

Surface Mount Rectifiers

ES3AB--ES3JB

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-214AA molded plastic
- Terminals: Solder able per MIL- STD-202,Method 208
- Polarity: Color band denotes cathode

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

Characteristic	Symbol	ES3AB	ES3BB	ES3CB	ES3DB	ES3GB	ES3HB	ES3JB	UNITS
Maximum recurrent peak reverse voltage	V _{RRM}	50	100	150	200	400	500	600	V
Maximum RMS voltage	V _{RMS}	35	70	105	140	280	350	420	V
Maximum DC blocking voltage	V _{DC}	50	100	150	200	400	500	600	V
Maximum average forward rectified current @T _A =100°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}	100							A

Thermal Characteristics

Characteristic	Symbol	ES3AB	ES3BB	ES3CB	ES3DB	ES3GB	ES3HB	ES3JB	UNITS
Typical junction capacitance (Note2)	C _J	45							p F
Typical thermal resistance (Note3)	R _{θJA}	25							°C/W
Operating junction temperature range	T _J	- 55 ---- + 150							°C
Storage temperature range	T _{STG}	- 55 ---- + 150							°C

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

Characteristic	Symbol	ES3AB	ES3BB	ES3CB	ES3DB	ES3GB	ES3HB	ES3JB	UNITS		
Maximum instantaneous forward voltage at 3.0 A	V _F	0.95				1.25	1.70			V	
Maximum reverse current @T _A =25°C at rated DC blocking voltage @T _A =125°C	I _R	10				500					μ A
Maximum reverse recovery time (Note1)	t _{rr}	35									ns

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

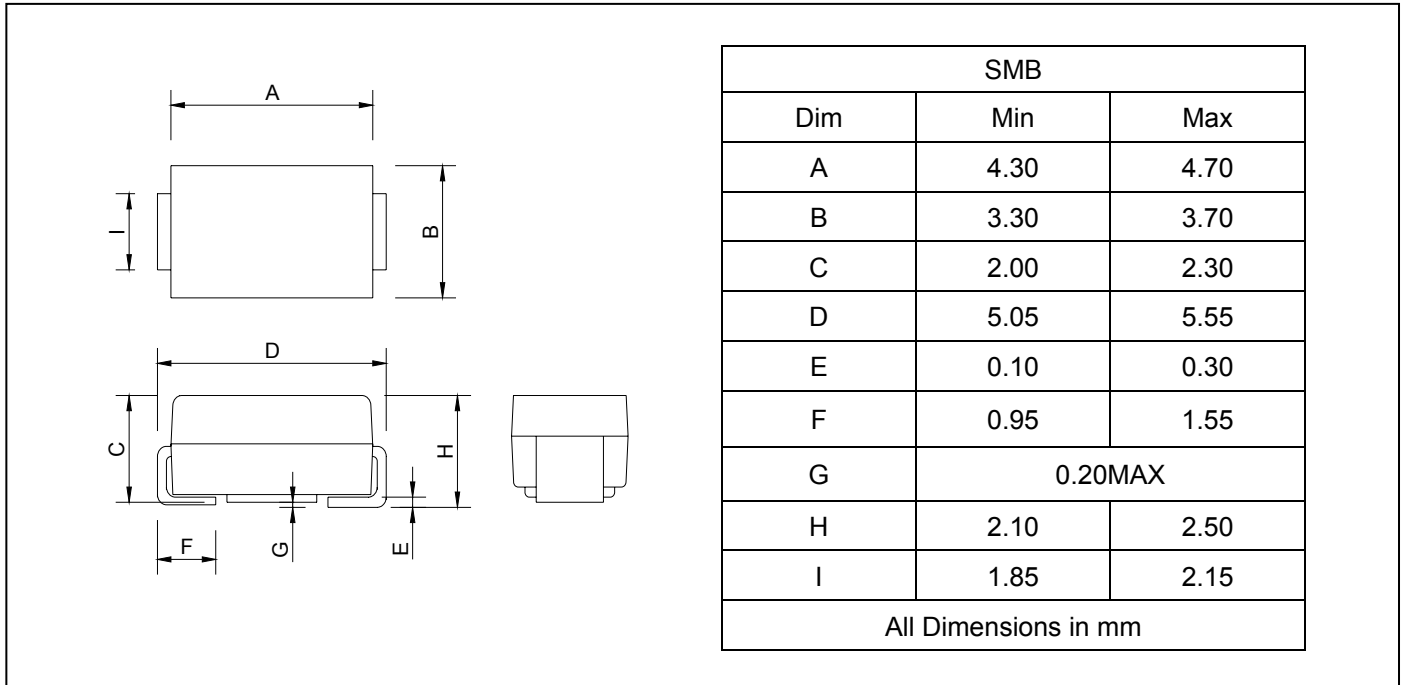
2. Measured at 1.0MHZ and applied reverse voltage of 4.0VDC

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

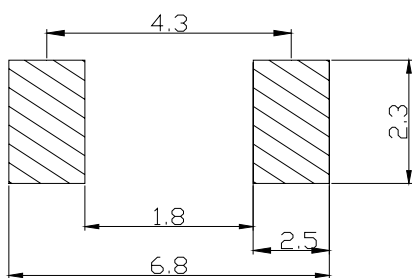
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PACKAGE OUTLINE DIMENSIONS



SOLDERING FOOTPRINT



Unit : mm

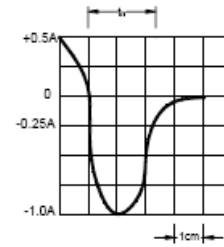
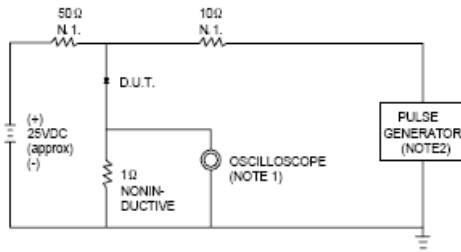
PACKAGE INFORMATION

Device	Package	Shipping
ES3AB-ES3JB	DO-214AA(SMB)	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 20/30 ns/cm

FIG.2 -- TYPICAL FORWARD CHARACTERISTIC

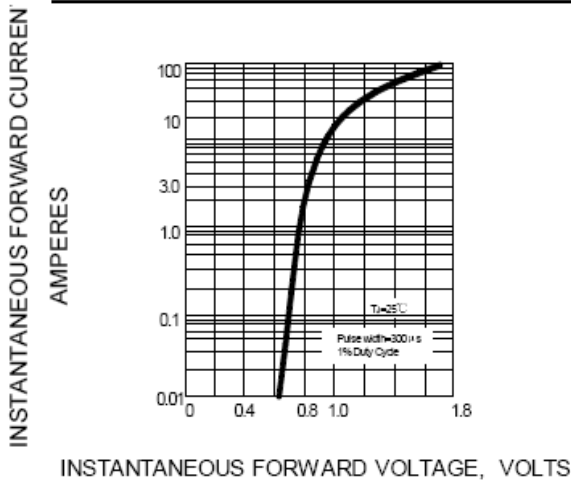


FIG.3 -- FORWARD DERATING CURVE

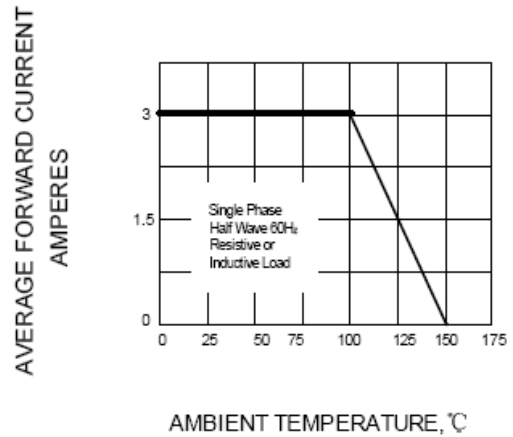


FIG.4 -- TYPICAL JUNCTION CAPACITANCE

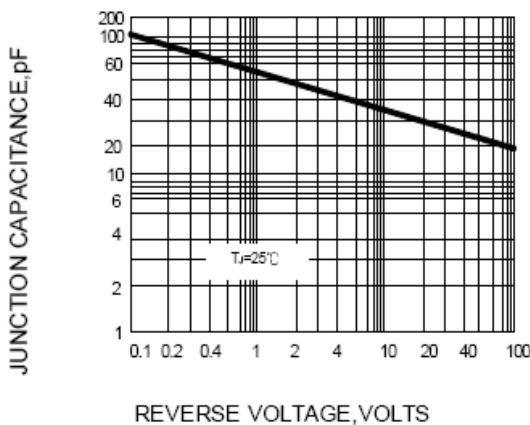


FIG.5 -- PEAK FORWARD SURGE CURRENT

