



ES5A THRU ES5J

SURFACE MOUNT GLASS PASSIVATED JUNCTION SUPER FAST RECOVERY RECTIFIER

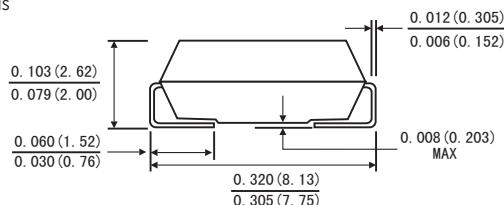
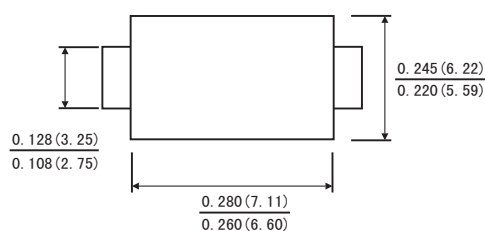
Reverse Voltage: 50 to 600 Volts
Forward Current: 5.0 Amperes

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	ES5							Units
		A	B	K	D	F	G	J	
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	$I_{(AV)}$	5.0							Amps
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	150							Amps
Maximum Instantaneous Forward Voltage at 5.0 A	V_F	0.95		1.3		1.7			Volts
Maximum DC Reverse Current At Rated DC Blocking Voltage	$T_A=25^\circ\text{C}$	10							μA
	$T_A=125^\circ\text{C}$								
Maximum Reverse Recovery Time(Note 1)	T_{rr}	35							ns
Typical Junction Capacitance(Note 2)	C_J	180							pF
Typical Thermal Resistance (NOTE 3)	$R_{\theta JA}$	40							$^\circ\text{C}/\text{W}$
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. P. C. B. Mounted On 0.6x0.6" (16x16mm) Copper Pad Areas.

RATINGS AND CHARACTERISTIC CURVES ES5A THRU ES5J

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

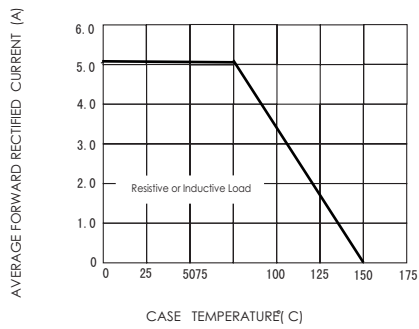


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

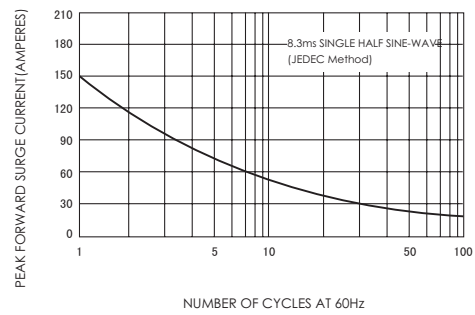


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

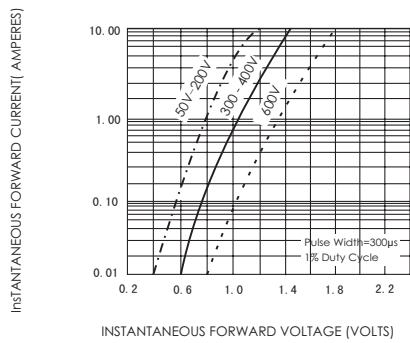


FIG.4-TYPICAL REVERSE CHARACTERISTICS

