



ES2AA - ES2JA

2.0AMPS Surface Mount Super Fast Rectifiers

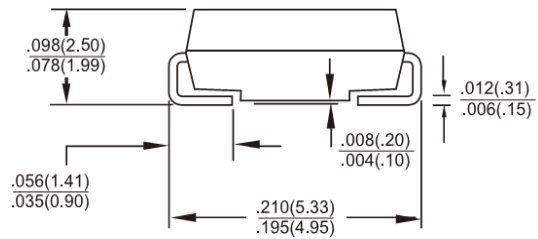
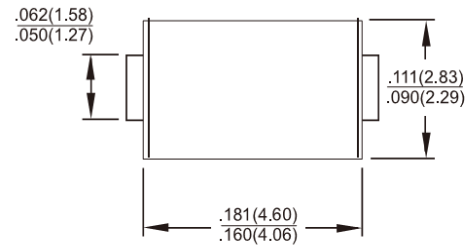
SMA/DO-214AC

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
- ◇ Plastic material used carries Underwriters
Laboratory Classification 94V-0
- ◇ Green compound with suffix "G" on packing
code & prefix "G" on datecode

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



Dimensions in inches and (millimeters)

Marking Diagram



- ES2XA = Specific Device Code
- G = Green Compound
- Y = Year
- M = Work Month

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%

Type Number	Symbol	ES 2AA	ES 2BA	ES 2CA	ES 2DA	ES 2FA	ES 2GA	ES 2HA	ES 2JA	Units
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	50	100	150	200	300	400	500	600	V
Maximum RMS Voltage	V _{RMS}	35	70	105	140	210	280	350	420	V
Maximum DC Blocking Voltage	V _{DC}	50	100	150	200	300	400	500	600	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: $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{RR}=0.25\text{A}$

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

RATINGS AND CHARACTERISTIC CURVES (ES2AA THRU ES2JA)

FIG. 1- MAXIMUM FORWARD CURRENT DERATING CURVE

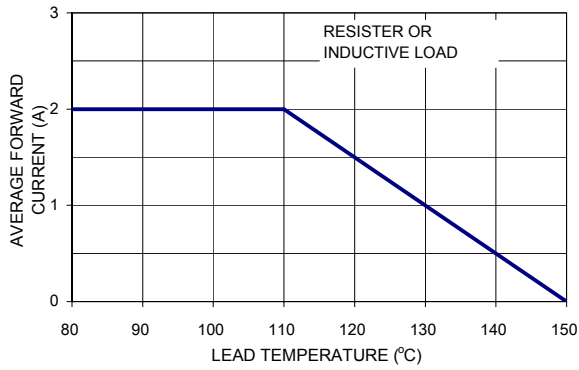


FIG. 2- TYPICAL REVERSE CHARACTERISTICS

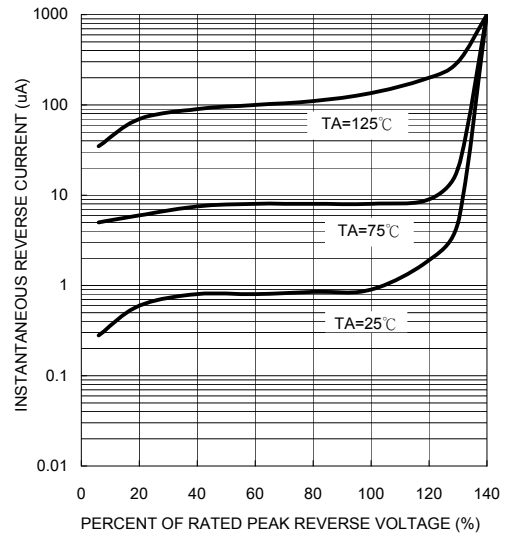


FIG. 3- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

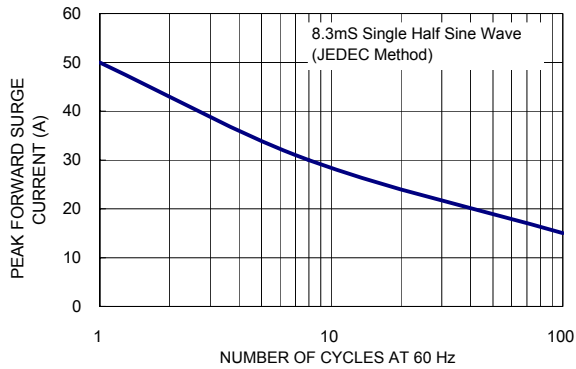


FIG. 5- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

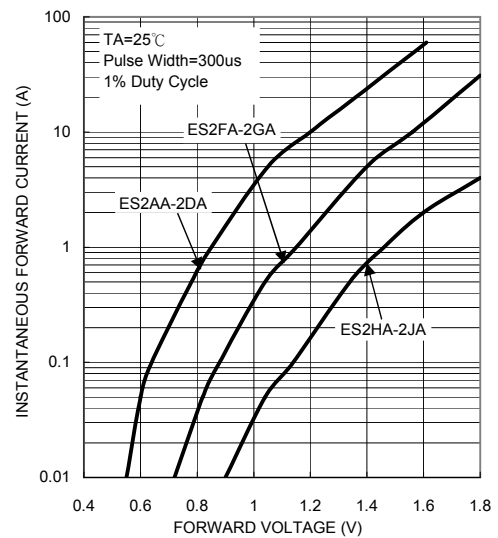


FIG. 4- TYPICAL JUNCTION CAPACITANCE

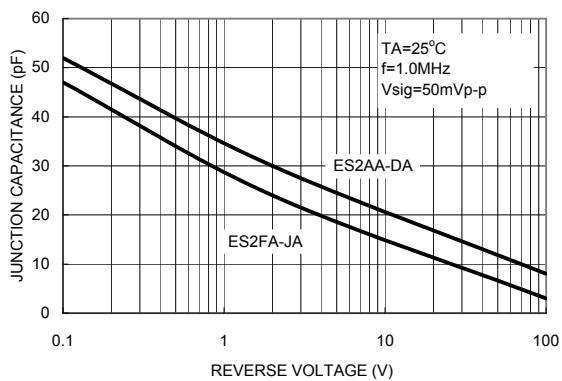


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

