

FEATURES

- Glass passivated junction
- For Surface Mount Applications, Easy to pick and place
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Low forward voltage drop
- High current capability, High reliability
- Low power loss, high efficiency
- High surge current capability
- High speed switching, Low leakage
- High temperature soldering guaranteed:260°C/10 seconds at terminals,
- Component in accordance to RoHS 2015/863/EU



SMC(DO-214AB)



Cathode  Anode

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
- Weight: 0.007ounce,0.21 gram

TYPICAL APPLICATIONS

For use in low voltage ,high frequency inverters ,DC/DC converters, free wheeling ,and polarity protection applications

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%.)

Parameters	Symbols	ES10JC	Units
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	600	V
Maximum RMS Voltage	V_{RMS}	420	V
Maximum DC Blocking Voltage	V_{DC}	600	V
Maximum Average Forward Rectified Current	I_{FAV}	10.0	A
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	230	A
Maximum Instantaneous Forward Voltage at 10.0A	V_F	1.70	V
Maximum DC Reverse Current at rated DC blocking voltage $T_j=25^\circ\text{C}$ $T_j=125^\circ\text{C}$	I_R	5.0 100	μA
Maximum reverse recovery time(Note1)	t_{rr}	35	ns
Typical junction capacitance(Note2)	C_j	90	pF
Typical Thermal Resistance(Note3)	$R_{\theta JA}$ $R_{\theta JL}$	47 10	$^\circ\text{C}/\text{W}$
Operating junction and storage temperature range	T_j, T_{STG}	-55 to+150	$^\circ\text{C}$

Note: 1.Test conditions: $I_f=0.5A, I_r=1.0A, I_{RRM}=0.25A$.

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

3.Units mounted on PCB with 0.31" x 0.31" (8.0 mm x 8.0 mm) copper pad areas

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

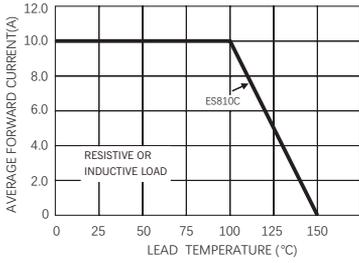


FIG.2-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

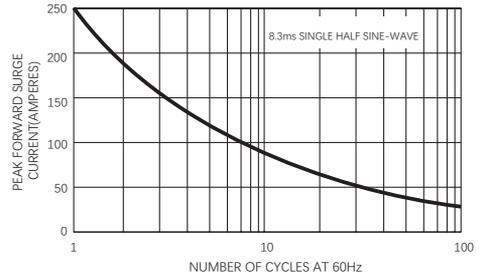


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

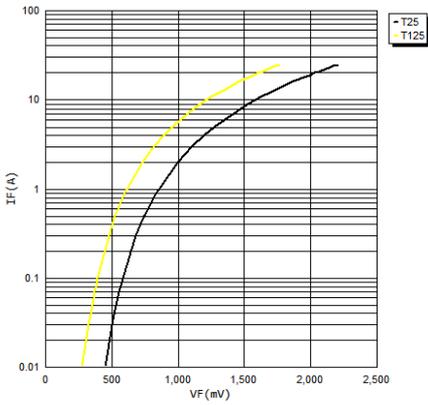


FIG.4-TYPICAL REVERSE CHARACTERISTICS

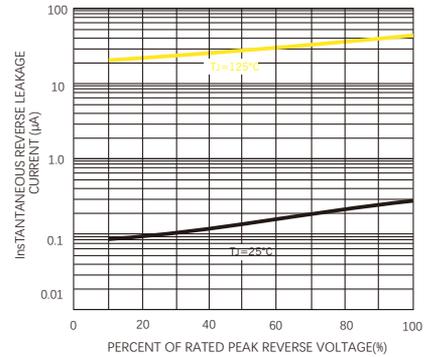


FIG.5-TYPICAL JUNCTION CAPACITANCE

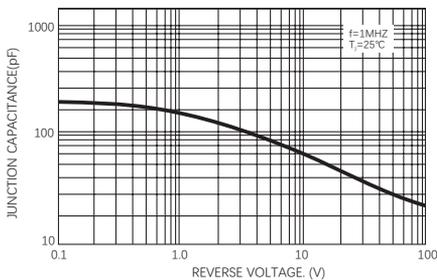
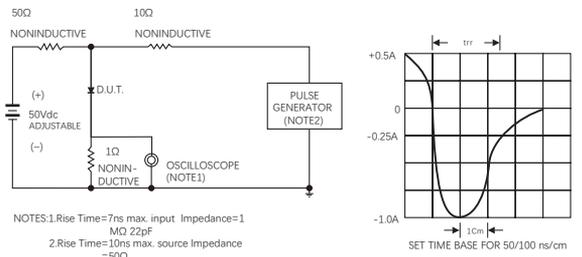


FIG.6-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC

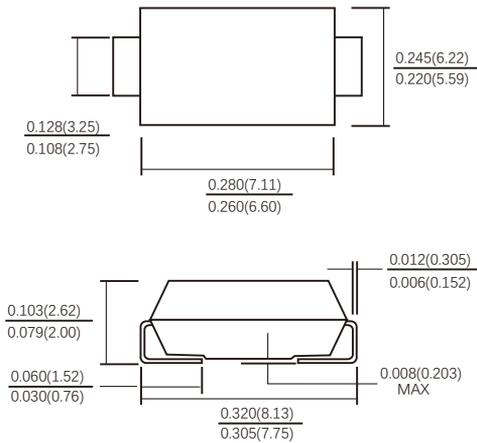


AVAILABLE PACK INFORMATION

Product code	Pack	Reel Size (mm)	Quantity (pcs/reel)	Box Size L×W×H (mm)	Quantity (reel/box)	Carton Size L×W×H (mm)	Quantity (box/carton)	Quantity (carton) (K)
ES10JC-SMC	T/R	Φ330	3000	338×338×39	2	370×370×360	8	48

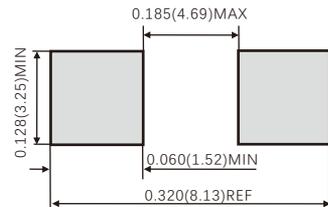
PACKAGE OUTLINE DIMENSIONS

SMC(DO-214AB)



Dimensions in inches and (millimeters)

Suggested PAD Layout



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