



FEATURES

- Glass Passivated Die Construction
- Super-Fast Recovery Time For High Efficiency
- Low Forward Voltage Drop and High Current Capability
- Surge Overload Rating to 50A Peak
- Ideally Suited for Automated Assembly
- Plastic Material: UL Flammability Classification Rating 94V-0

MECHANICAL DATA

Case: Molded Plastic

Terminals: Solder Plated Terminal -
Solderable per MIL-STD-202, Method 208

Polarity: Cathode Band or Cathode Notch

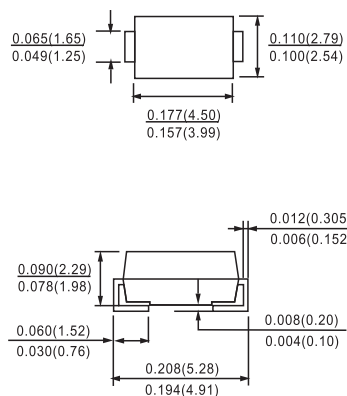
SMA Weight: 0.064 grams (approx.)

SMB Weight: 0.093 grams (approx.)

Mounting Position: Any

Marking: Type Number

DO-214AC(SMA)



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate by 20%.

		ES2AA	ES2BA	ES2CA	ES2DA	ES2GA	UNITS
Device marking code		EA	EB	EC	ED	EG	
Maximum recurrent peak reverse voltage	V_{RRM}	50	100	150	200	400	V
Maximum RMS voltage	V_{RMS}	35	70	105	140	210	V
Maximum DC blocking voltage	V_{DC}	50	100	150	200	400	V
Maximum average forward rectified current @ $T_A=110^{\circ}C$	$I_{F(AV)}$	2.0					A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load @ $T_J=125^{\circ}C$	I_{FSM}	50					A
Maximum instantaneous forward voltage at 2.0 A	V_F	0.92 1.25					V
Maximum reverse current @ $T_A=25^{\circ}C$ at rated DC blocking voltage @ $T_A=125^{\circ}C$	I_R	10 350					μA
Typical reverse recovery time (Note1)	t_{rr}	25					ns
Typical junction capacitance (Note2)	C_J	18					pF
Typical thermal resistance	$R_{\theta JA}$	50					$^{\circ}C/W$
Operating junction temperature range	T_J	- 55 ---- + 150					$^{\circ}C$
Storage temperature range	T_{STG}	- 55 ---- + 150					$^{\circ}C$

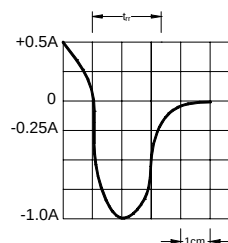
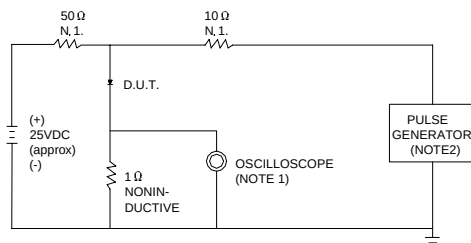
NOTE: 1. Measured with $I_F=0.5A$, $I_R=1A$, $t_{rr}=0.25A$.

2. Measured at 1.0MHz and applied reverse voltage of 4.0VDC.

3. Thermal resistance from junction to ambient and junction to lead P.C.B. mounted on 0.27"X0.27"(7.0X7.0mm2) copper pad areas

RATINGS AND CHARACTERISTIC CURVES ES2AA THRU ES2GA

FIG.1 -- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC

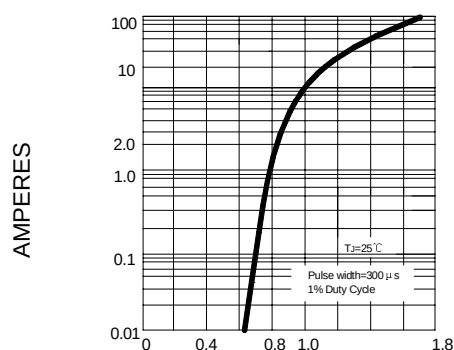


NOTES:1.RISE TIME = 7ns MAX.INPUT IMPEDANCE = 1MΩ .22pF.
2.RISE TIME =10ns MAX.SOURCE IMPEDANCE=50 Ω .

SET TIME BASE FOR 20/30 ns/cm

FIG.2 -- TYPICAL FORWARD CHARACTERISTIC

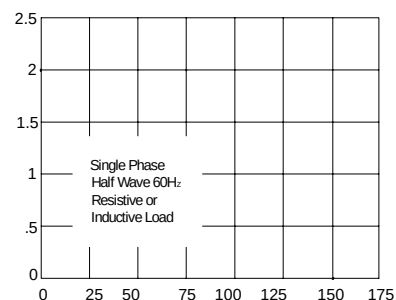
INSTANTANEOUS FORWARD CURRENT



INSTANTANEOUS FORWARD VOLTAGE, VOLTS

FIG.3 -- FORWARD DERATING CURVE

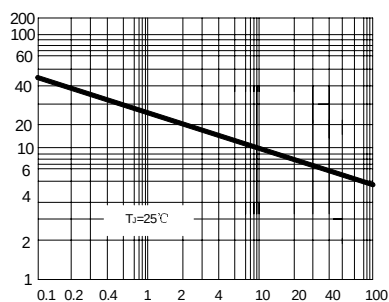
AVERAGE FORWARD CURRENT



AMBIENT TEMPERATURE, °C

FIG.4 -- TYPICAL JUNCTION CAPACITANCE

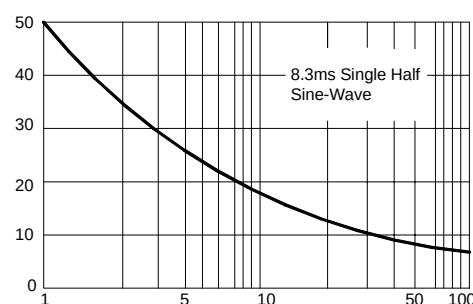
JUNCTION CAPACITANCE,pF



REVERSE VOLTAGE, VOLTS

FIG.5 -- PEAK FORWARD SURGE CURRENT

PEAK FORWARD SURGE CURRENT



NUMBER OF CYCLES AT 60Hz