

# ES2A-F THRU ES2J-F

## 2.0A Surface Mount Super Fast Rectifiers-50-600V

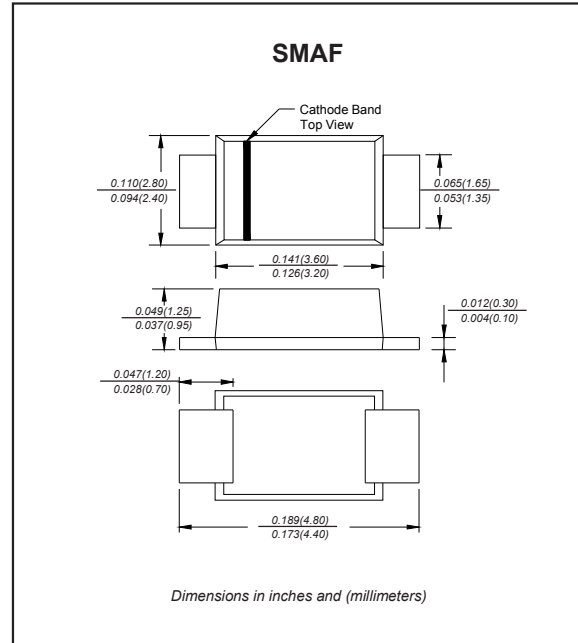
### Features

- ◆ 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 SMAF molded plastic body
- ◆ **Terminals:** Solder plated, solderable per MIL-STD-750, Method 2026
- ◆ **Polarity:** Color band denotes cathode end
- ◆ **Mounting Position:** Any
- ◆ **Weight:** 0.0018 ounce, 0.064 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>			2.0	A
Forward surge current	8.3ms single half sine-wave (JEDEC methode)	I <sub>FSM</sub>			50	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>		60		pF
Storage temperature		T <sub>STG</sub>	-65		+150	°C

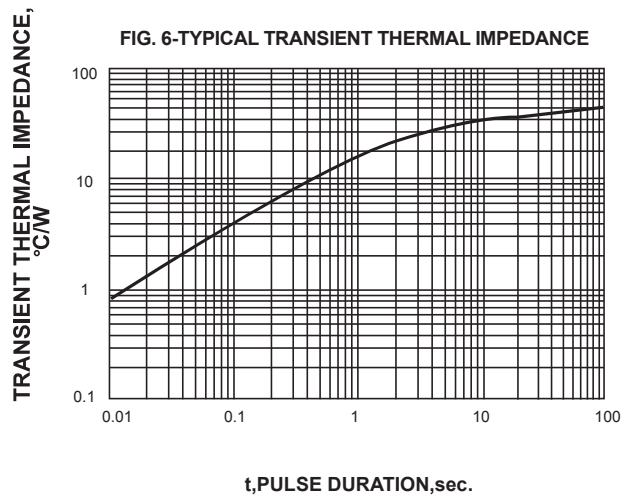
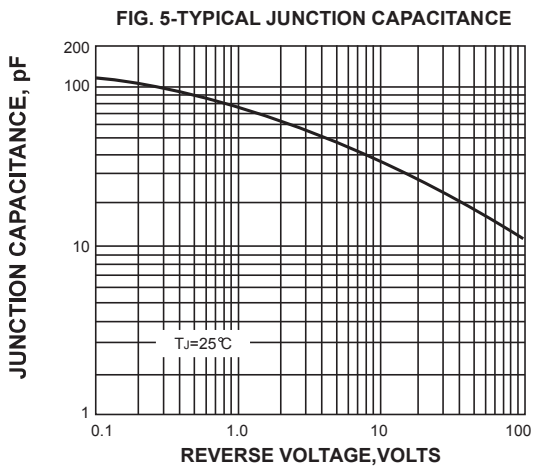
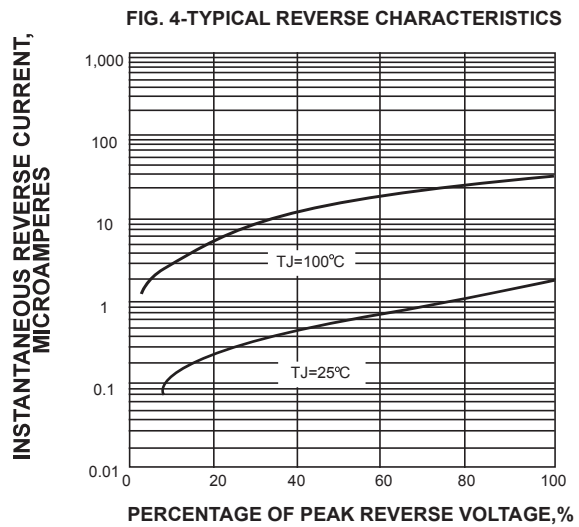
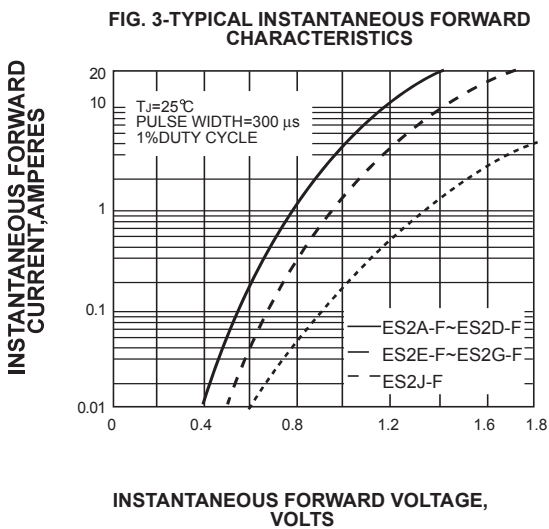
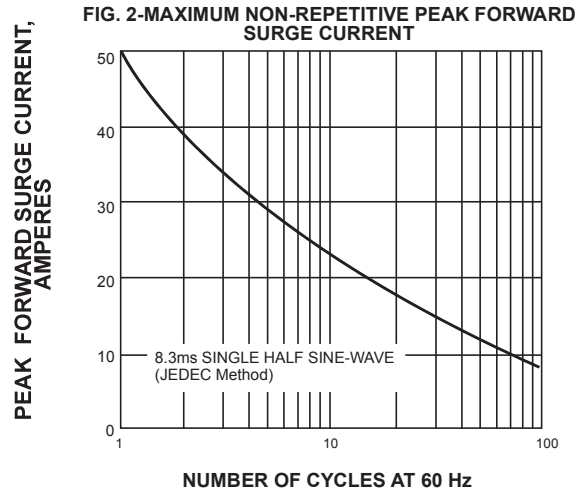
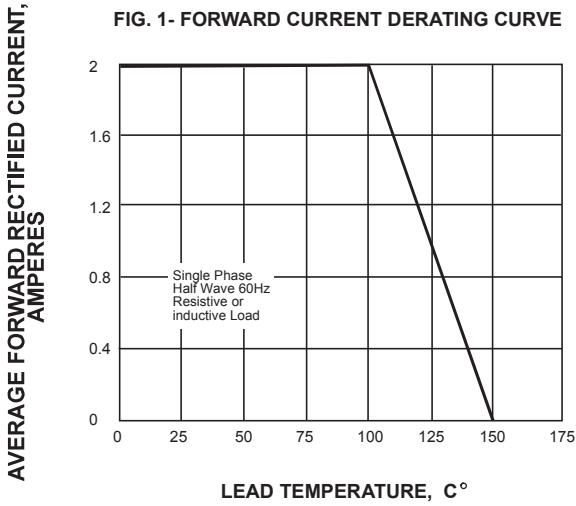
SYMBOLS	V <sub>RRM</sub> <sup>*1</sup> (V)	V <sub>RMS</sub> <sup>*2</sup> (V)	V <sub>R</sub> <sup>*3</sup> (V)	V <sub>F</sub> <sup>*4</sup> (V)	t <sub>rr</sub> <sup>*5</sup> (ns)	Operating temperature T <sub>J</sub> , (°C)
ES2A-F	50	35	50	0.95	35	-55 to +150
ES2B-F	100	70	100			
ES2C-F	150	105	150			
ES2D-F	200	140	200			
ES2E-F	300	210	300	1.25		
ES2G-F	400	280	400			
ES2J-F	600	420	600			

- \*1 Repetitive peak reverse voltage
- \*2 RMS voltage
- \*3 Continuous reverse voltage
- \*4 Maximum forward voltage@I<sub>F</sub>=2.0A
- \*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



# ES2A-F THRU ES2J-F

## Rating and characteristic curves



# ES2A-F THRU ES2J-F

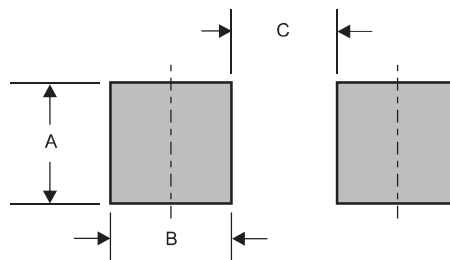
## Pinning information

Pin	Simplified outline	Symbol
Pin1 cathode Pin2 anode		

## Marking

Type number	Marking code
ES2A-F	E2A
ES2B-F	E2B
ES2C-F	E2C
ES2D-F	E2D
ES2E-F	E2E
ES2G-F	E2G
ES2J-F	E2J

## Suggested solder pad layout



Dimensions in inches and (millimeters)

PACKAGE	A	B	C
SMAF	0.110 (2.80)	0.063 (1.60)	0.079 (2.00)