ER3AC-ER3JC

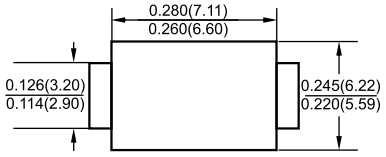
Surface Mount Rectifiers

VOLTAGE RANGE: 50 --- 600 V
CURRENT: 3.0 A

Features

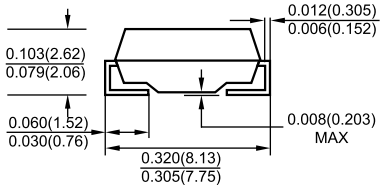
- ✧ Low cost
- ✧ Low leakage
- ✧ Low forward voltage drop
- ✧ High current capability
- ✧ Easily cleaned with alcohol,Isopropanol and similar solvents
- ✧ The plastic material carries U/L recognition 94V-0

SMC/DO-214AB



Mechanical Data

- ✧ Case:JEDEC DO-214AB,molded plastic
- ✧ Polarity: Color band denotes cathode
- ✧ Weight: 0.007 ounces,0.21 grams
- ✧ Mounting position: Any



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 ℃ ambient temperature unless otherwise specified.

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

Parameter	Symbol	ER3AC	ER3BC	ER3CC	ER3DC	ER3EC	ER3GC	ER3JC	UNITS
Marking code		ER3A	ER3B	ER3C	ER3D	ER3E	ER3G	ER3J	
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℃	$I_{F(AV)}$	3.0							A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load @T_J=125℃	I_{FSM}	100							A
Maximum instantaneous forward voltage @3.0A	V_F	0.95				1.25		1.7	V
Maximum reverse current @T_A=25℃	I_R	5.0							μA
at rated DC blocking voltage @T_A=125℃		300							
Maximum reverse recovery time (Note 1)	t_{rr}	35							ns
Typical junction capacitance (Note 2)	C_J	95							pF
Typical thermal resistance (Note 3)	$R_{\theta JA}$	20							℃/W
Operating junction temperature range	T_J	- 55 ----- + 150							℃
Storage temperature range	T_{STG}	- 55 ----- + 150							℃

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

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

3.Thermal resistance junction to ambient.

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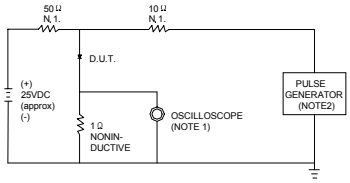
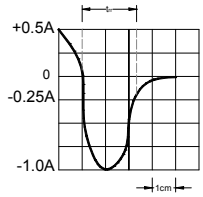
Ratings AND Charactieristic Curves

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

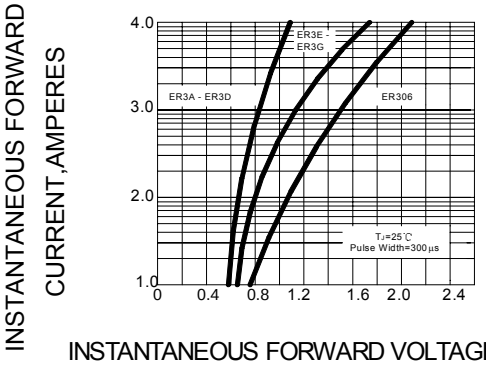


NOTES:1.RISE TIME = 7ns MAX.INPUT IMPEDANCE = 1MΩ.22pF.
2.RISE TIME =10ns MAX.SOURCE IMPEDANCE=50 Ω.



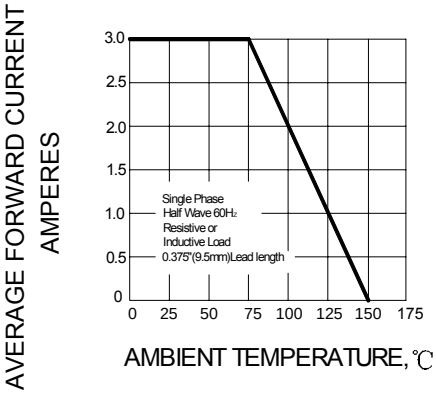
SET TIME BASE FOR 10 ns/cm

FIG.2 -- TYPICAL FORWARD CHARACTERISTIC



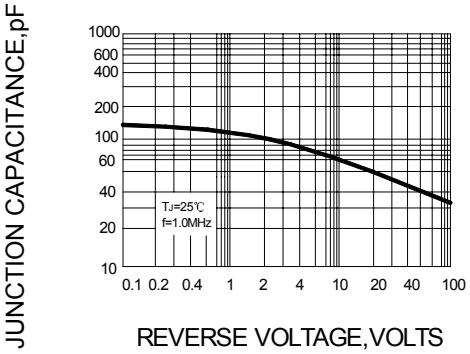
INSTANTANEOUS FORWARD VOLTAGE, VOLTS

FIG.3 -- FORWARD DERATING CURVE



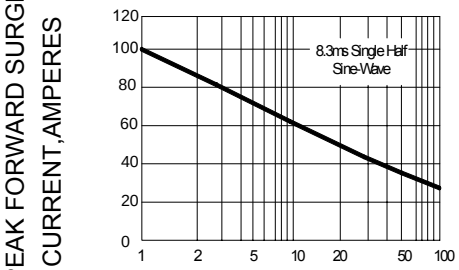
AMBIENT TEMPERATURE,℃

FIG.4 -- TYPICAL JUNCTION CAPACITANCE



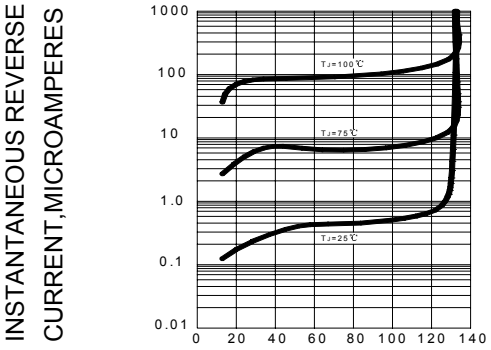
REVERSE VOLTAGE,VOLTS

FIG.5 -- PEAK FORWARD SURGE CURRENT



NUMBER OF CYCLES AT 60Hz

FIG.6 -- TYPICAL REVERSE CHARACTERISTICS



PERCENT OF RATED PEAK REVERSE VOLTAGE. %

PACKAGE	SPQ/PCS	CARTON SPQ/PCS	CARTON SIZE/CM	CARTON GW/KG	CARTON NW/KG
SMC	3000/REEL	42000	36X36X36.5	18.50	15.50