

Super Fast Recovery Rectifiers

ES2A THRU ES2J 50 to 600 V 2.0 A

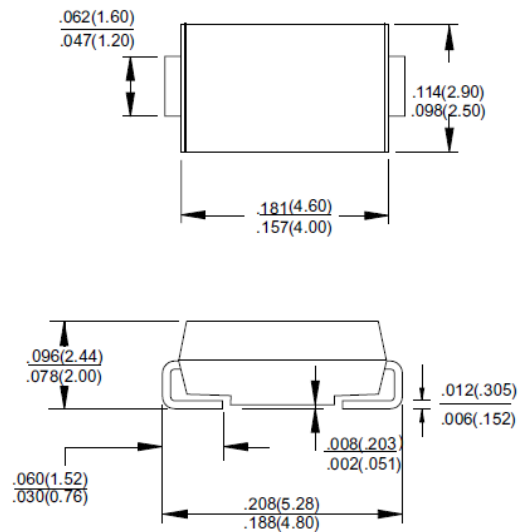
FEATURES

- Glass passivated chip junction
- Ideal for automated placement
- Super fast reverse recovery time for high efficiency
- Low profile package
- High forward surge capability
- High temperature soldering :
260°C/10 seconds at terminals
- Component in accordance to RoHS 2002/95/1
and WEEE 2002/96/EC

MECHANICAL DATA

- Case: JEDEC DO-214AC molded plastic body over passivated chip
- Terminals: Solder plated, solderable per
J-STD-002B and JESD22-B102D
- Polarity: Laser band denotes cathode end

SMA/DO-214AC



Dimensions in inches and (millimeters)

Maximum Ratings and Electrical Characteristics

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

Type Number	Symbols	ES2A	ES2B	ES2D	ES2G	ES2J	Units	
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	Volts	
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	Volts	
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	Volts	
Average Forward Rectified Current @ $T_A = 50^\circ\text{C}$	$I_{(AV)}$	2.0						Amp
Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	60						Amp
Maximum Forward Voltage at 2.0A DC	V_F	1.0			1.3	1.7	Volts	
Maximum Reverse Current @ Rated $T_J = 25^\circ\text{C}$ Reverse Voltage @ $T_J = 100^\circ\text{C}$	I_R	5.0			50		μAmp	
Typical Thermal Resistance $T_J = 25^\circ\text{C}$	$R_{\theta JA}$	25					$^\circ\text{C}/\text{W}$	
Typical Junction capacitance (Note2)	C_J	18					pF	
Maximum Reverse Recovery Time(Note1)	TRR	35					nS	
Operating Temperature Range	T_J	-55 to +150					$^\circ\text{C}$	
Storage Temperature Range	T_{STG}	-55 to +150					$^\circ\text{C}$	

NOTES:

1. Measured with $I_F = 0.5\text{A}$, $I_R = 1\text{A}$, $I_{RR} = 0.25\text{A}$.
2. Measured at 1.0 MHz and applied reverse voltage of 4.0 V DC.
3. 8.0mm^2 (0.013mm thick) land areas

RATINGS AND CHARACTERISTIC CURVES

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

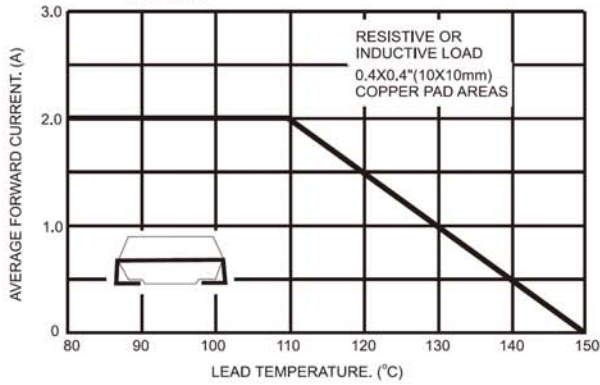


FIG.3- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

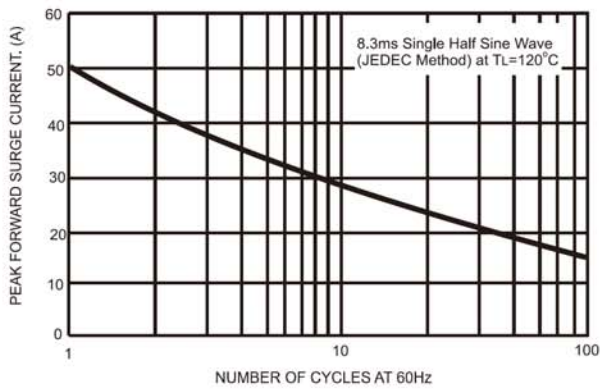


FIG.4- TYPICAL JUNCTION CAPACITANCE

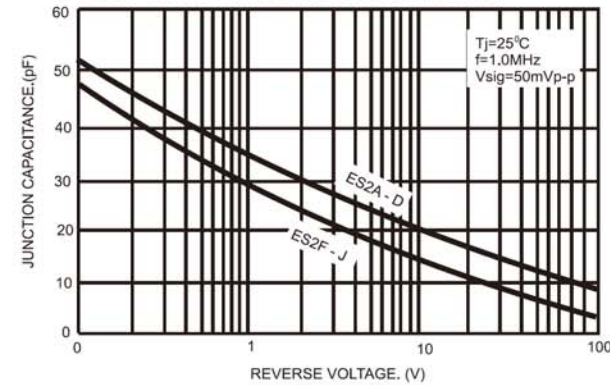


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

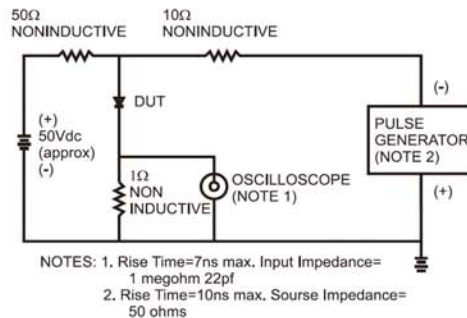


FIG.2- TYPICAL REVERSE CHARACTERISTIC

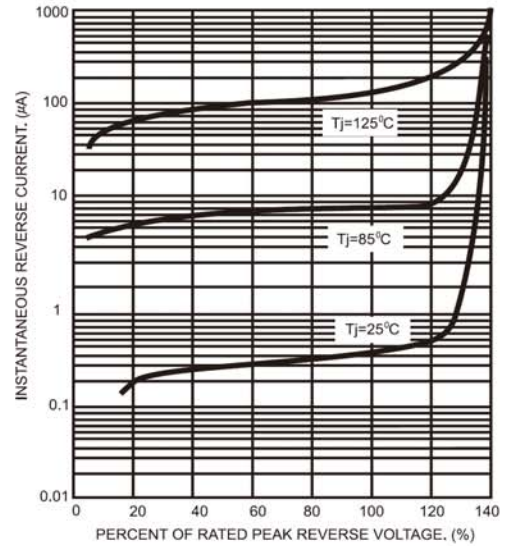


FIG.5- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

