

## Surface Mount Rectifiers

## ES2AA--ES2JA

### 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



### MECHANICAL DATA

- Case: DO-214AC(SMA) molded plastic
- Terminals: Solder able per MIL- STD-202,Method 208
- Polarity: Color band denotes cathode
- Weight: 0.002 ounces,0.064 grams

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

Characteristic	Symbol	ES2AA	ES2BA	ES2CA	ES2DA	ES2GA	ES2HA	ES2JA	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 @TA=110°C	$I_{F(AV)}$	2.0							A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load @Tj=125°C	$I_{FSM}$	50							A

### Thermal Characteristics

Characteristic	Symbol	ES2AA	ES2BA	ES2CA	ES2DA	ES2GA	ES2HA	ES2JA	UNITS
Typical junction capacitance (Note2)	$C_J$	18							pF
Typical thermal resistance	$R_{\theta ja}$ $R_{\theta jc}$	50 31							°C/W
Operating junction temperature range	$T_J$	- 55 ---- + 150							°C
Storage temperature range	$T_{STG}$	- 55 ---- + 150							°C

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

Characteristic	Symbol	ES2AA	ES2BA	ES2CA	ES2DA	ES2GA	ES2HA	ES2JA	UNITS	
Maximum instantaneous forward voltage @2.0 A	$V_F$	0.95				1.25	1.7		V	
Maximum reverse current @TA=25°C at rated DC blocking voltage @TA=125°C	$I_R$	5.0				100				μA
Maximum reverse recovery time (Note1)	$t_{rr}$	35								ns

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

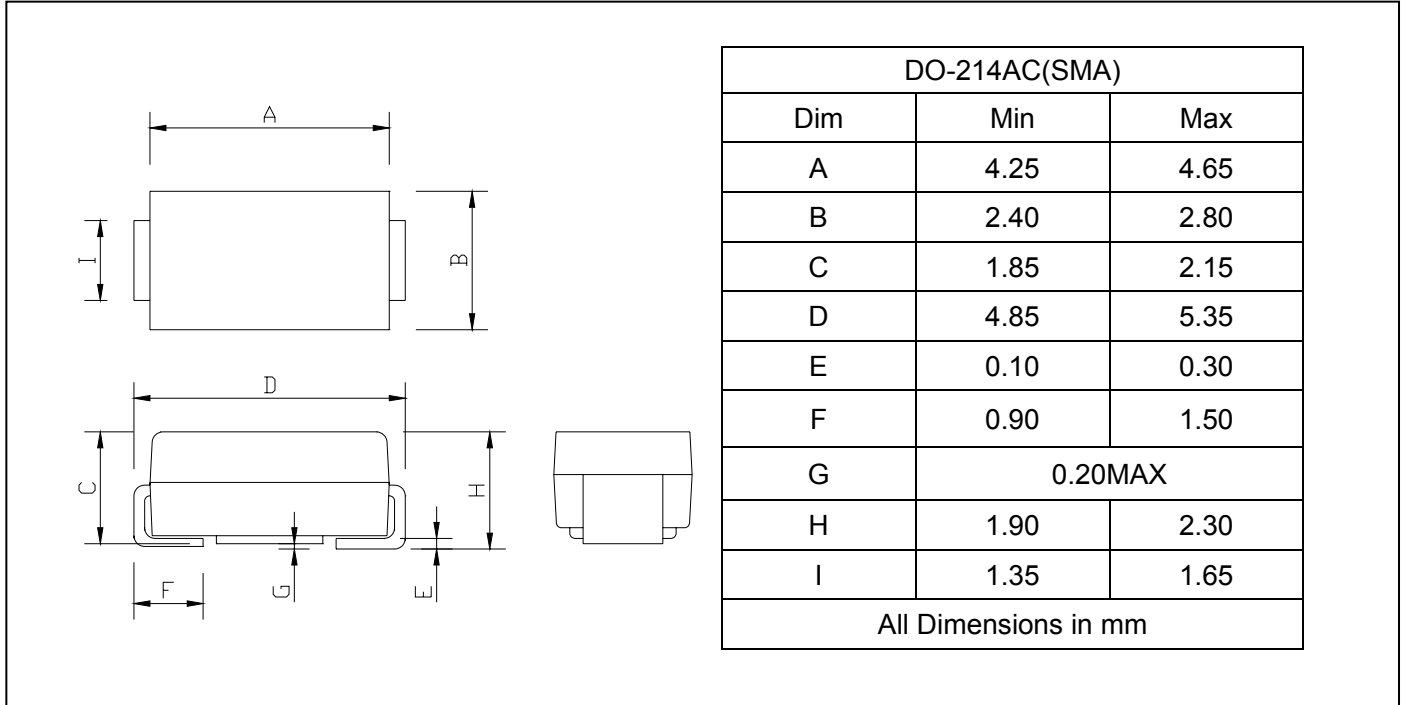
2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.



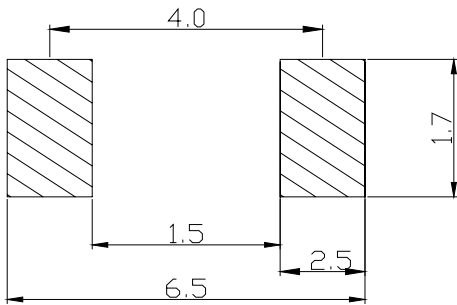
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### PACKAGE OUTLINE DIMENSIONS



### SOLDERING FOOTPRINT



Unit : mm

### PACKAGE INFORMATION

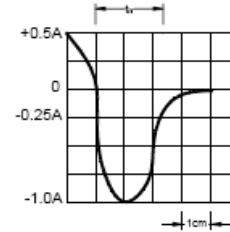
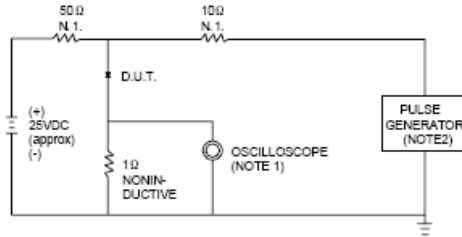
Device	Package	Shipping
ES2AA--ES2JA	DO-214AC(SMA)	5000/Tape&Reel



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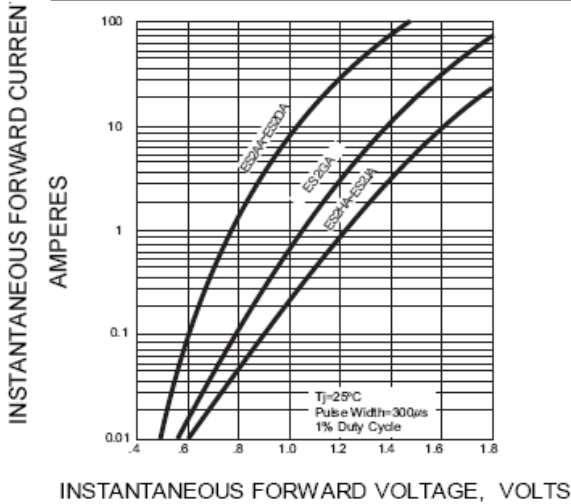
**FIG.1 -- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC**



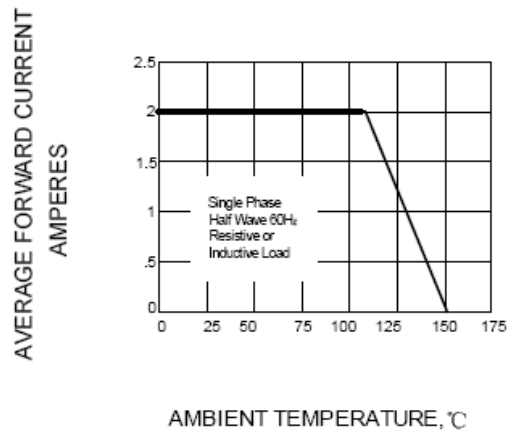
NOTES: 1. RISE TIME = 7ns MAX. INPUT IMPEDANCE = 1MΩ .22pF.  
2. RISE TIME = 10ns MAX. SOURCE IMPEDANCE = 50 Ω .

SET TIME BASE FOR 10/15 ns/cm

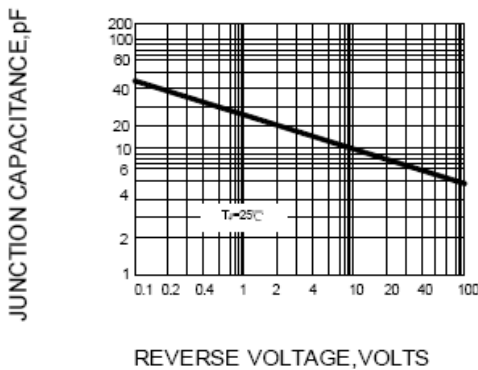
**FIG.2 -- TYPICAL FORWARD CHARACTERISTIC**



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



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



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

