

ES1A-A THRU ES1J-A

1.0A Surface Mount Super Fast Rectifiers-50-600V

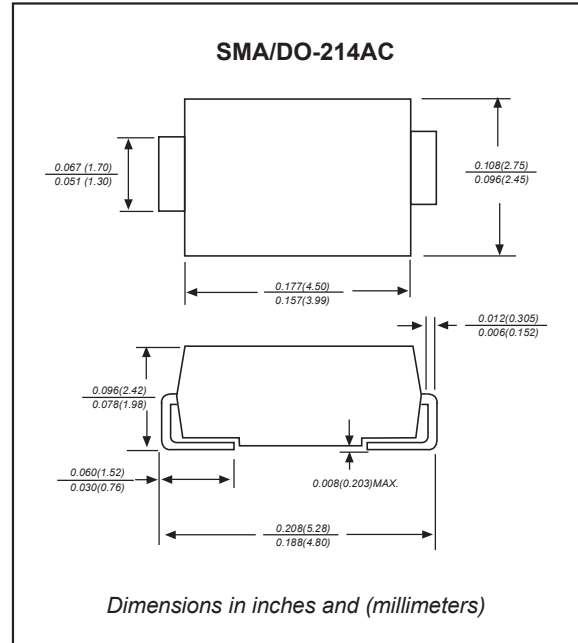
Features

- ◆ 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. ES1J-A-H

Mechanical data

- ◆ **Case:** JEDEC DO-214AC molded plastic body
- ◆ **Terminals:** Solder plated, solderable per MIL-STD-750, Method 2026
- ◆ **Polarity:** Color band denotes cathode end
- ◆ **Mounting Position:** Any
- ◆ **Weight:** 0.002 ounce, 0.07 grams

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			1.0	A
Forward surge current	8.3ms single half sine-wave (JEDEC methode)	I _{FSM}			30	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}		60		°C/W
Diode junction capacitance	f=1MHz and applied 4V DC reverse voltage	C _J		15		pF
Storage temperature		T _{STG}	-65		+150	°C

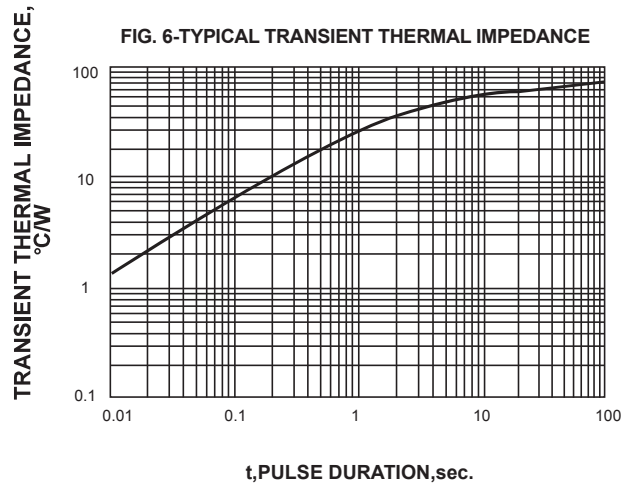
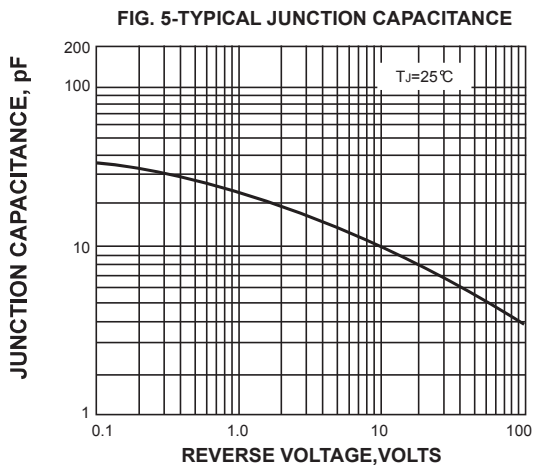
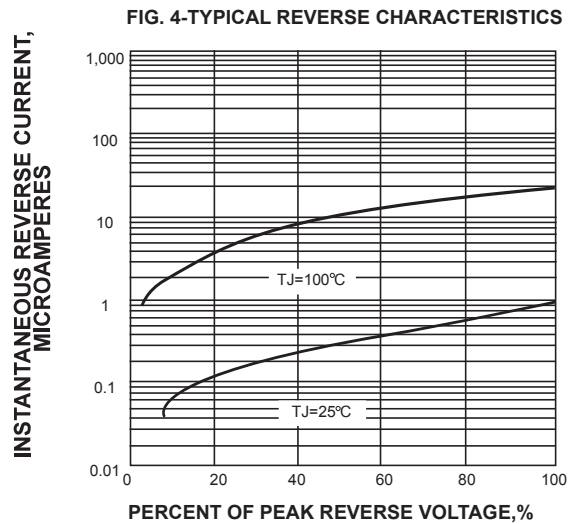
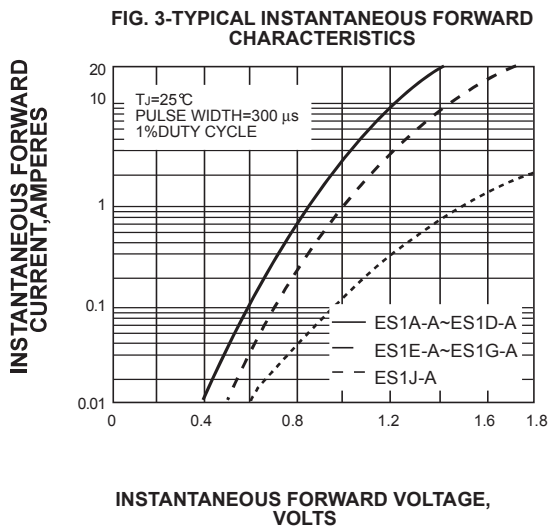
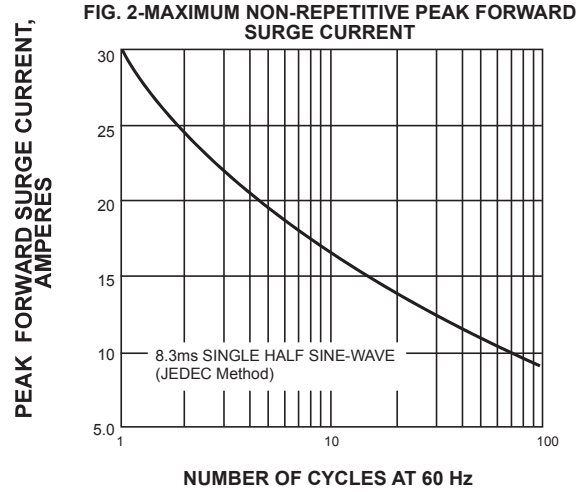
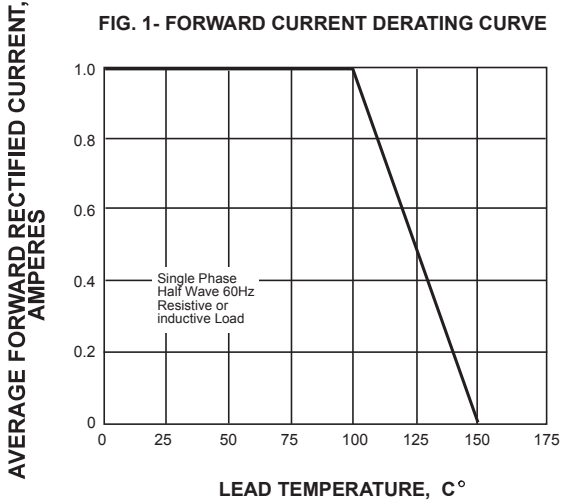
SYMBOLS	V _{RM} ^{*1} (V)	V _{RMS} ^{*2} (V)	V _R ^{*3} (V)	V _F ^{*4} (V)	t _{rr} ^{*5} (ns)	Operating temperature T _{Jr} (°C)
ES1A-A	50	35	50	0.95	35	-55 to +150
ES1B-A	100	70	100			
ES1C-A	150	105	150			
ES1D-A	200	140	200	1.25	35	-55 to +150
ES1E-A	300	210	300			
ES1G-A	400	280	400			
ES1J-A	600	420	600	1.70	35	-55 to +150

- *1 Repetitive peak reverse voltage
- *2 RMS voltage
- *3 Continuous reverse voltage
- *4 Maximum forward voltage@I_F=1.0A
- *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

ES1A-A THRU ES1J-A

Rating and characteristic curves



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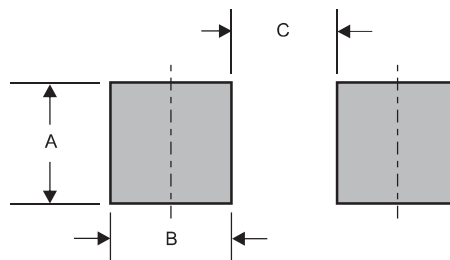
Pinning information

Pin	Simplified outline	Symbol
Pin1 cathode Pin2 anode		

Marking

Type number	Marking code	Example	
ES1A-A	ES1A	For Halogen Device	For Halogen-free Device
ES1B-A	ES1B		
ES1C-A	ES1C		
ES1D-A	ES1D		
ES1E-A	ES1E		
ES1G-A	ES1G		
ES1J-A	ES1J		

Suggested solder pad layout



Dimensions in inches and (millimeters)

PACKAGE	A	B	C
SMA	0.110 (2.80)	0.063 (1.60)	0.087 (2.20)