



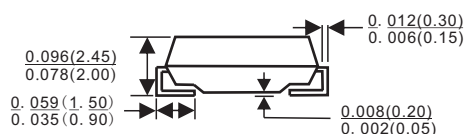
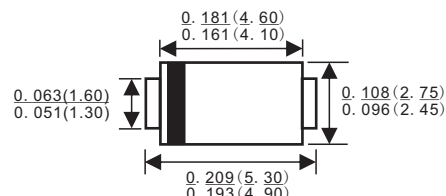
Features

- ✧ Low cost
- ✧ Low leakage
- ✧ Low forward voltage drop
- ✧ High current capability
- ✧ Easily cleaned with alcohol, Isopropanol and similar solvents
- ✧ The plastic material carries U/L recognition 94V-0

VOLTAGE RANGE: 50 --- 600 V

CURRENT: 3.0 A

SMA/DO-214AC



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%.

Parameter	Symbol	ES3AA	ES3BA	ES3CA	ES3DA	ES3EA	ES3GA	ES3JA	UNITS
Marking code		ES3A	ES3B	ES3C	ES3D	ES3E	ES3G	ES3J	
Maximum recurrent peak reverse voltage	V _{RRM}	50	100	150	200	300	400	600	V
Maximum RMS voltage	V _{RMS}	35	70	105	140	210	280	420	V
Maximum DC blocking voltage	V _{DC}	50	100	150	200	300	400	600	V
Maximum average forward rectified current @T _A =75°C	I _{F(AV)}	3.0							A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load @T _J =125°C	I _{FSM}	50.0							A
Maximum instantaneous forward voltage @ 2.0A	V _F	0.95				1.25		1.7	V
Maximum reverse current @T _A =25°C at rated DC blocking voltage @T _A =125°C	I _R	5.0 200							μA
Maximum reverse recovery time (Note 1)	t _{rr}	35							ns
Typical junction capacitance (Note 2)	C _J	62							pF
Typical thermal resistance (Note 3)	R _{θJA}	50							°C/W
Operating junction temperature range	T _J	- 55 ----- + 150							°C
Storage temperature range	T _{STG}	- 55 ----- + 150							°C

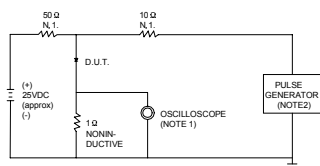
NOTE: 1. Measured with $I_F = 0.5\text{A}$, $I_R = 1\text{A}$, $t_{rr} = 0.25\text{A}$.

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

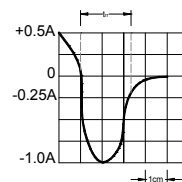
3. Thermal resistance junction to ambient.

Ratings AND Characteristic Curves

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



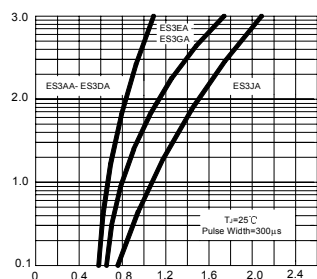
NOTES: 1. RISE TIME = 7ns MAX INPUT IMPEDANCE = 1MΩ. 22pF.
2. RISE TIME = 10ns MAX SOURCE IMPEDANCE = 50 Ω.



SET TIME BASE FOR 10/20 ns/cm

FIG.2 -- TYPICAL FORWARD CHARACTERISTIC

INSTANTANEOUS FORWARD
CURRENT, AMPERES



INSTANTANEOUS FORWARD VOLTAGE, VOLTS

FIG.3 -- FORWARD DERATING CURVE

AVERAGE FORWARD CURRENT
AMPERES

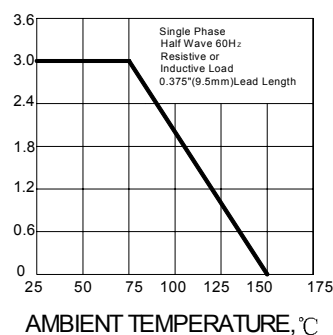
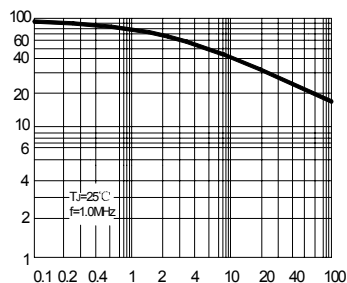


FIG.4 -- TYPICAL JUNCTION CAPACITANCE

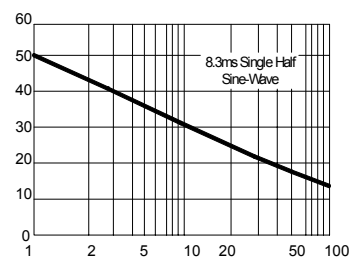
JUNCTION CAPACITANCE, pF



REVERSE VOLTAGE, VOLTS

FIG.5 -- PEAK FORWARD SURGE CURRENT

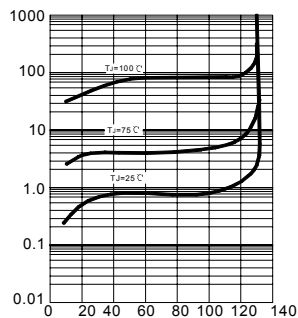
PEAK FORWARD SURGE
CURRENT, AMPERES



NUMBER OF CYCLES AT 60Hz

FIG.6 -- TYPICAL REVERSE CHARACTERISTICS

INSTANTANEOUS REVERSE
CURRENT, MICROAMPERES



PERCENT OF RATED PEAK REVERSE VOLTAGE. %

PACKAGE	SPQ/PCS	CARTON SPQ/PCS	CARTON SIZE/CM	CARTON GW/KG	CARTON NW/KG
SMA	5000/REEL	80000	36X30.6X31	12.00	11.00