



ES2AA - ES2JA

2.0 AMPS. Surface Mount Super Fast Rectifiers

SMA/DO-214AC



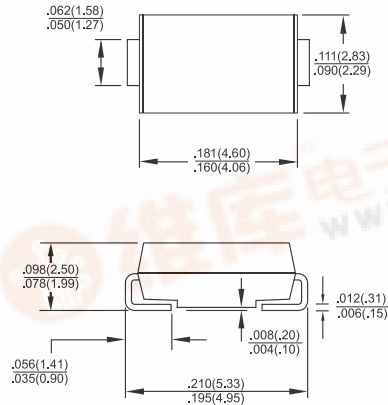
Features

- ◇ Glass passivated junction chip
- ◇ For surface mounted application
- ◇ Low profile package
- ◇ Built-in strain relief
- ◇ Ideal for automated placement
- ◇ Easy pick and place
- ◇ Superfast 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

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: 0.093 gram

Dimensions in inches and (millimeters)



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 See Fig. 1	I _(AV)	2.0								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 @ 2.0A	V _F	0.95				1.3		1.7		V
Maximum DC Reverse Current @ T _A =25 °Cat Rated DC Blocking Voltage @ T _A =100 °C	I _R	10 350								uA uA
Maximum Reverse Recovery Time (Note 1)	T _{rr}	35								nS
Typical Junction Capacitance (Note 2)	C _j	25				20				pF
Maximum Thermal Resistance (Note 3)	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

- Notes:
1. Reverse Recovery Test Conditions: $I_F = 0.5\text{A}$, $I_R = 1.0\text{A}$, $I_{RR} = 0.25\text{A}$
 2. Measured at 1 MHz and Applied $V_R = 4.0\text{ Volts}$
 3. Units Mounted on P.C.B. 0.2" x 0.2" (5mm x 5mm) Pad Areas



RATINGS AND CHARACTERISTIC CURVES (ES2AA THRU ES2JA)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

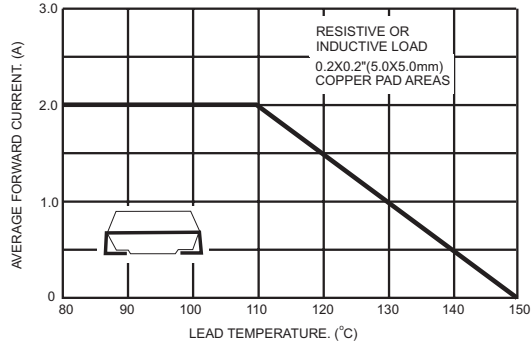


FIG.2- TYPICAL REVERSE CHARACTERISTICS

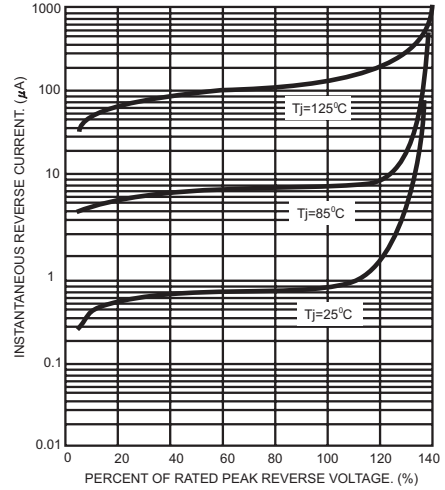


FIG.3- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

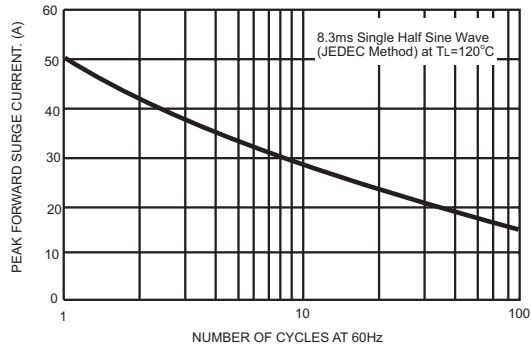


FIG.5- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

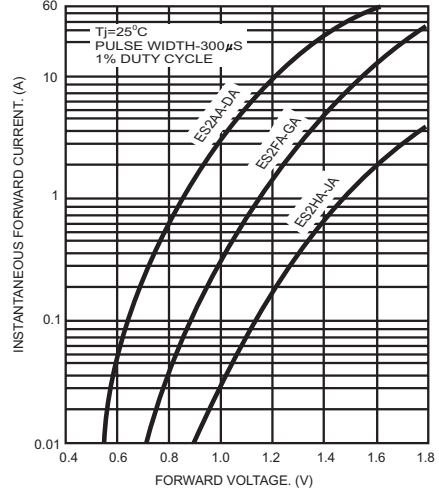


FIG.4- TYPICAL JUNCTION CAPACITANCE

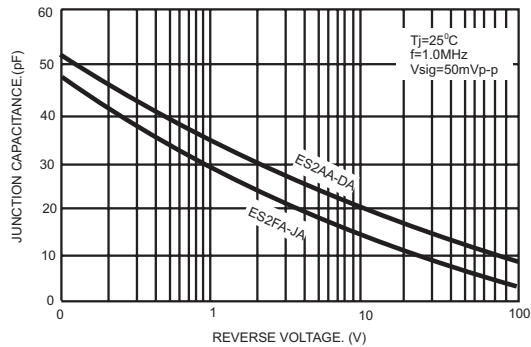


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

