

# ES5J THRU ES5M

## 5.0A Surface Mount Super Fast Rectifiers-600 -1000V

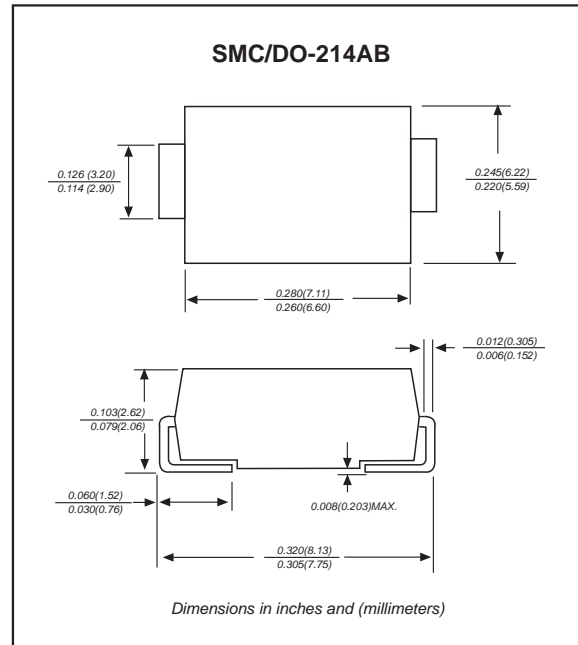
### Features

- ▶ 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
- ▶ Glass passivated chip junction
- ▶ Compliant to RoHS Directive 2011/65/EU

### Mechanical data

- ▶ **Case:** JEDEC DO-214AB molded plastic body
- ▶ **Terminals:** Solder plated, solderable per MIL-STD-750, Method 2026
- ▶ **Polarity:** Color band denotes cathode end
- ▶ **Mounting Position:** Any
- ▶ **Weight:** 0.007 ounce, 0.25 grams

### Package outline



### Maximum ratings and Electrical Characteristics (AT T<sub>A</sub>=25°C unless otherwise noted)

PARAMETER	CONDITIONS	Symbol	MIN.	TYP.	MAX.	UNIT
Forward rectified current	See Fig.2	I <sub>O</sub>			5.0	A
Forward surge current	8.3ms single half sine-wave (JEDEC methode)	I <sub>FSM</sub>			150	A
Reverse current	V <sub>R</sub> = V <sub>RRM</sub> T <sub>A</sub> = 25°C	I <sub>R</sub>			5.0	μA
	V <sub>R</sub> = V <sub>RRM</sub> T <sub>A</sub> = 100°C				50	
Thermal resistance	Junction to ambient NOTE 1	R <sub>θJA</sub>		40		°C/W
Diode junction capacitance	f=1MHz and applied 4V DC reverse voltage	C <sub>J</sub>		180		pF
Storage temperature		T <sub>STG</sub>	-65		+150	°C

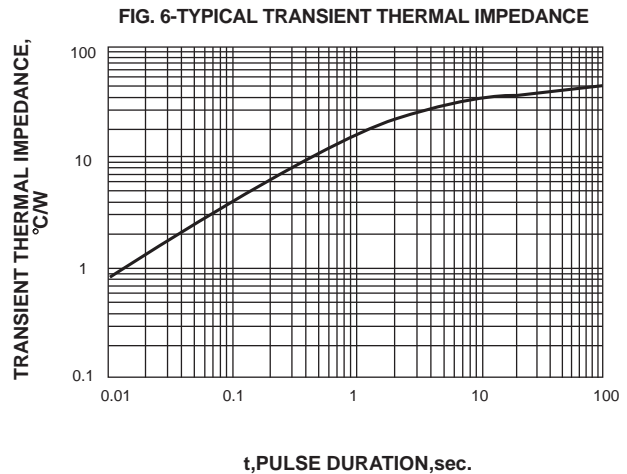
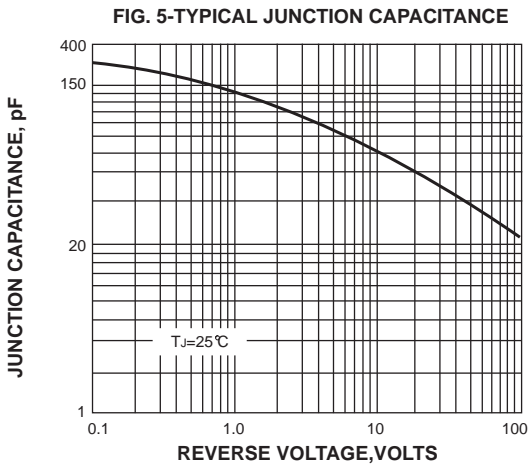
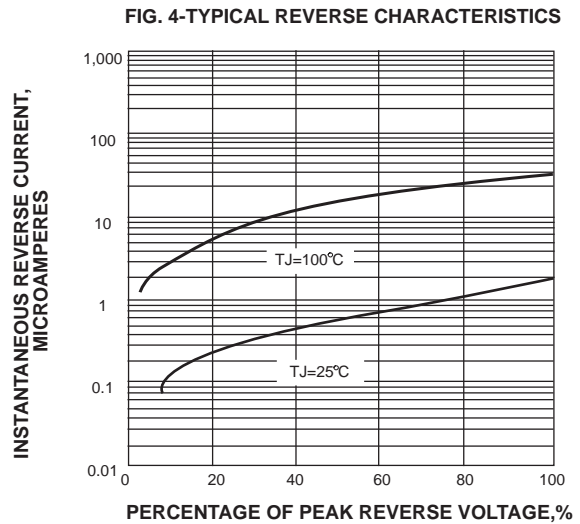
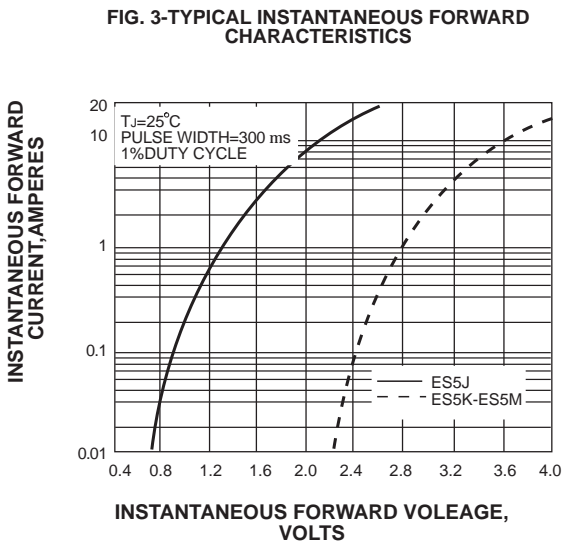
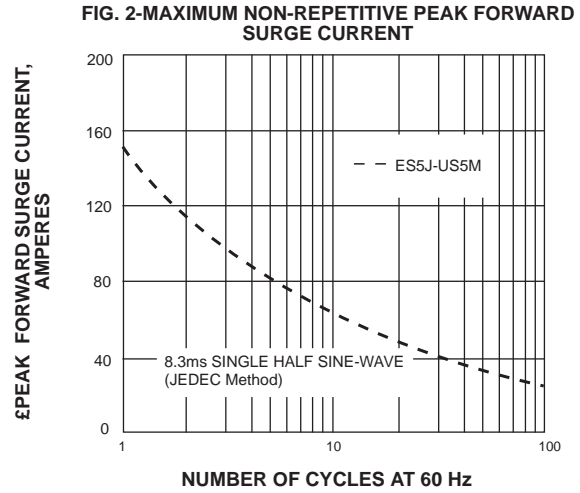
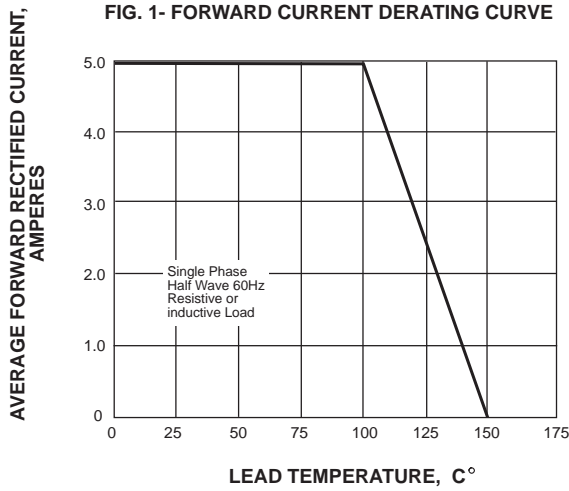
SYMBOLS	V <sub>RRM</sub> <sup>*1</sup> (V)	V <sub>RMS</sub> <sup>*2</sup> (V)	V <sub>R</sub> <sup>*3</sup> (V)	V <sub>F</sub> <sup>*4</sup> (V)	t <sub>rr</sub> <sup>*5</sup> (ns)	Operating temperature T <sub>J</sub> , (°C)
ES5J	600	420	600	1.70	35	-55 to +150
ES5K	800	560	800	3.20		
ES5M	1000	700	1000			

- \*1 Repetitive peak reverse voltage
- \*2 RMS voltage
- \*3 Continuous reverse voltage
- \*4 Maximum forward voltage@I<sub>F</sub>=5.0A
- \*5 Maximum Reverse recovery time, note 2

**Note:** 1.P.C.B. mounted with 0.2x0.2" (5.0x5.0mm) copper pad areas  
2. Reverse recovery time test condition, I<sub>F</sub>=0.5A, I<sub>R</sub>=1.0A, I<sub>RR</sub>=0.25A



# ES5J THRU ES5M

## Rating and characteristic curves ( ES5J THRU ES5M )

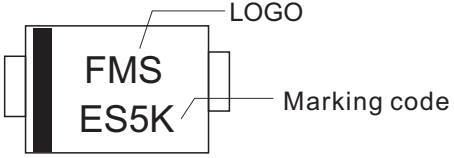


# ES5J THRU ES5M

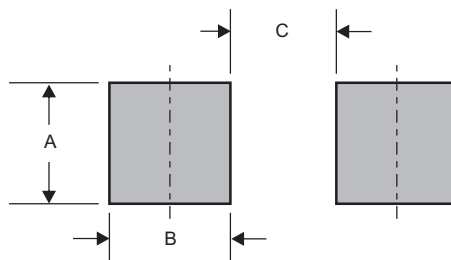
## Pinning information

Pin	Simplified outline	Symbol
Pin1 cathode Pin2 anode		

## Marking

Type number	Marking code	Example
ES5J	ES5J	
ES5K	ES5K	
ES5M	ES5M	

## Suggested solder pad layout



Dimensions in inches and (millimeters)

PACKAGE	A	B	C
SMC	0.132 (3.30)	0.100 (2.50)	0.176(4.40)