



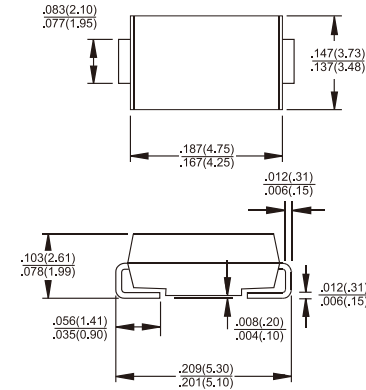
ES2A - ES2J

2.0 AMPS. Surface Mount Super Fast Rectifiers

SMB/DO-214AA

Features

- ✦ UL Recognized File # E-326243
- ✦ 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
- ✦ Qualified as per AEC-Q101
- ✦ Green compound with suffix "G" on packing
code & prefix "G" on datecode.



Dimensions in inches and (millimeters)

Marking Diagram



- ES2X = Specific Device Code
- G = Green Compound
- Y = Year
- M = Work Month

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 grams

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 2A	ES 2B	ES 2C	ES 2D	ES 2F	ES 2G	ES 2H	ES 2J	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	$I_{F(AV)}$	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 at Rated DC Blocking Voltage @ $T_A = 25^\circ C$ (Note 1) @ $T_A = 100^\circ C$	I_R					10	350			μA μA
Maximum Reverse Recovery Time (Note 2)	T_{rr}					35				nS
Typical Junction Capacitance (Note 3)	C_j	25					20			pF
Maximum Thermal Resistance (Note 4)	$R_{\theta JA}$ $R_{\theta JL}$					75	20			$^\circ C / W$
Operating Temperature Range	T_J					-55 to +150				$^\circ C$
Storage Temperature Range	T_{STG}					-55 to +150				$^\circ C$

- Notes: 1. Pulse Test with PW=300 usec, 1% Duty Cycle
2. Reverse Recovery Test Conditions: $I_F=0.5A$, $I_R=1.0A$, $I_{RR}=0.25A$
3. Measured at 1 MHz and Applied $V_R=4.0$ Volts
4. Units Mounted on P.C.B. 0.4" x 0.4" (10mm x 10mm) Pad Areas

RATINGS AND CHARACTERISTIC CURVES (ES2A THRU ES2J)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

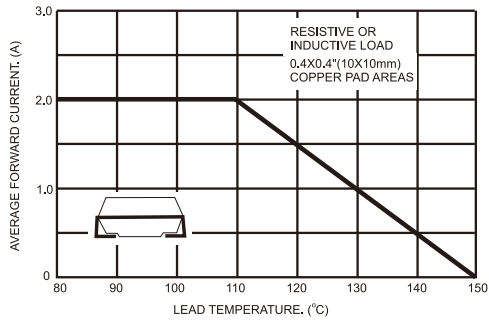


FIG.3- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

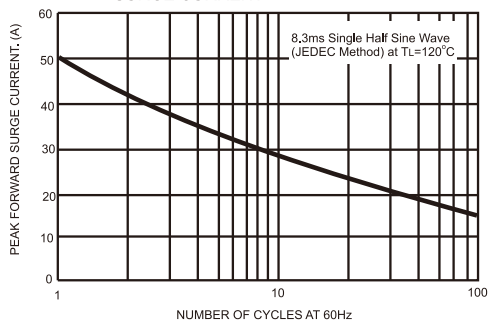


FIG.4- TYPICAL JUNCTION CAPACITANCE

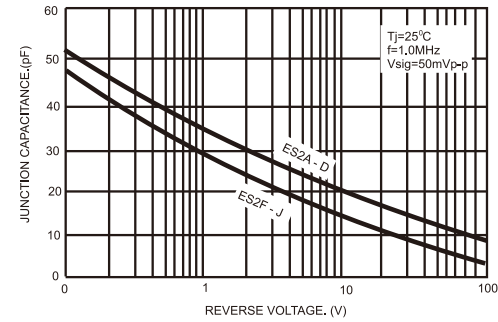


FIG.2- TYPICAL REVERSE CHARACTERISTICS

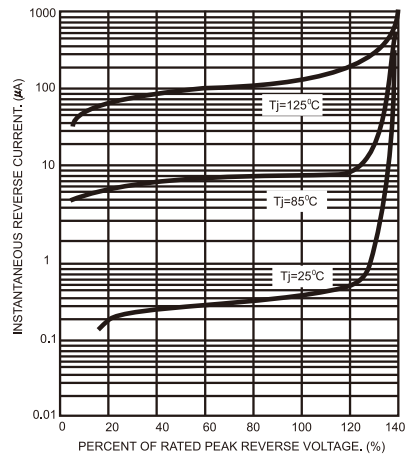


FIG.5- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

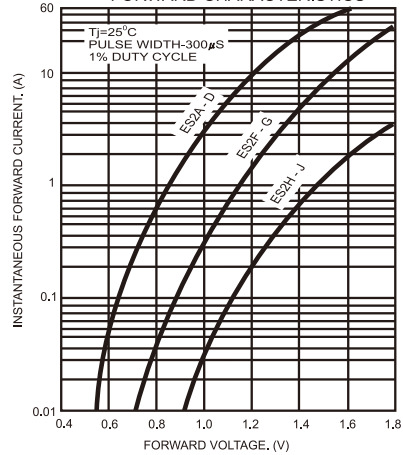


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

