

ES3A-C THRU ES3J-C

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

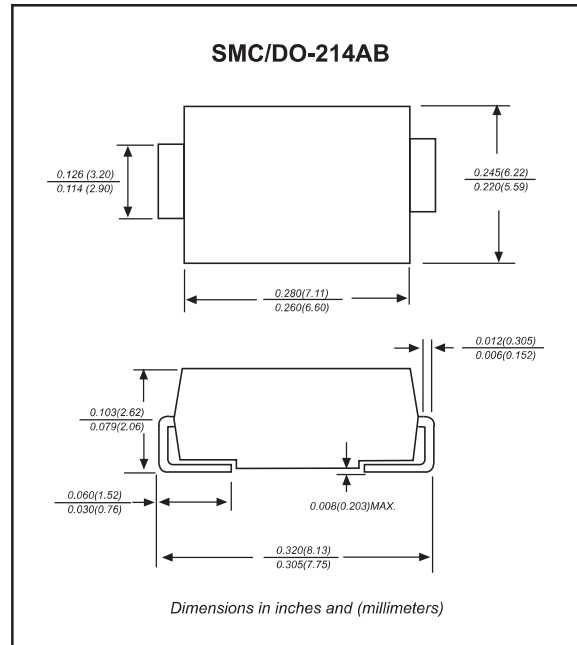
Features

- ▶ 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
- ▶ Suffix "-H" indicates Halogen-free part, ex. ES3J-C-H

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_A=25°C unless otherwise noted)

PARAMETER	CONDITIONS	Symbol	MIN.	TYP.	MAX.	UNIT
Forward rectified current	See Fig.2	I _O			3.0	A
Forward surge current	8.3ms single half sine-wave (JEDEC methode)	I _{FSM}			80	A
Reverse current	V _R = V _{RRM} T _A = 25°C	I _R			5.0	μA
	V _R = V _{RRM} T _A = 100°C				50	
Thermal resistance	Junction to ambient NOTE 1	R _{θJA}		47		°C/W
Diode junction capacitance	f=1MHz and applied 4V DC reverse voltage	C _J		45		pF
Storage temperature		T _{STG}	-65		+150	°C

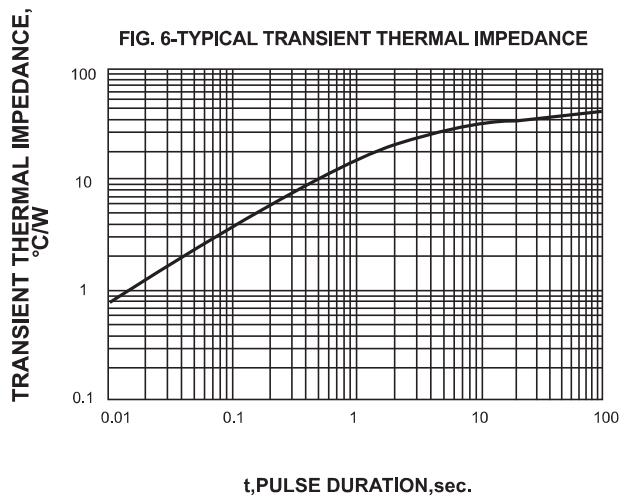
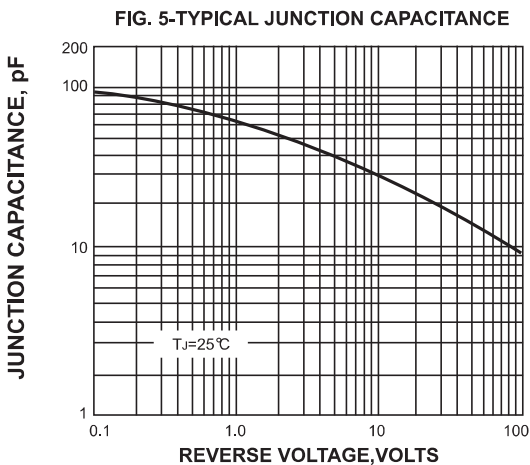
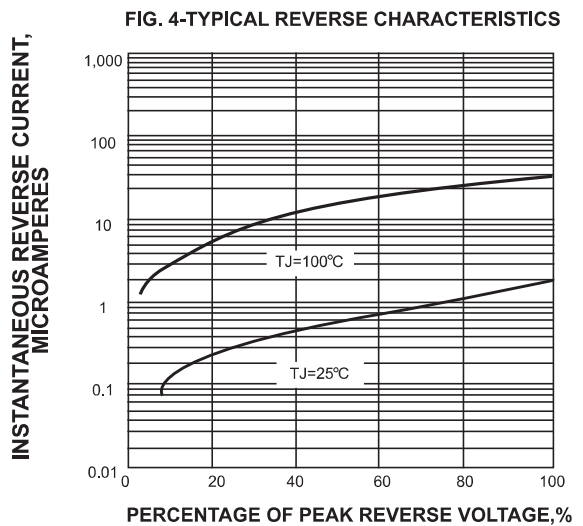
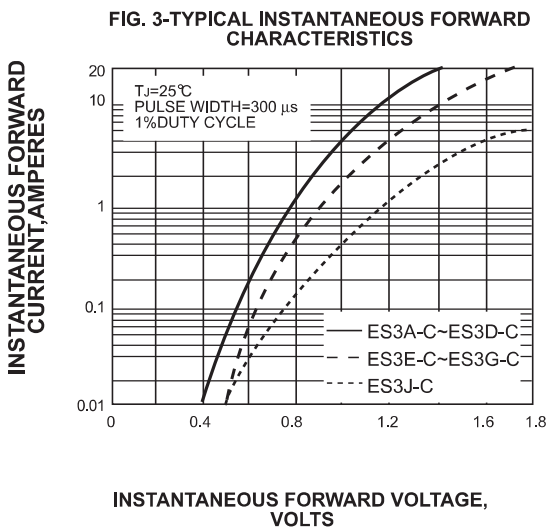
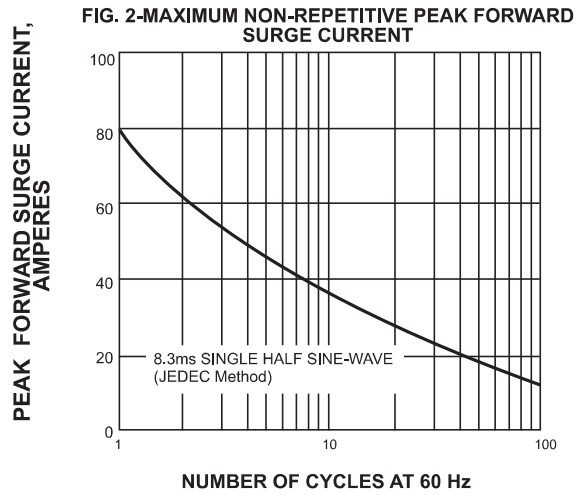
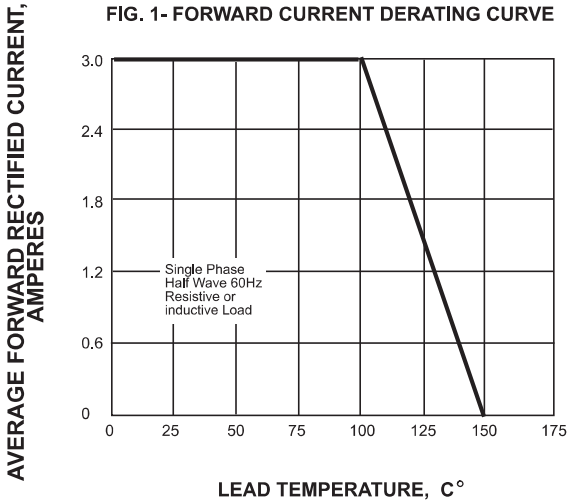
SYMBOLS	V _{RM} ^{*1} (V)	V _{RMS} ^{*2} (V)	V _R ^{*3} (V)	V _F ^{*4} (V)	t _{rr} ^{*5} (ns)	Operating temperature T _J (°C)
ES3A-C	50	35	50	0.95	35	-55 to +150
ES3B-C	100	70	100			
ES3C-C	150	105	150			
ES3D-C	200	140	200			
ES3E-C	300	210	300	1.25	35	-55 to +150
ES3G-C	400	280	400			
ES3J-C	600	420	600			

- *1 Repetitive peak reverse voltage
- *2 RMS voltage
- *3 Continuous reverse voltage
- *4 Maximum forward voltage@I_F=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_F=0.5A, I_R=1.0A, I_{RR}=0.25A

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Rating and characteristic curves



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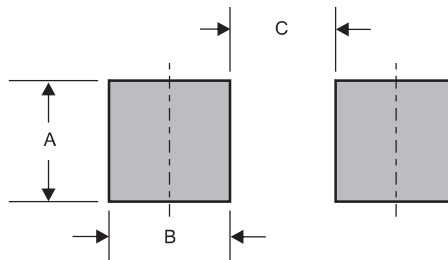
Pinning information

Pin	Simplified outline	Symbol
Pin1 cathode Pin2 anode		

Marking

Type number	Marking code	Example	
ES3A-C	ES3A	For Halogen Device	For Halogen-free Device
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)