

FEATURES

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



DO-214AC (SMA)

MECHANICAL DATA

- Case: DO-214AC Molded plastic
- Terminals: Pure tin plated, lead free
- Polarity: Indicated by cathode band
- Weight: 70mg (approx.)



Cathode

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 current by 20%.

Parameter	Symbol	ER1A	ER1B	ER1C	ER1D	ER1E	ER1G	ER1J	ER1K	ES1M	Unit
Maximum Repetitive Peak Reverse Voltage	V _{RRM}	50	100	150	200	300	400	600	800	1000	v
Maximum RMS Voltage	V _{RMS}	35	70	105	140	210	280	420	560	700	v
Maximum DC Blocking Voltage	V _{DC}	50	100	150	200	300	400	600	800	1000	v
Maximum Average Forward Rectified Current at T _A =75 °C	I _{F(AV)}	1.0									A
Peak Forward Surge Current 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC)	I _{FSM}	50.0									A
Maximum Instantaneous Forward Voltage at 1 A	V _F	0.975				1.25		1.7		V	
Maximum DC Reverse Current at Rated DC Blocking Voltage	T _A = 25 °C T _A =100 °C	I _R	5.0 150.0								μA
Maximum reverse recovery time (NOTE1)	t _{rr}	50				60		100		nS	
Typical Junction Capacitance (NOTE2)	C _J	25.0									pF
Maximum Thermal Resistance (NOTE3)	R _{θJL}	20.0									°C/W
Operating and Storage Temperature Range	T _{J, T_S}	-50 to +150									°C

Note: 1.Reverse recovery condition $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{rr}=0.25\text{A}$

2.Measured at 1MHz and applied reverse voltage of 4.0V D.C.

3.P.C.B. mounted with 0.2x0.2" (5.0x5.0mm) copper pad areas

AVERAGE FORWARD RECTIFIED CURRENT,
AMPERES

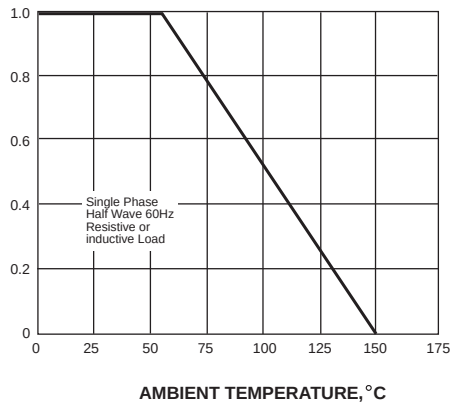
FIG. 1- FORWARD CURRENT DERATING CURVE

 PEAK FORWARD SURGE CURRENT,
AMPERES

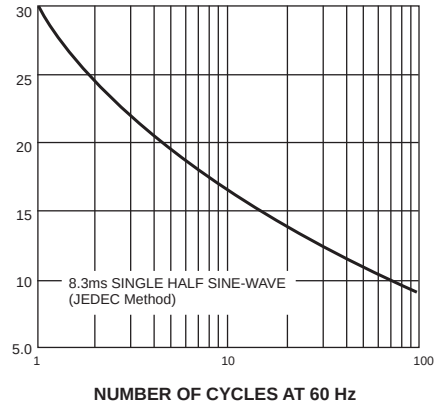
FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

 INSTANTANEOUS FORWARD
CURRENT,AMPERES

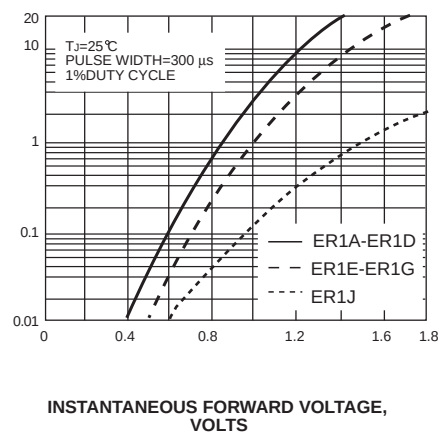
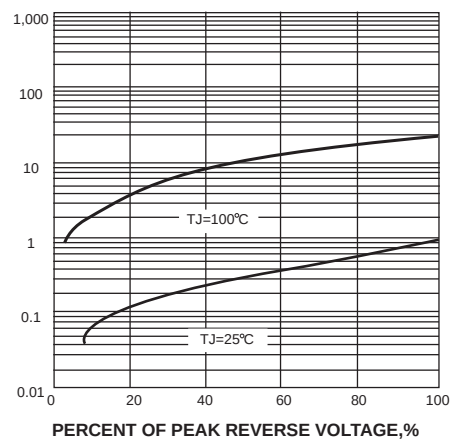
FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

 INSTANTANEOUS REVERSE CURRENT,
MICROAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS


JUNCTION CAPACITANCE, pF

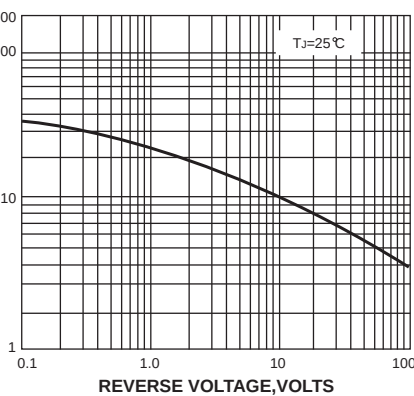
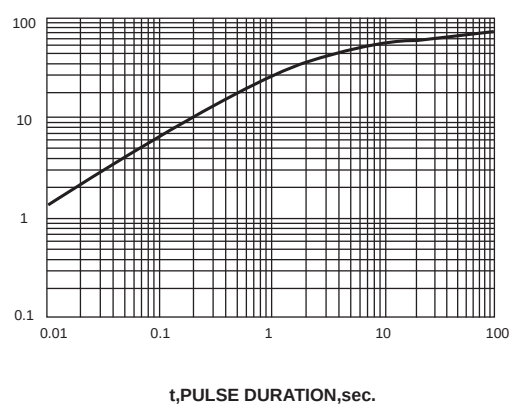
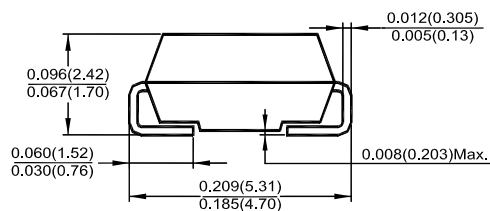
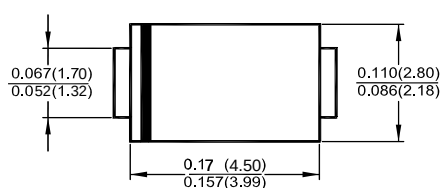
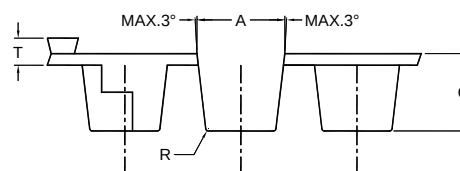
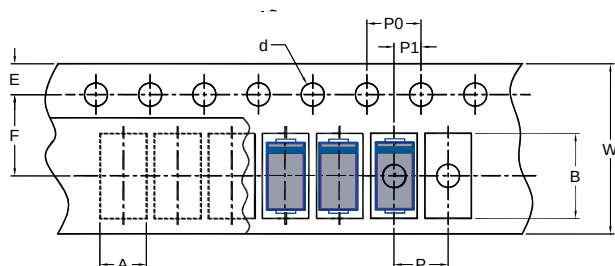
FIG. 5-TYPICAL JUNCTION CAPACITANCE

 TRANSIENT THERMAL IMPEDANCE,
°C/W

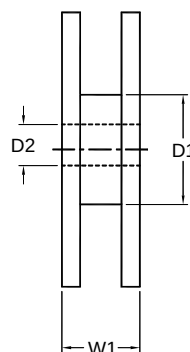
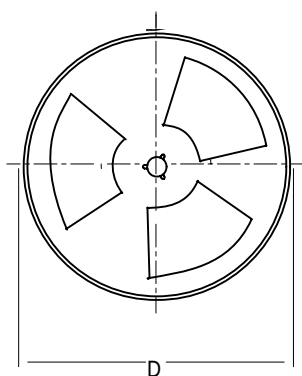
FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE


SMA Package Outline Dimensions


(DIMENSIONS ARE IN MILLIMETER)

SMA Embossed Carrier Tape


DIMENSIONS ARE IN MILLIMETER											
TYPE	A	B	C	d	E	F	P	P0	P1	T	W
SMA	3.0	5.4	2.4	1.5	1.5	5.65	4	4	2	0.3	12
TOLERANCE	±0.1	±0.1	±0.1	±0.1	±0.1	±0.05	±0.1	±0.1	±0.1	±0.05	±0.2

SMA Reel


DIMENSIONS ARE IN MILLIMETER				
REEL OPTION	D	D1	D2	W1
7" DIA	178	50 min.	13	16.8
TOLERANCE	±2	±0.1	±0.5	±2