

Surface Mount Rectifiers

ER3A--ER3J

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



Lead-free



MECHANICAL DATA

- Case: DO-214AB molded plastic
- Terminals: Solder able per MIL- STD-202,Method 208
- Polarity: Color band denotes cathode
- Weight: 0.007 ounces,0.21 grams

Maximum Ratings(@TA = 25°C unless otherwise specified)

Characteristic	Symbol	ER3A	ER3B	ER3C	ER3D	ER3E	ER3G	ER3J	UNITS
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 @ $T_A=75^\circ\text{C}$	$I_{F(AV)}$	3.0							A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load @ $T_J=125^\circ\text{C}$	I_{FSM}	100							A

Thermal Characteristics

Characteristic	Symbol	ER3A	ER3B	ER3C	ER3D	ER3E	ER3G	ER3J	UNITS
Typical junction capacitance (Note2)	C_J	95							p F
Typical thermal resistance (Note3)	$R_{\theta JA}$	20							$^\circ\text{C}/\text{W}$
Operating junction temperature range	T_J	- 55 ----- + 150							$^\circ\text{C}$
Storage temperature range	T_{STG}	- 55 ----- + 150							$^\circ\text{C}$

Electrical Characteristics (@TA = 25°C unless otherwise specified)

Characteristic	Symbol	ER3A	ER3B	ER3C	ER3D	ER3E	ER3G	ER3J	UNITS
Maximum instantaneous forward voltage @3.0 A	V_F	0.95				1.25		1.7	V
Maximum reverse current @ $T_A=25^\circ\text{C}$ at rated DC blocking voltage @ $T_A=125^\circ\text{C}$	I_R	5.0				300		μA	
Maximum reverse recovery time (Note1)	t_{rr}	35				ns			

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

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

3. Thermal resistance junction to ambient.



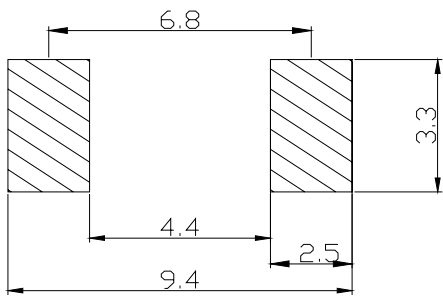
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PACKAGE OUTLINE DIMENSIONS

DO-214AB(SMC)		
Dim	Min	Max
A	6.70	7.10
B	5.70	6.10
C	2.10	2.40
D	7.55	8.05
E	0.15	0.35
F	1.00	1.60
G	0.20MAX	
H	2.15	2.45
I	2.85	3.15
All Dimensions in mm		

SOLDERING FOOTPRINT



Unit : mm

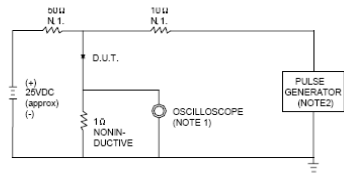
PACKAGE INFORMATION

Device	Package	Shipping
ER3A--ER3J	DO-214AB(SMC)	3000/Tape&Reel

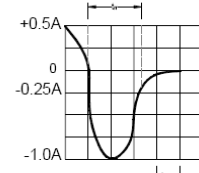
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FIG.1 – TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



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

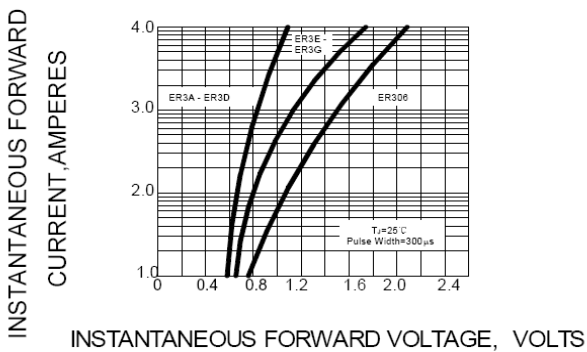


FIG.3 – FORWARD DERATING CURVE

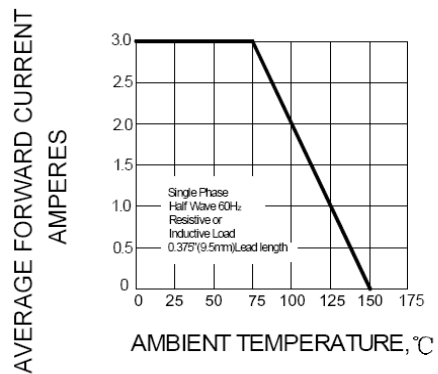


FIG.4 -- TYPICAL JUNCTION CAPACITANCE

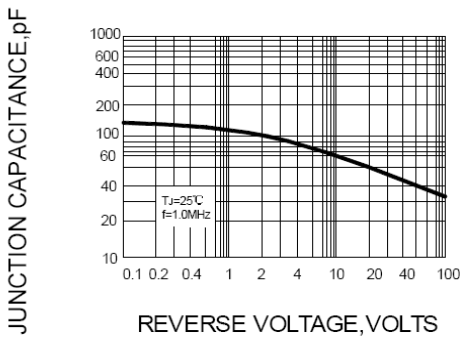


FIG.5 -- PEAK FORWARD SURGE CURRENT

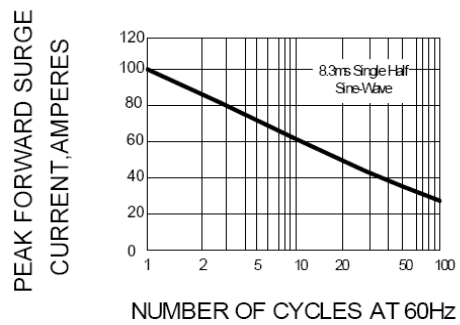


FIG.6 – TYPICAL REVERSE CHARACTERISTICS

