ES8GC

SEMICONDUCTOR

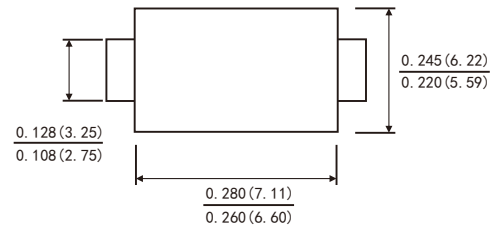
SURFACE MOUNT GLASS PASSIVATED JUNCTION SUPER FAST RECOVERY RECTIFIER

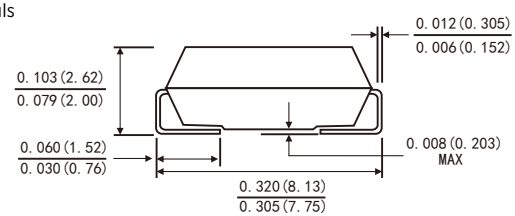
Reverse Voltage: 400 Volts
Forward Current:8.0Amperes

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%.)

Parameter		Symbols	ES8GC	Units
Maximum Repetitive Peak Reverse Voltage		V_{RRM}	400	Volts
Maximum RMS Voltage		V_{RMS}	280	Volts
Maximum DC Blocking Voltage		V_{DC}	400	Volts
Maximum Average Forward Rectified Current		$I_{(AV)}$	8. 0	Amps
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load		I_{FSM}	200	Amps
Maximum Instantaneous Forward Voltage at 8.0 A		V_F	1.3	Volts
Maximum DC Reverse Current At Rated DC Blocking Voltage	T_A=25°C	I_R	5	μA
	T_A=125°C		100	
Maximum Reverse Recovery Time(Note1)		Trr	35	ns
Typical Junction Capacitance(Note2)		C_J	77	PF
Typical Thermal Resistance (NOTE3)		$R_{\theta JA}$	40	℃/W
Operating Junction and Storage Temperature		T_J, T_{STG}	-55 to+150	℃

Note: 1.Reverse Recovery 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.P.C.B.Mounted On 0.6x0.6"(16x16mm)Copper Pad Areas.

RATINGS AND CHARACTERISTIC CURVES ES8GC

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

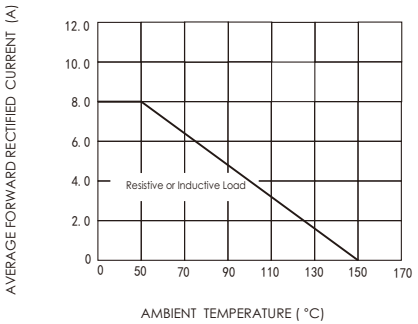


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

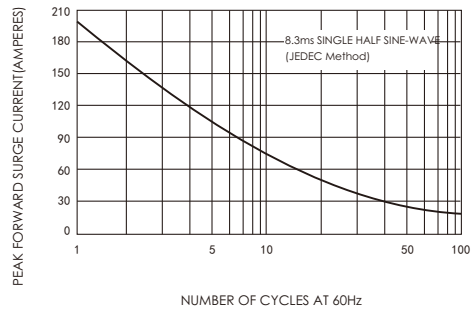


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

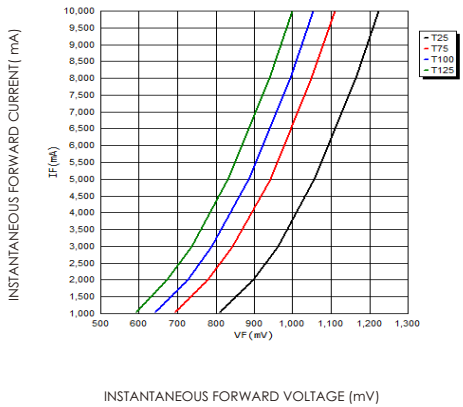


FIG.4-TYPICAL REVERSE CHARACTERISTICS

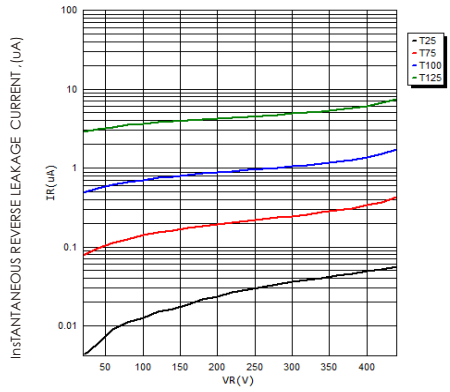
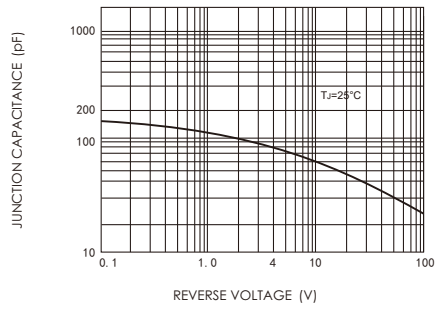
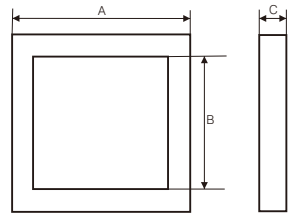


FIG.5-TYPICAL JUNCTION CAPACITANCE



CHIP SIZE



Size		
A	B	C
(mil)	(mil)	(mm)
120±2	94±2	0.21-0.25

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