3.0 Amperes

### SMC /DO-214AB



Dimensions in inches and (millimeters)

### 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: 250°C/10 seconds at terminals

### MECHANICAL DATA

**Case:** JEDEC DO-214AB molded plastic body  
**Terminals:** Plated axial leads, solderable per MIL-STD-750, Method 2026  
**Polarity:** Color band denotes cathode end  
**Mounting Position:** Any  
**Weight:** 0.008 ounce, 0.217 grams

### 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	ES3J	ES3K	ES3M	UNITS
Maximum repetitive peak reverse voltage	$V_{RRM}$	600	800	1000	VOLTS
Maximum RMS voltage	$V_{RMS}$	420	560	700	VOLTS
Maximum DC blocking voltage	$V_{DC}$	600	800	1000	VOLTS
Maximum average forward rectified current at $T_L=55^\circ C$	$I_{(AV)}$	3.0			Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	100.0			Amps
Maximum instantaneous forward voltage at 3.0A	$V_F$	1.7	3.2		Volts
Maximum DC reverse current at rated DC blocking voltage $T_A=25^\circ C$ $T_A=100^\circ C$	$I_R$	5.0 50.0			$\mu A$
Maximum reverse recovery time (NOTE 1)	$t_{rr}$	35			ns
Typical junction capacitance (NOTE 2)	$C_J$	130.0			pF
Typical thermal resistance (NOTE 3)	$R_{qJA}$	40.0			$^\circ C/W$
Operating junction and storage temperature range	$T_J, T_{STG}$	-65 to +150			$^\circ C$

**Note:** 1. Reverse recovery condition  $I_F=0.5A, I_R=1.0A, I_{rr}=0.25A$   
 2. Measured at 1MHz and applied reverse voltage of 4.0V D.C.  
 3. P.C.B. mounted with 0.6x0.6" (16x16mm) copper pad areas

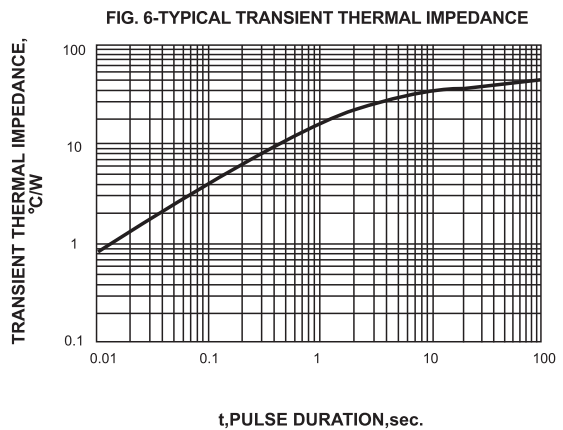
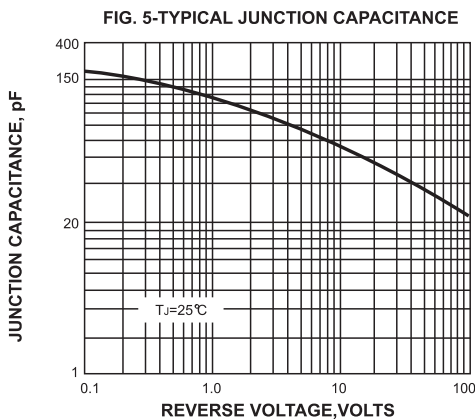
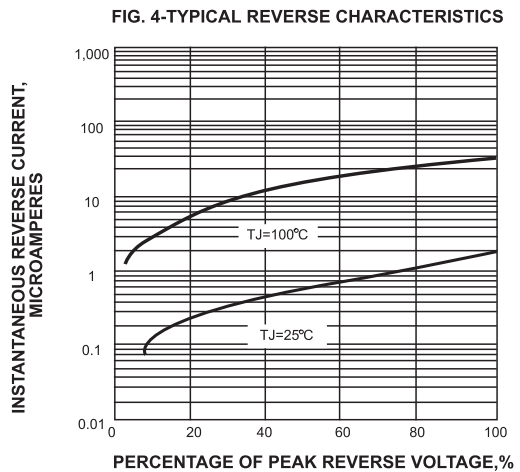
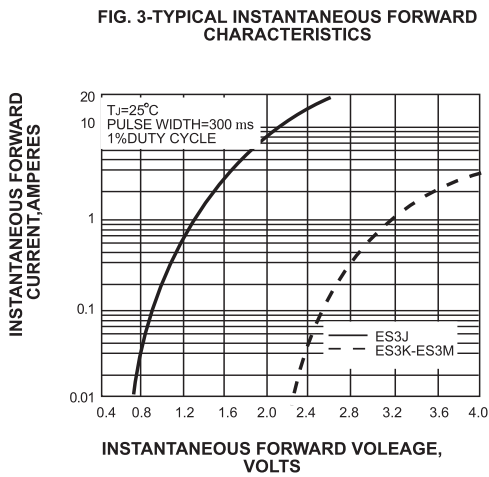
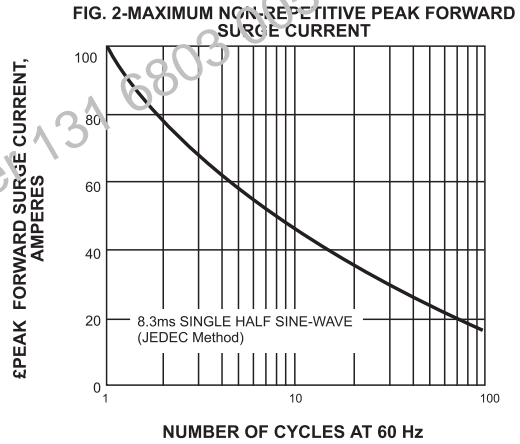
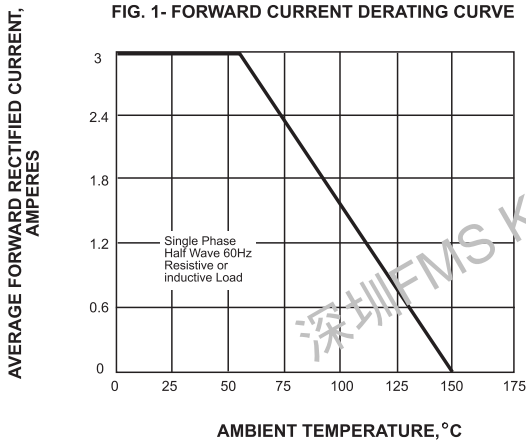


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**RATINGS AND CHARACTERISTIC CURVES ES3J THRU ES3M**

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