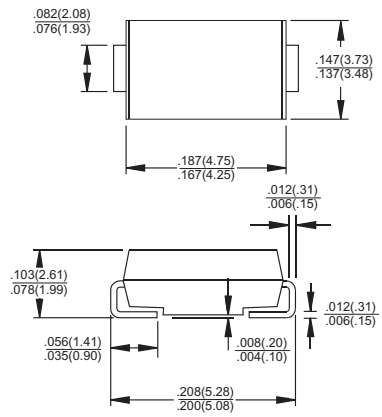
ES2A THRU ES2J

2.0 AMPS. Super Fast Surface Mount Rectifiers

Voltage Range
50 to 600 Volts
Current
2.0 Amperes

SMB/DO-214AA



Dimensions in inches and (millimeters)

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-O

Mechanical Data

- ✧ Cases: Molded plastic
- ✧ Terminals: Solder plated
- ✧ Polarity: Indicated by cathode band
- ✧ Packing: 12mm tape per E1A STD RS-481
- ✧ Weight: 0.093 gram

Maximum Ratings and Electrical Characteristics

Rating at 25℃ 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	$I_{(AV)}$	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℃ at Rated DC Blocking Voltage @ T_A=100℃	I_R	10 350								uA uA
Maximum Reverse Recovery Time (Note 1)	Trr	35								nS
Typical Junction Capacitance (Note 2)	Cj	25				20				pF
Maximum Thermal Resistance (Note 3)	$R\theta_{JA}$ $R\theta_{JL}$	75 20								℃/W
Operating Temperature Range	T_J	-55 to +150								℃
Storage Temperature Range	T_{STG}	-55 to + 150								℃

Notes: 1. Reverse Recovery Test Conditions: IF=0.5A, IR=1.0A, IRR=0.25A
2. Measured at 1 MHz and Applied VR=4.0 Volts
3. Units Mounted on P.C.B. 0.4 x 0.4" (10 x 10mm) Pad Areas

RATINGS AND CHARACTERISTIC CURVES (ES2A THRU ES2J)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

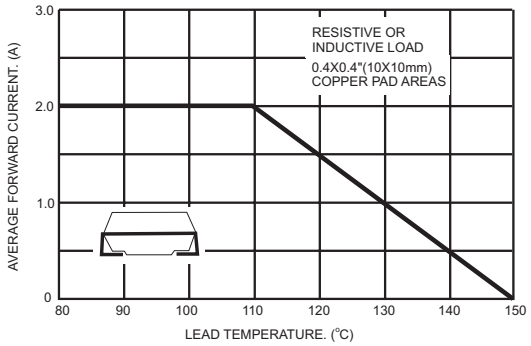


FIG.2- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

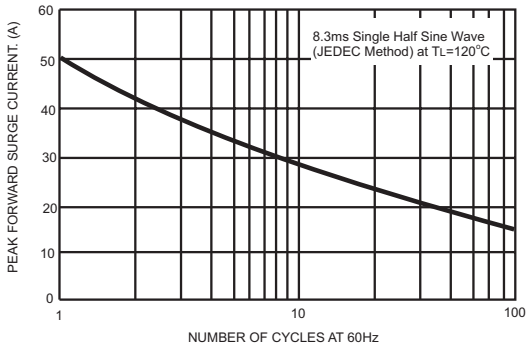


FIG.3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

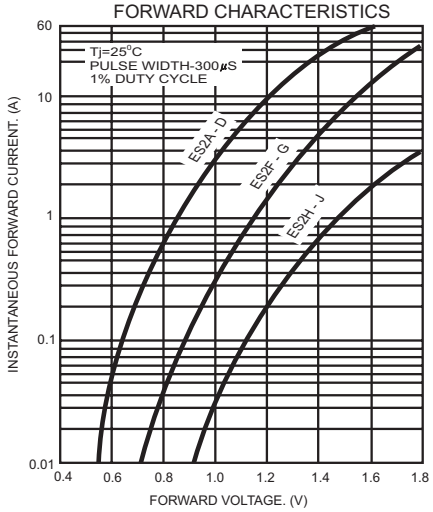


FIG.4- TYPICAL REVERSE CHARACTERISTICS

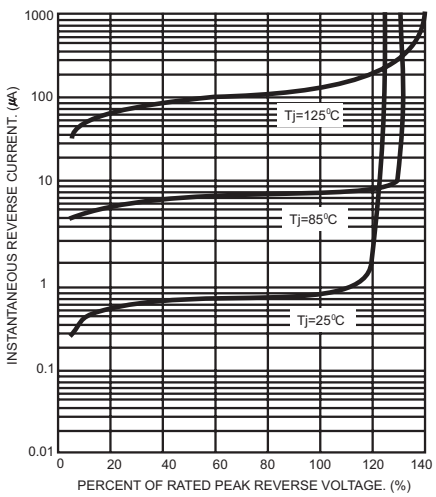


FIG.5- TYPICAL JUNCTION CAPACITANCE