

ES1A~ES1J

SURFACE MOUNT SUPERFAST RECTIFIER

VOLTAGE 50 to 600 Volts **CURRENT** 1.0 Amperes

SMA / DO-214AC

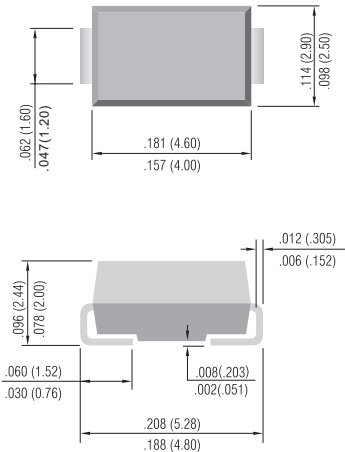
Unit: inch (mm)

FEATURES

- For surface mounted applications
- Low profile package
- Built-in strain relief
- Easy pick and place
- Superfast recovery times for high efficiency.
- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- Glass passivated junction
- Lead free in comply with EU RoHS 2002/95/EC directives

MECHANICAL DATA

- Case: JEDEC DO-214AC molded plastic
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Standard packaging: 12mm tape (EIA-481)
- Weight: 0.0023 ounce, 0.0679 gram



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

PARAMETER	SYMBOL	ES1A	ES1B	ES1C	ES1D	ES1E	ES1G	ES1J	UNITS
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	50	100	150	200	300	400	600	V
Maximum RMS Voltage	V _{RMS}	35	70	105	140	210	280	420	V
Maximum DC Blocking Voltage	V _{DC}	50	100	150	200	300	400	600	V
Maximum Average Forward Current at T _L =120°C	I _{F(AV)}	1.0							A
Peak Forward Surge Current : 8.3ms single half sine-wave superimposed on rated load(JEDEC method)	I _{FSM}	30							A
Maximum Forward Voltage at 1.0A	V _F	0.95				1.25		1.7	V
Maximum DC Reverse Current T _J = 25°C at Rated DC Blocking Voltage T _J =100°C	I _R	1.0 150							μA
Maximum Reverse Recovery Time (NOTE 1)	t _{rr}	35							ns
Typical Junction capacitance (Note 2)	C _J	7.0							pF
Typica Thermal Resistance (Note 3)	R _{θJL}	35							°C / W
Operating Junction and Storage Temperature Range	T _J ,T _{STG}	-55 to +150							°C

NOTES:

- 1.Reverse Recovery Tset Conditions: $I_F=0.5A, I_R=1.0A, I_{rr}=0.25A$
- 2.Measured at 1.0MHz and applied reverse voltage of 4.0 volts.
- 3.8.0mm²(.013mm thick) land areas.

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RATING AND CHARACTERISTIC CURVES

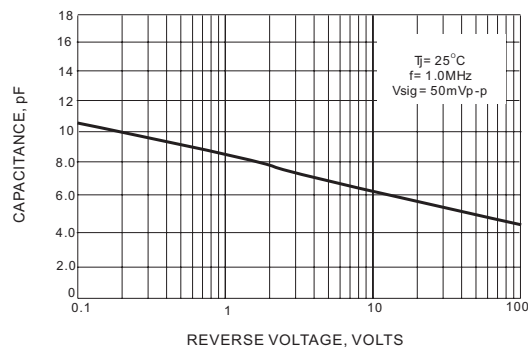


FIG.1 TYPICAL JUNCTION CAPACITANCE

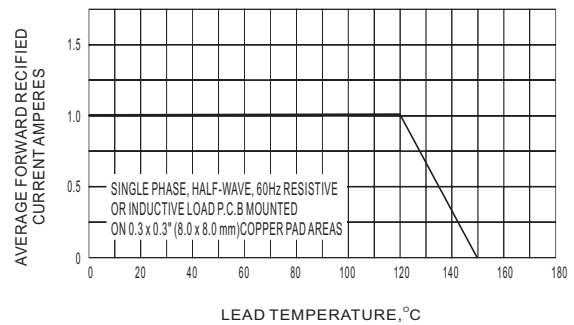


FIG.2 MAXIMUM AVERAGE FORWARD CURRENT DERATING

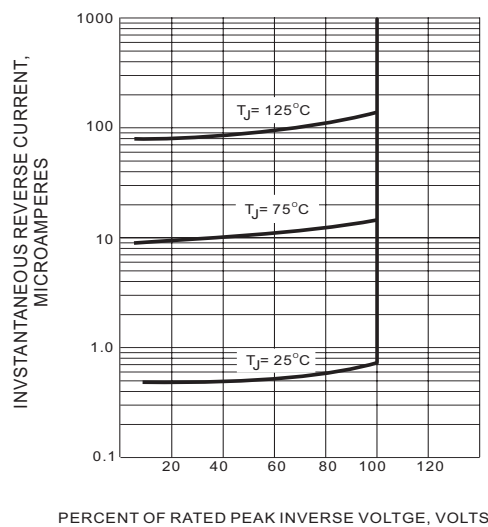


FIG.3 TYPICAL REVERSE CHARACTERISTICS

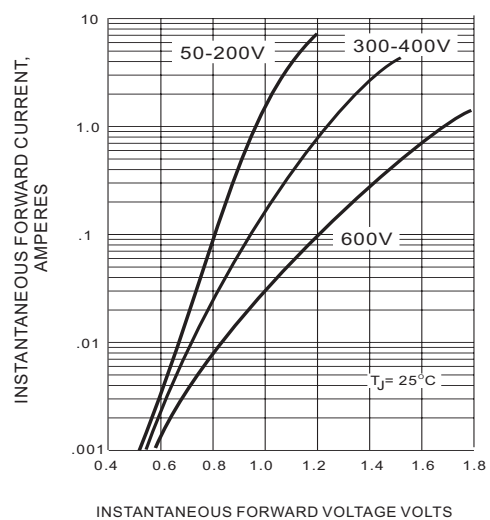


FIG.4 TYPICAL FORWARD CHARACTERISTICS

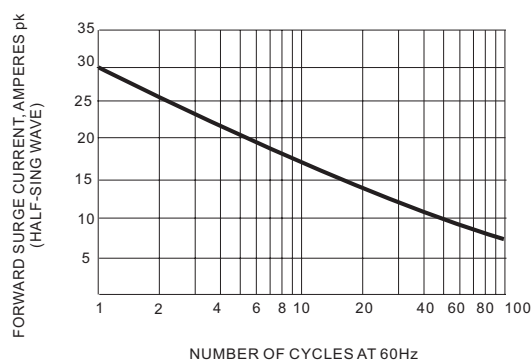
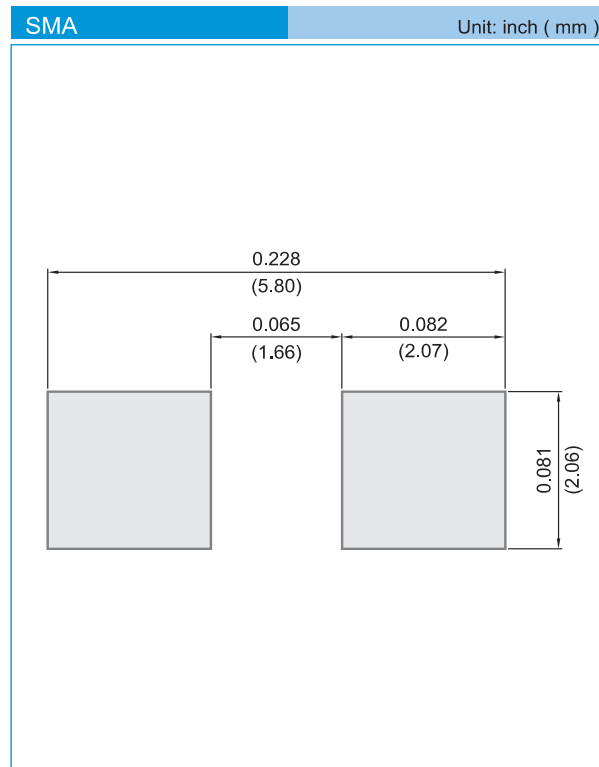


FIG.5 MAXIMUM NON-REPEITIVE SURGE CURRENT

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MOUNTING PAD LAYOUT



ORDER INFORMATION

- Packing information
 - T/R - 7.5K per 13" plastic Reel
 - T/R - 1.8Kper 7" plastic Reel



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For example :

RB500V-40_R2_00001



Packing Code XX				Version Code XXXXX		
Packing type	1 st Code	Packing size code	2 nd Code	HF or RoHS	1 st Code	2 nd ~5 th Code
T/B	A	N/A	0	HF	0	serial number
T/R	R	7"	1	RoHS	1	serial number
B/P	B	13"	2			
T/P	T	26mm	X			
TRR	S	52mm	Y			
TRL	L	PBCU	U			
FORMING	F	PBCD	D			

Part No_packing code_Version

ES1A_R1_00001

ES1A_R1_10001

ES1A_R2_00001

ES1A_R2_10001



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