

# ES3A-C THRU ES3J-C

## 3.0A Surface Mount Super Fast Rectifiers-50-600V

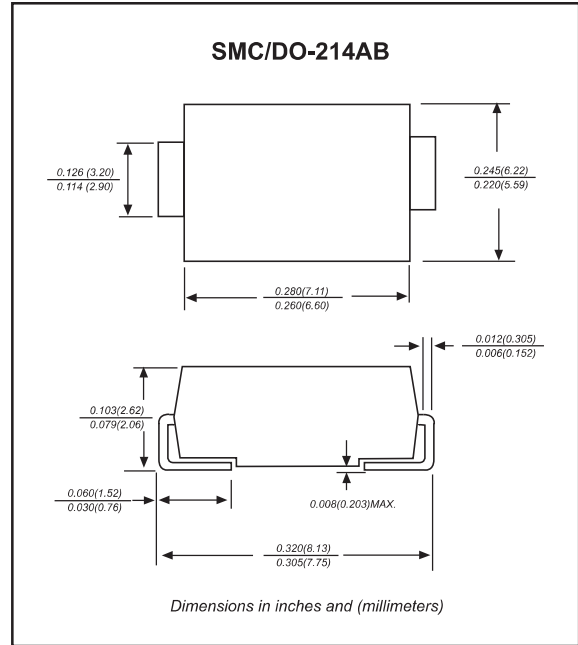
### Features

- ▶ 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
- ▶ Compliant to Halogen-free

### 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

### 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>			3.0	A
Forward surge current	8.3ms single half sine-wave (JEDEC methode)	I <sub>FSM</sub>			80	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>		47		°C/W
Diode junction capacitance	f=1MHz and applied 4V DC reverse voltage	C <sub>J</sub>		45		pF
Storage temperature		T <sub>STG</sub>	-65		+150	°C

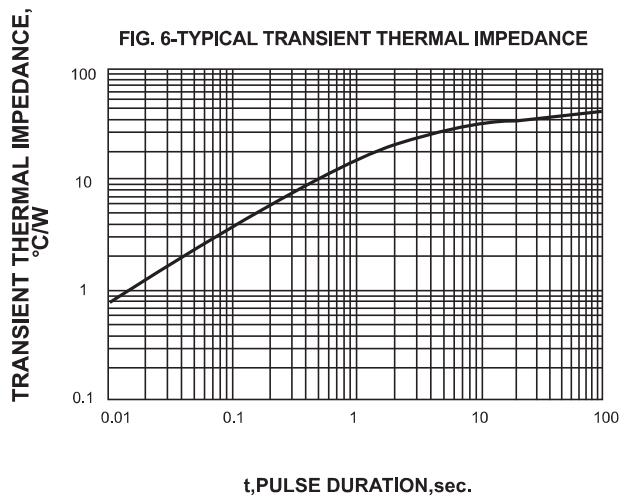
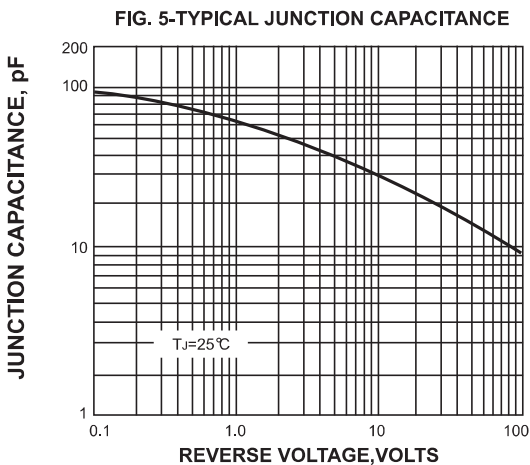
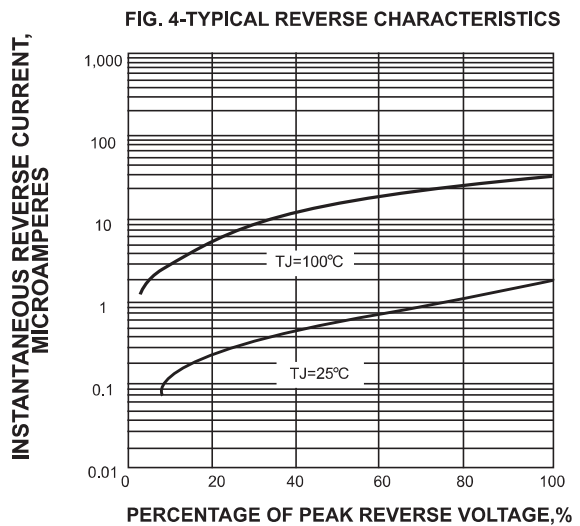
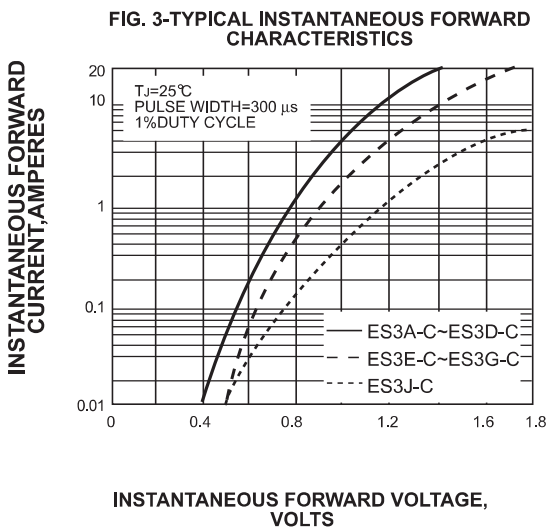
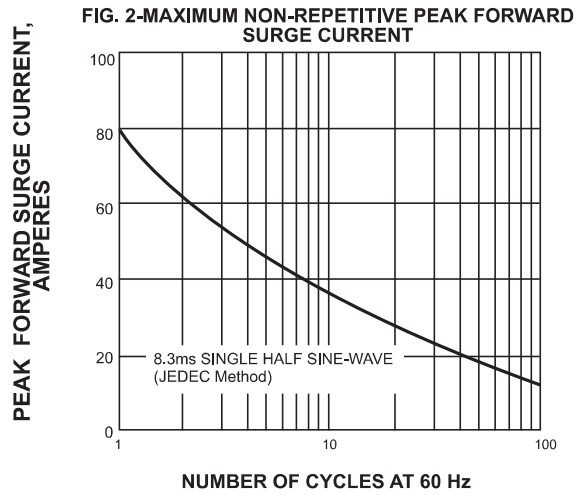
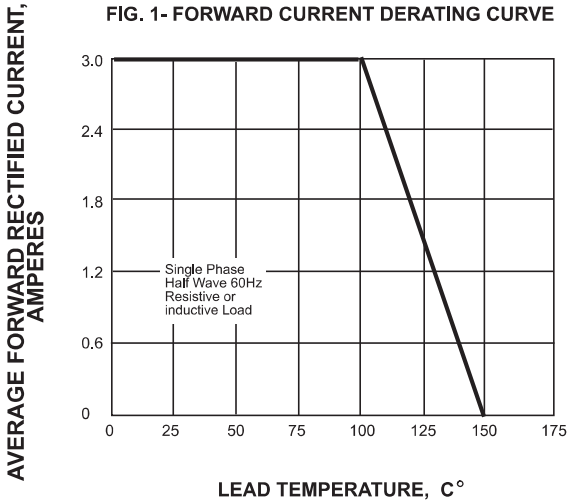
SYMBOLS	V <sub>RRM</sub> <sup>*1</sup> (V)	V <sub>RMS</sub> <sup>*2</sup> (V)	V <sub>R</sub> <sup>*3</sup> (V)	V <sub>F</sub> <sup>*4</sup> (V)	t <sub>rr</sub> <sup>*5</sup> (ns)	Operating temperature T <sub>J</sub> (°C)
ES3A-C	50	35	50	0.95	35	-55 to +150
ES3B-C	100	70	100			
ES3C-C	150	105	150			
ES3D-C	200	140	200			
ES3E-C	300	210	300	1.25		
ES3G-C	400	280	400			
ES3J-C	600	420	600	1.70		

- \*1 Repetitive peak reverse voltage
- \*2 RMS voltage
- \*3 Continuous reverse voltage
- \*4 Maximum forward voltage@I<sub>F</sub>=3.0A
- \*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



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Rating and characteristic curves

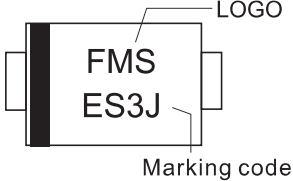


# ES3A-C THRU ES3J-C

## Pinning information

Pin	Simplified outline	Symbol
Pin1 cathode Pin2 anode		

## Marking

Type number	Marking code	Example
ES3A-C	ES3A	
ES3B-C	ES3B	
ES3C-C	ES3C	
ES3D-C	ES3D	
ES3E-C	ES3E	
ES3G-C	ES3G	
ES3J-C	ES3J	

## 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)