

## Surface Mount Rectifiers

## ES2A--ES2J

### 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
- Weight: 0.003 ounces,0.093 grams
- Mounting position: Any

### 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%.

		ES2A	ES2B	ES2C	ES2D	ES2G	ES2H	ES2J	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 @ $T_A=110^{\circ}C$	$I_{F(AV)}$	2.0							A	
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load @ $T_J=125^{\circ}C$	$I_{FSM}$	50							A	
Maximum instantaneous forward voltage @2.0 A	$V_F$	0.95			1.25		1.7		V	
Maximum reverse current @ $T_A=25^{\circ}C$ at rated DC blocking voltage @ $T_A=125^{\circ}C$	$I_R$	5.0				200				$\mu A$
Typical reverse recovery time (Note1)	$t_{rr}$	35							ns	
Typical junction capacitance (Note2)	$C_J$	18							pF	
Typical thermal resistance (Note3)	$R_{\theta JA}$	40							$^{\circ}C/W$	
Operating junction temperature range	$T_J$	- 55 ---- + 150							$^{\circ}C$	
Storage temperature range	$T_{STG}$	- 55 ---- + 150							$^{\circ}C$	

NOTE: 1. Measured with  $I_F=0.5A$ ,  $I_R=1.0A$ ,  $I_{rr}=0.25A$ .

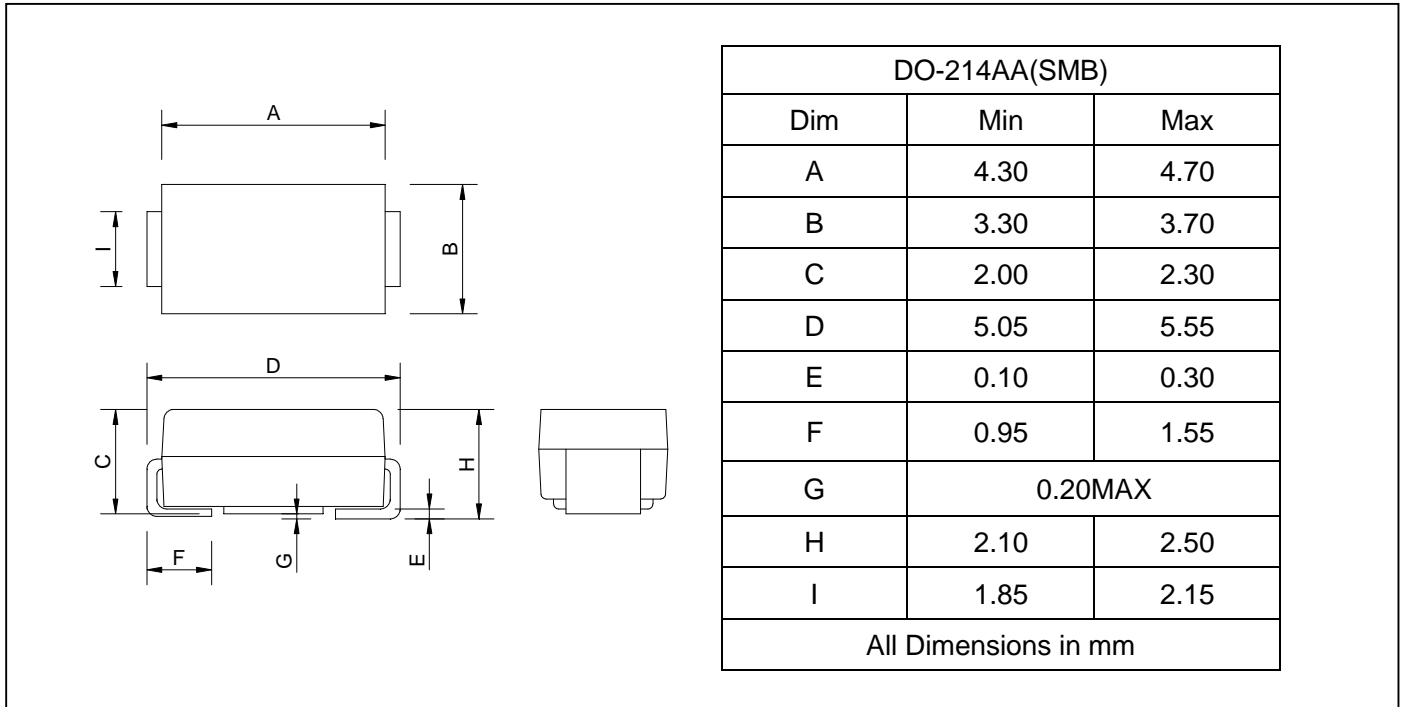
2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.

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

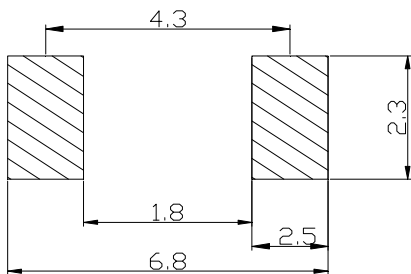
**Surface Mount Rectifiers**

**ES2A--ES2J**

**PACKAGE OUTLINE DIMENSIONS**



**SOLDERING FOOTPRINT**



Unit : mm

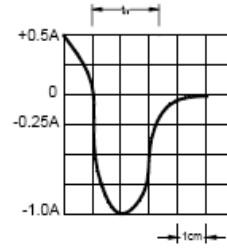
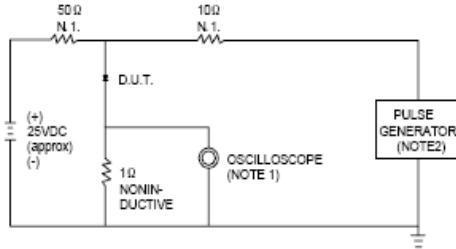
**PACKAGE INFORMATION**

Device	Package	Shipping
ES2A--ES2J	DO-214AA(SMB)	3000/Tape&Reel

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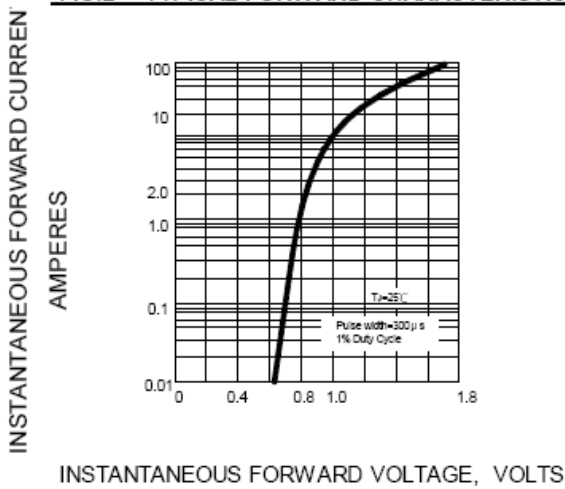
**FIG.1 -- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC**



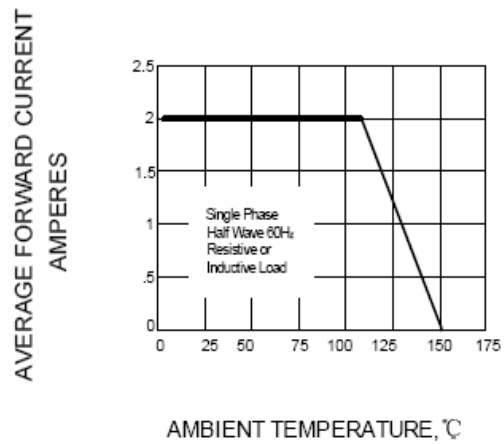
NOTES: 1. RISE TIME = 7ns MAX. INPUT IMPEDANCE = 1MΩ .22pF.  
2. RISE TIME = 10ns MAX. SOURCE IMPEDANCE = 50 Ω.

SET TIME BASE FOR 10/15 ns/cm

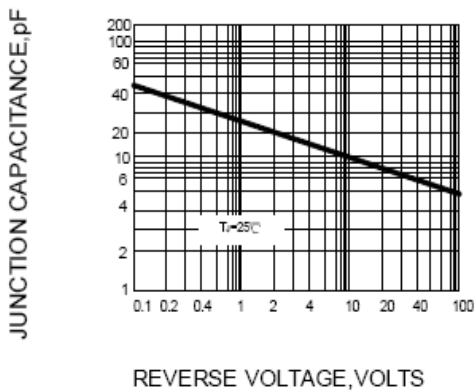
**FIG.2 -- TYPICAL FORWARD CHARACTERISTIC**



**FIG.3 -- FORWARD DERATING CURVE**



**FIG.4 -- TYPICAL JUNCTION CAPACITANCE**



**FIG.5 -- PEAK FORWARD SURGE CURRENT**

