



Features

- ◇ Glass passivated junction chip
- ◇ For surface mounted application
- ◇ Low profile package
- ◇ Built-in strain relief
- ◇ Ideal for automated placement
- ◇ Easy pick and place
- ◇ Super fast recovery time for high efficiency
- ◇ Glass passivated chip junction
- ◇ High temperature soldering:
260°C/10 seconds at terminals
- ◇ Meet MSL level 1, per J-STD-020D
lead free, maximum peak of 260°C

Mechanical Data

- ◇ Cases: Molded plastic
- ◇ Terminals: Pure tin plated, lead free
- ◇ Polarity: Indicated by cathode band
- ◇ Packing: 12mm tape per EIA STD RS-481
- ◇ Weight: 0.064 grams

Ordering Information (example)

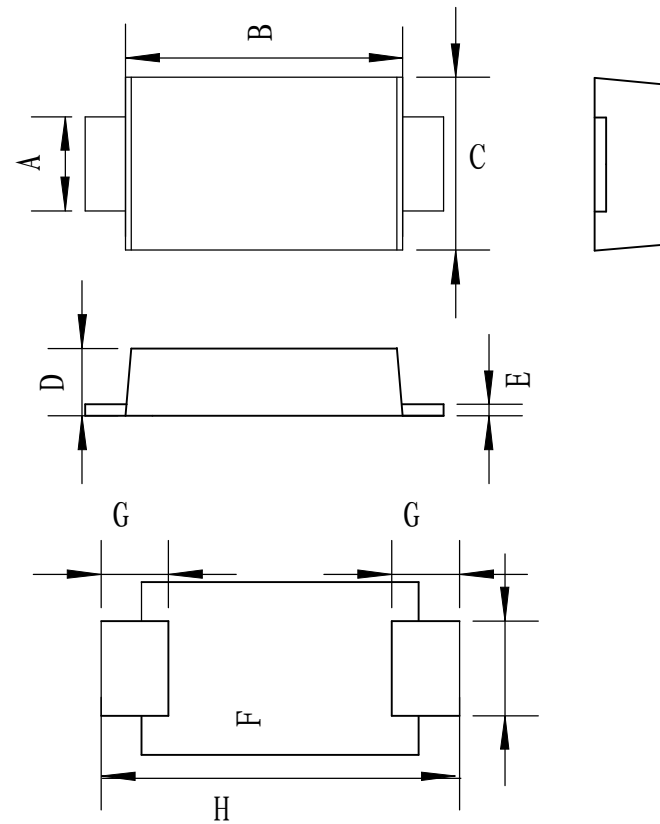
Part No.	Package	Packing	Packing code	Green Compound Packing code
ES2A	SMAF1.0	1.8K / 7" REEL	R3	R3G

Maximum Ratings and Electrical Characteristics

Rating 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%



DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	1.30	1.60	0.051	0.063
B	3.80	4.20	0.149	0.165
C	2.30	2.70	0.090	0.106
D	0.95	1.05	0.037	0.041
E	0.12	0.17	0.004	0.006
F	1.20	1.60	0.047	0.063
G	0.60	1.20	0.024	0.047
H	4.95	5.33	0.195	0.211

Type Number	Symbol	ES 2A	ES 2B	ES 2C	ES 2D	ES 2F	ES 2G	ES 2H	ES 2J	ES 2K	Units
Maximum Recurrent Peak Reverse Voltage	V	50	100	150	200	300	400	500	600	800	V
Maximum RMS Voltage	V _{RMS}	35	70	105	140	210	280	350	420	560	V
Maximum DC Blocking Voltage	V	50	100	150	200	300	400	500	600	800	V
Maximum Average Forward Rectified Current	I _{F(AV)}	2									A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I _{FSM}	50									A
Maximum Instantaneous Forward Voltage (Note 1) @ 2 A	V _F	0.95			1.3			1.7			V
Maximum DC Reverse Current @ T _A =25 °C	I _R	10									uA
at Rated DC Blocking Voltage @ T _A =125 °C		350									uA
Maximum Reverse Recovery Time (Note 2)	T _{rr}	35									nS
Typical Junction Capacitance (Note 3)	C _j	25						20			pF
Maximum Thermal Resistance	R _{θJA} R _{θJL}	75						20			°C/W
Operating Temperature Range	T _J	- 55 to + 150									°C
Storage Temperature Range	T _{STG}	- 55 to + 150									°C

Note 1: Pulse Test with PW=300 usec, 1% Duty Cycle

Note 2: Reverse Recovery Test Conditions: I_F=0.5A, I_R=1.0A, I_{RR}=0.25A

Note 3: Measured at 1 MHz and Applied V_R=4.0 Volts



FIG. 1- MAXIMUM FORWARD CURRENT DERATING CURVE

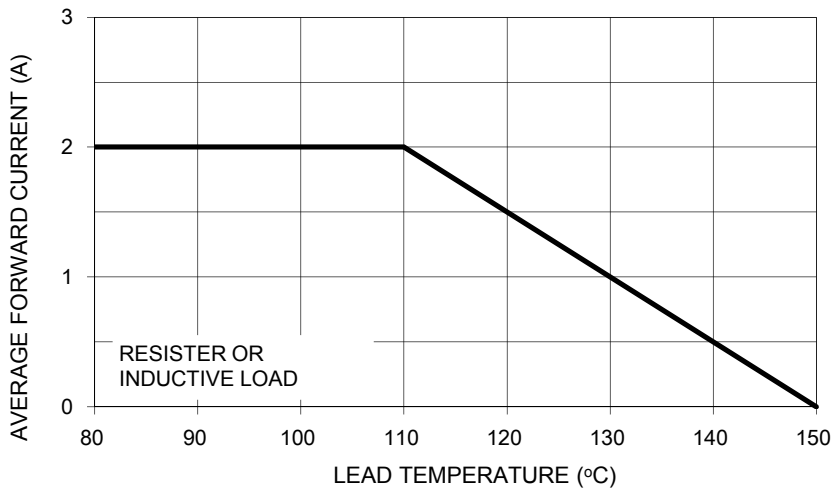


FIG. 2- TYPICAL REVERSE CHARACTERISTICS

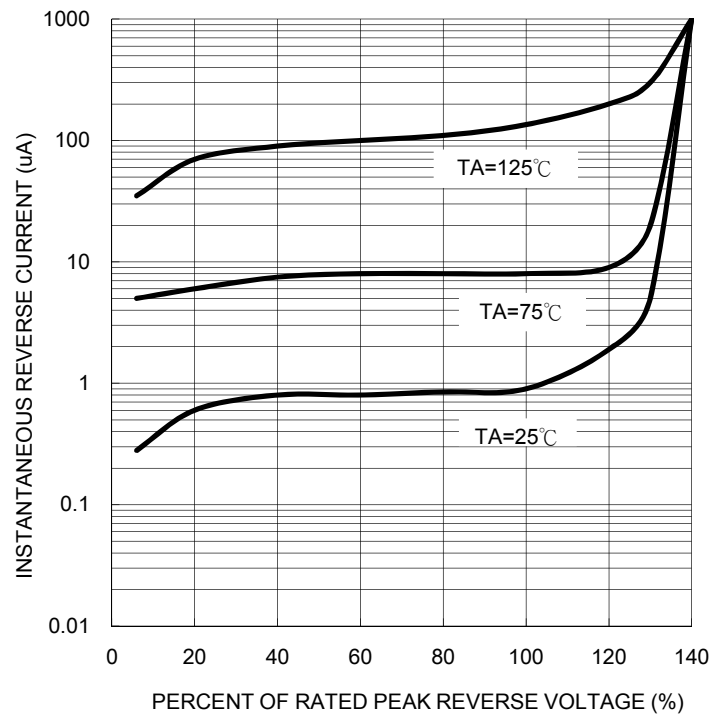


FIG. 3- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

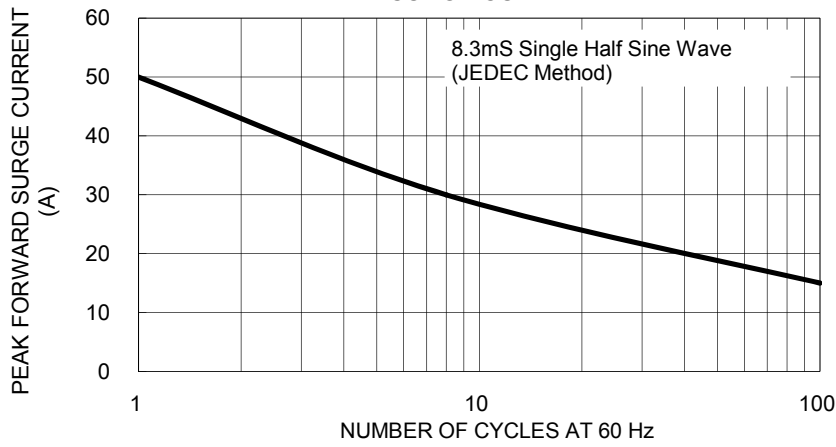


FIG. 5- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

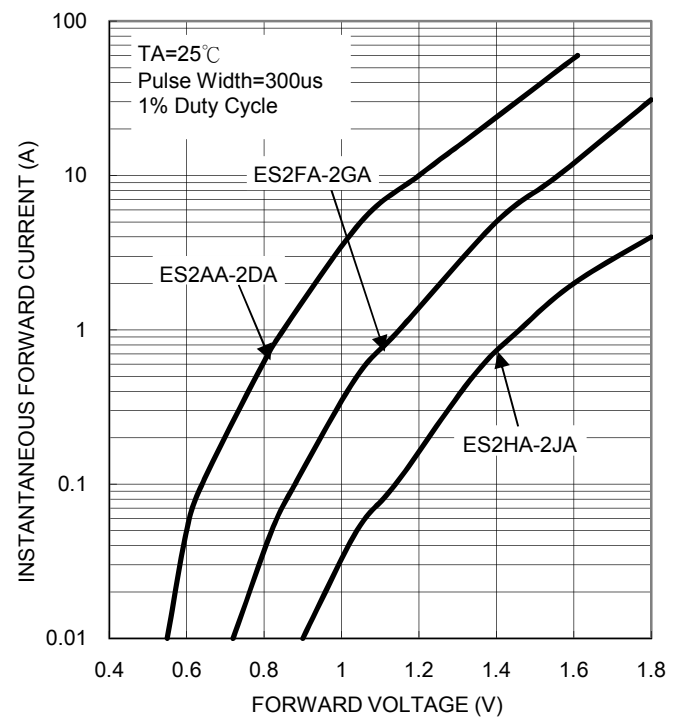


FIG. 4- TYPICAL JUNCTION CAPACITANCE

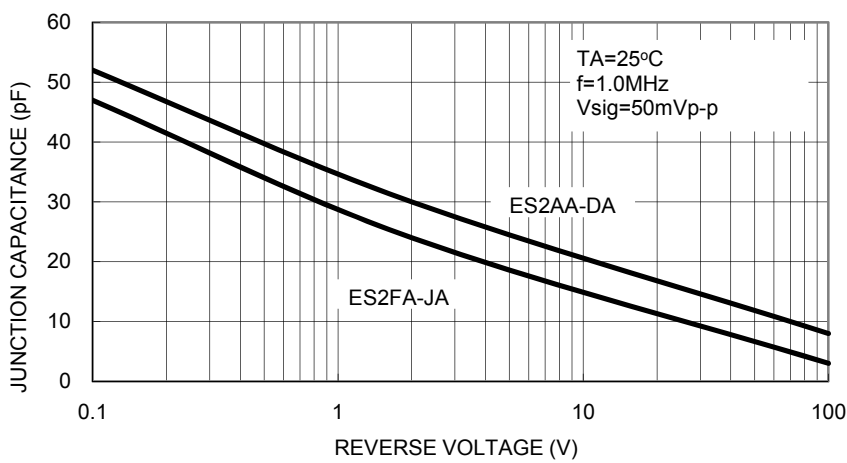


FIG. 6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

