

ES1A THRU ES1J

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

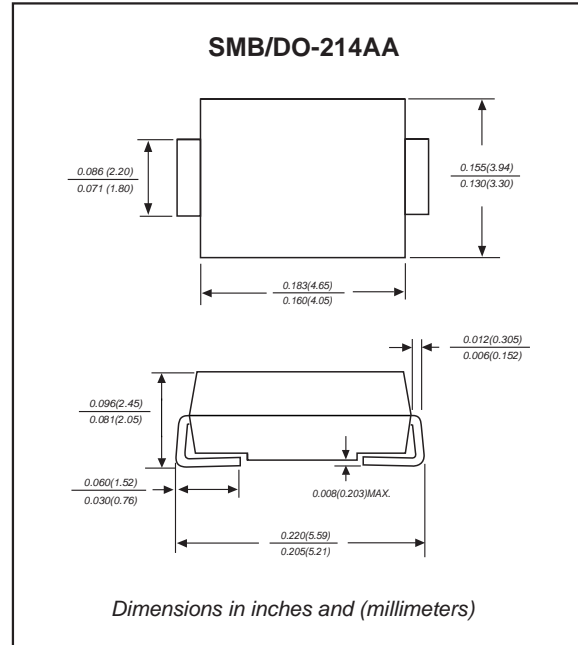
Features

- ▶ 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

Mechanical data

- ▶ **Case:** JEDEC DO-214AA molded plastic body
- ▶ **Terminals:** Solder plated, solderable per MIL-STD-750, Method 2026
- ▶ **Polarity:** Color band denotes cathode end
- ▶ **Mounting Position:** Any
- ▶ **Weight:** 0.003 ounce, 0.093 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

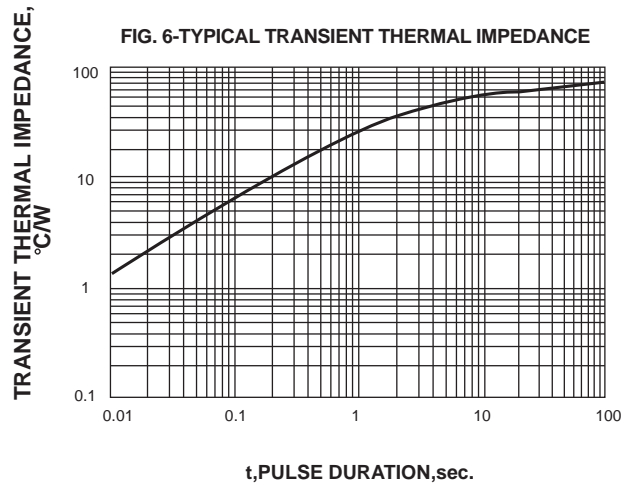
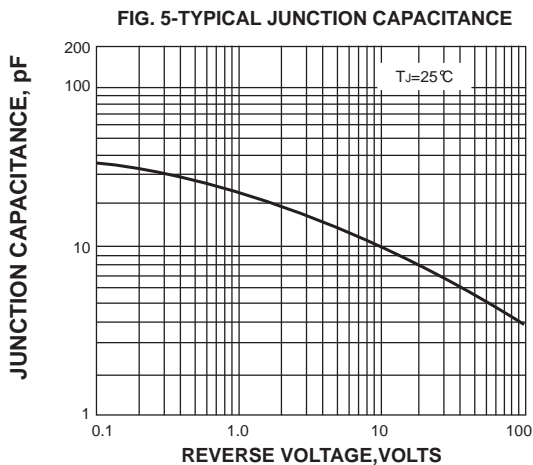
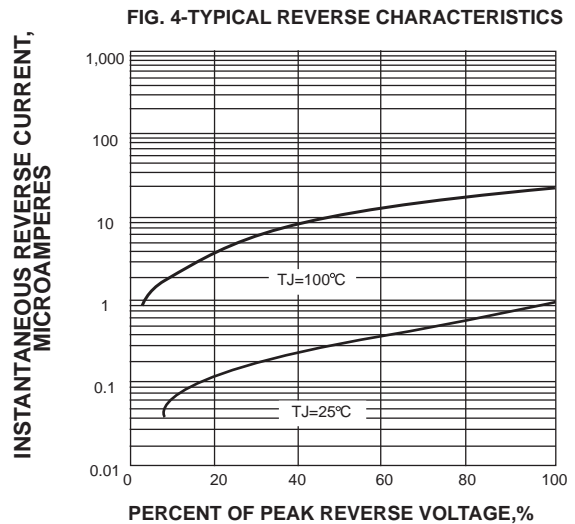
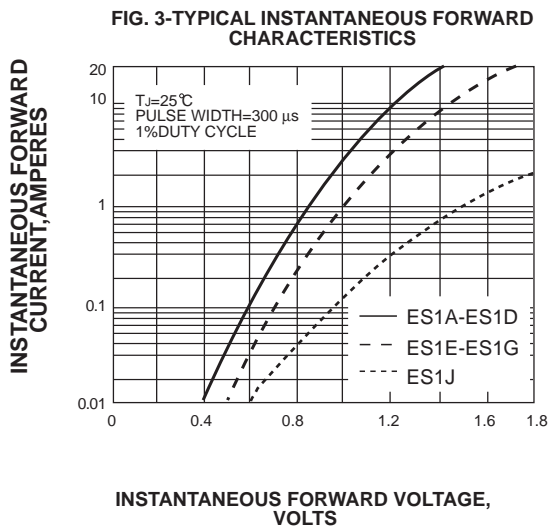
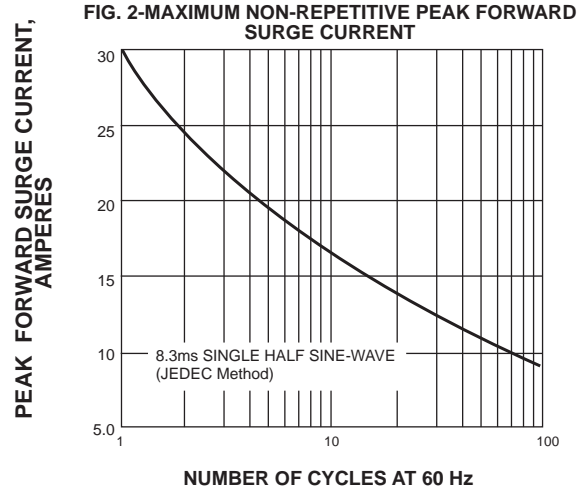
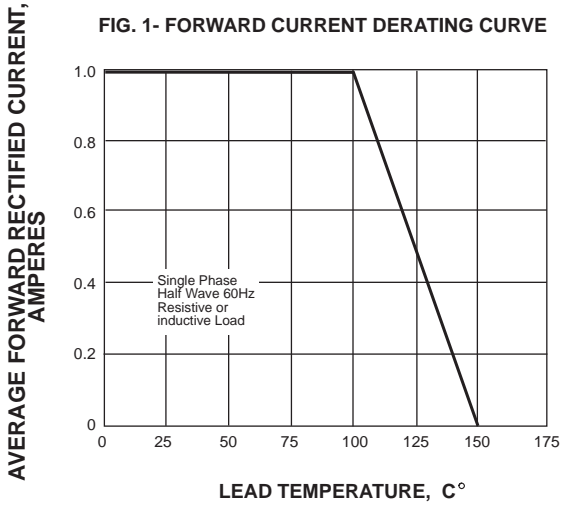
SYMBOLS	V _{RRM} ^{*1} (V)	V _{RMS} ^{*2} (V)	V _R ^{*3} (V)	V _F ^{*4} (V)	t _{rr} ^{*5} (ns)	Operating temperature T _J (°C)
ES1A	50	35	50	0.95	35	-55 to +150
ES1B	100	70	100			
ES1C	150	105	150			
ES1D	200	140	200			
ES1E	300	210	300	1.25	35	-55 to +150
ES1G	400	280	400			
ES1J	600	420	600			

- *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 THRU ES1J

Rating and characteristic curves (ES1A THRU ES1J)



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Pinning information

Pin	Simplified outline	Symbol
Pin1 cathode Pin2 anode		

Marking

Type number	Marking code
ES1A	ES1A
ES1B	ES1B
ES1C	ES1C
ES1D	ES1D
ES1E	ES1E
ES1G	ES1G
ES1J	ES1J

Suggested solder pad layout



Dimensions in inches and (millimeters)

PACKAGE	A	B	C
SMB	0.078 (2.00)	0.059 (1.50)	0.110 (2.80)