

ES2A THRU ES2M

SURFACE MOUNT GLASS PASSIVATED JUNCTION SUPER FAST RECOVERY RECTIFIER

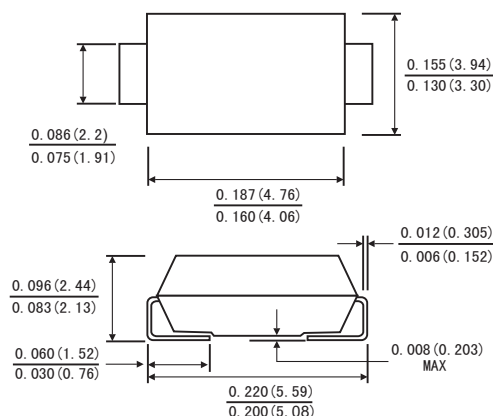
Reverse Voltage: 50 to 800 Volts
Forward Current: 2.0 Ampere

FEATURES

- Glass passivated cavity-free junction
- Ideal for surface mount automotive applications
- Ultrafast recovery time for high efficiency
- Built-in strain relief
- Easy pick and place
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Lead (Pb)-free component
- Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC
- High temperature soldering guaranteed: 260 °C/10 seconds at terminals



SMB(DO-214AA)



MECHANICAL DATA

- Case: JEDEC SMB(DO-214AA) molded plastic body
- Terminals: solder plated, solderable per MIL-STD-750, method 2026
- Polarity: color band denotes cathode end
- Mounting Position: Any
- Weight: 0.003ounce, 0.093 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(Rating at 25 °C ambient temperature unless otherwise specified, Single phase, half wave, 60HZ, resistive or inductive load. For capacitive load, derate current by 20%.)

	Symbols	ES2							Units
		A	B	D	G	J	K	M	
Maximum Repetitive Peak Reverse Voltage	V _{RRM}	50	100	200	400	600	800	1000	Volts
Maximum RMS Voltage	V _{RMS}	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage	V _{DC}	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Current at Ta=110 °C	I _(AV)	2.0							Amps
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	I _{FSM}	50							Amps
Maximum Instantaneous Forward Voltage at 2.0 A	V _F	0.95		1.3		1.7		Volts	
Maximum DC Reverse Current At Rated DC Blocking Voltage	T _A =25 °C	10							μA
	T _A =100 °C	350							
Maximum Reverse Recovery Time(Note1)	T _{rr}	35					100		ns
Typical Junction Capacitance(Note2)	C _J	25							pF
Typical Thermal Resistance(Note3)	R _{θJA}	75							°C/W
	R _{θJL}	20							
Operating Junction and Storage Temperature Range	T _J , T _{STG}	-55 to +150							°C

Note: 1. Test conditions: I_F=0.5A, I_R=1.0A, I_{RR}=0.25A.

2. Measured at 1MHZ and applied reverse voltage of 4.0 Volts.

3. Thermal resistance from junction to ambient P. C. B. mounted on 0.2x0.2" (5.0x5.0mm) copper pad areas.

RATINGS AND CHARACTERISTIC CURVES ES2A THRU ES2M

FIG.1- FORWARD CURRENT DERATING CURVE

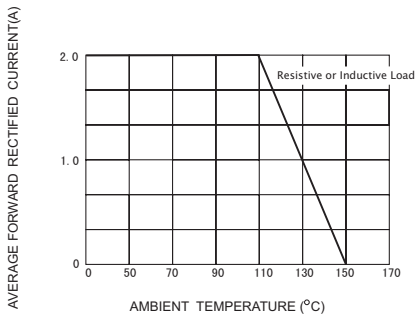


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

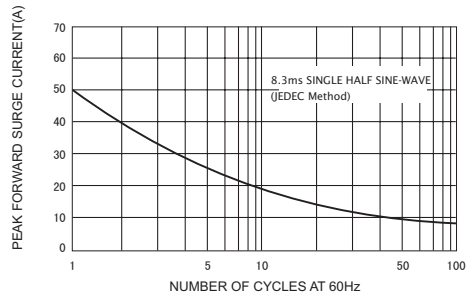


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

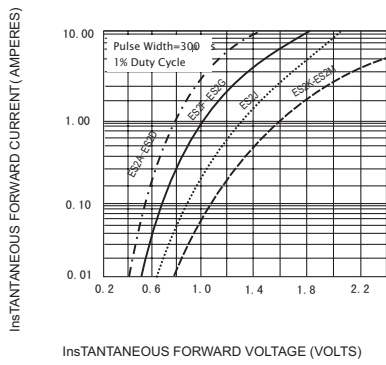


FIG.4-TYPICAL REVERSE CHARACTERISTICS

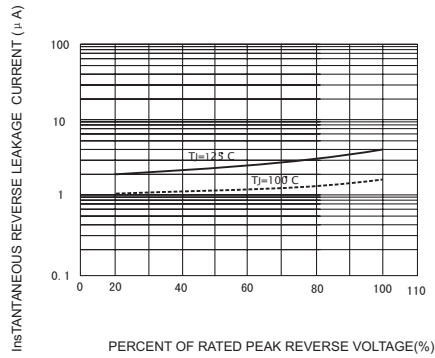
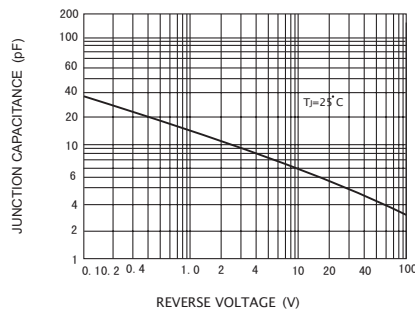


FIG.5-TYPICAL JUNCTION CAPACITANCE



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