



SEMICONDUCTOR

ES3AC THRU ES3JC

SURFACE MOUNT GLASS PASSIVATED JUNCTION SUPER FAST RECOVERY RECTIFIER

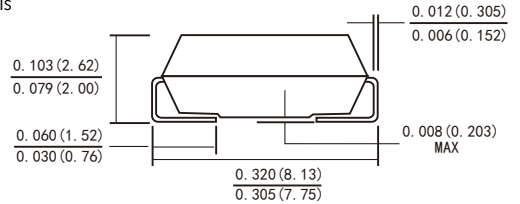
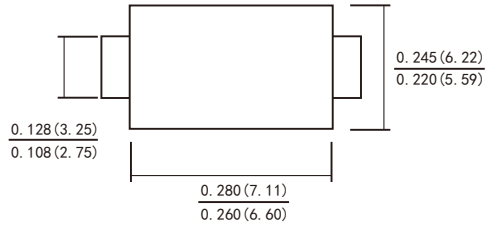
Reverse Voltage: 50 to 600 Volts
Forward Current: 3.0 Amperes

FEATURES

- Glass passivated
- 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 2011/65/EU
- High temperature soldering guaranteed: 260°C/10 seconds at terminals



SMC(DO-214AB)



Dimensions in inches and (millimeters)

MECHANICAL DATA

- Case: JEDEC SMC(DO-214AB) molded plastic body
- Terminals: solder plated, solderable per MIL-STD-750, method 2026
- Polarity: color band denotes cathode end
- Mounting Position: Any

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	ES3						Units	
			AC	BC	CC	DC	FC	GC		JC
Maximum Repetitive Peak Reverse Voltage		V_{RRM}	50	100	150	200	300	400	600	Volts
Maximum RMS Voltage		V_{RMS}	35	70	105	140	210	280	420	Volts
Maximum DC Blocking Voltage		V_{DC}	50	100	150	200	300	400	600	Volts
Maximum Average Forward Rectified Current At $T_L=110^\circ\text{C}$		$I_{(AV)}$	3.0						Amps	
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load		I_{FSM}	100						Amps	
Maximum Instantaneous Forward Voltage at 3.0 A		V_F	0.95			1.25		1.7		Volts
Maximum DC Reverse Current At Rated DC Blocking Voltage	$T_A=25^\circ\text{C}$	I_R	5						μA	
	$T_A=125^\circ\text{C}$		250							
Maximum Reverse Recovery Time(Note1)		t_{rr}	35						ns	
Typical Junction Capacitance(Note2)		C_J	45						pF	
Typical Thermal Resistance(NOTE3)		$R_{\theta JA}$	47						$^\circ\text{C}/\text{W}$	
Operating Junction and Storage Temperature		T_J, T_{STG}	-55 to +150						$^\circ\text{C}$	

Note: 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 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 ES3AC THRU ES3JC

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

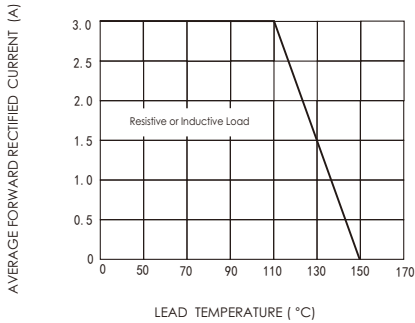


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

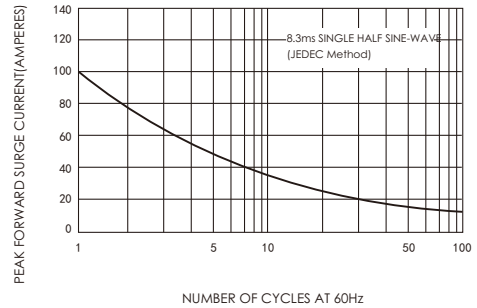


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

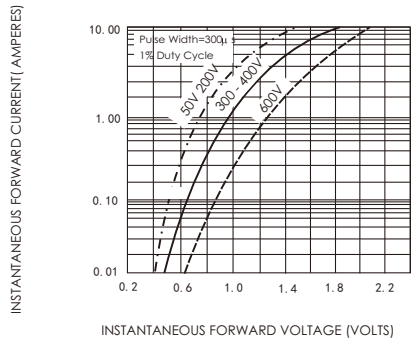


FIG.4-TYPICAL REVERSE CHARACTERISTICS

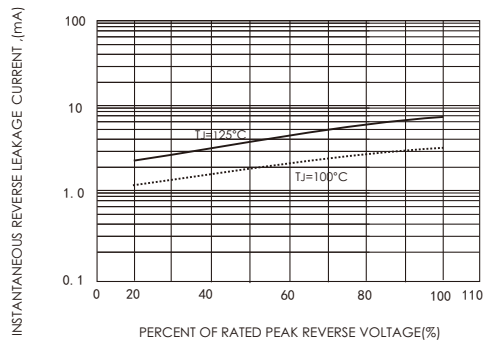


FIG.5-TYPICAL JUNCTION CAPACITANCE

