

## ES3JGB

### 3.0AMPS. SUPER FAST SURFACE MOUNT RECTIFIER

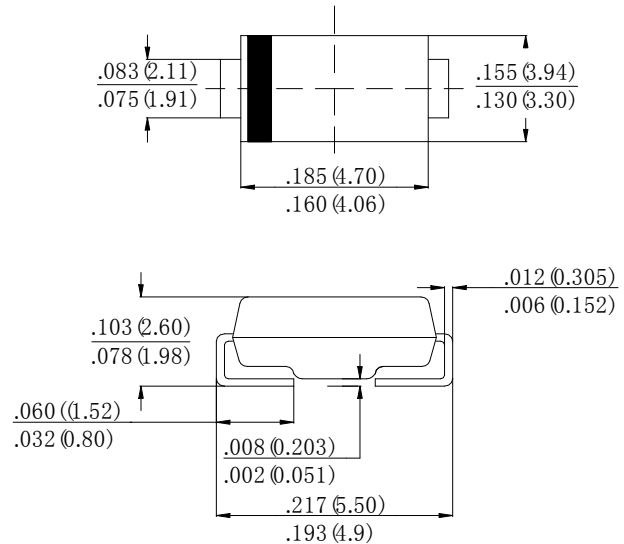
#### FEATURE

- . High current capability
- . Low forward voltage drop
- . Low power loss, high efficiency
- . High surge capability
- . High temperature soldering guaranteed  
260°C/10 seconds at terminals.
- . Superfast recovery time for high efficiency
- . For surface mounted application.
- . Easy pick and place.

#### MECHANICAL DATA

- . Case: Molded plastic
- . Epoxy: UL94V-0 rate flame retardant
- . Lead: MIL-STD- 202E, Method 208 guaranteed
- . Polarity:Color band denotes cathode end
- . Packaging: 12mm tape per EIA STD RS-481
- . Mounting position: Any

#### SMB (DO-214AA)



#### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.  
Single phase, half wave, 60Hz, resistive or inductive load.  
For capacitive load, derate current by 20%

Type Number	SYM BOL	ES3JGB	units
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	600	V
Maximum RMS Voltage	$V_{RMS}$	420	V
Maximum DC blocking Voltage	$V_{DC}$	600	V
Maximum Average Forward Rectified Current	$I_{F(AV)}$	3.0	A
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	90.0	A
Maximum Forward Voltage at 3.0A DC	$V_F$	1.7	V
Maximum DC Reverse Current @TJ=25°C at rated DC blocking voltage @TJ=125°C	$I_R$	5.0 100.0	μA
Maximum Reverse Recovery Time (Note 1)	$t_{rr}$	35	nS
Typical Junction Capacitance (Note 2)	$C_J$	24	pF
Typical Thermal Resistance (Note 3)	$R_{(JA)}$	55	°C/W
Storage Temperature	$T_{STG}$	-55 to +150	°C
Operation Junction Temperature	$T_J$	-55 to +150	°C

#### Note:

1. Reverse Recovery test Condition:  $I_f=0.5A, I_R=1.0A, I_{RR}=0.25A$
2. Measured at 1.0 MHz and applied reverse voltage of 4.0Vdc
3. P.C.B.Mounted on 0.2×0.2"(5.0×5.0mm) Copper Pad Area.

**RATING AND CHARACTERISTIC CURVES (ES3JGB)**

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

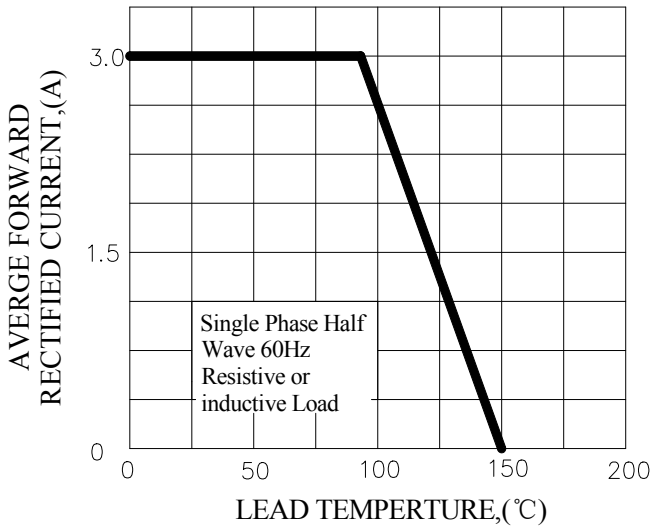


FIG.2-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

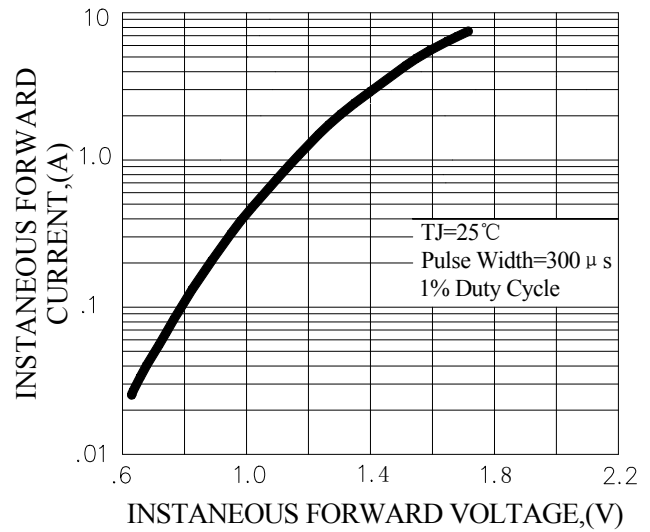


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

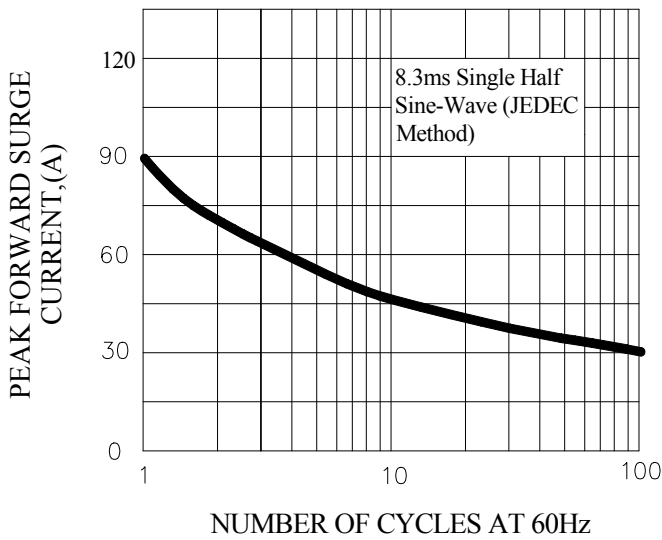


FIG.4-TYPICAL REVERSE CHARACTERISTICS

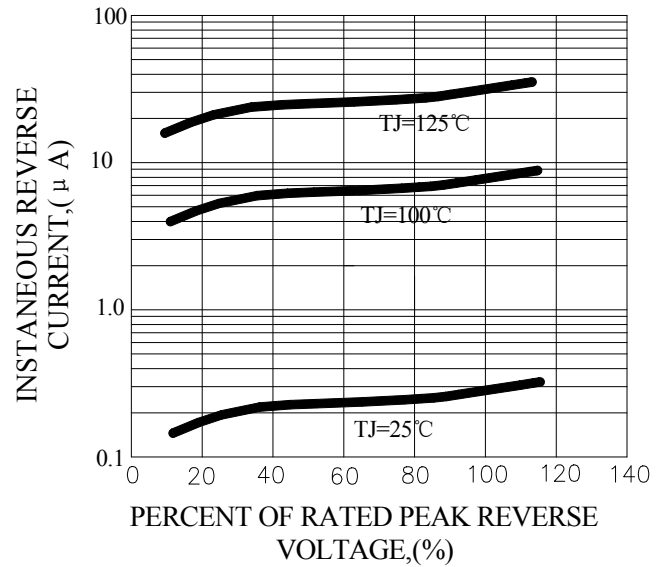
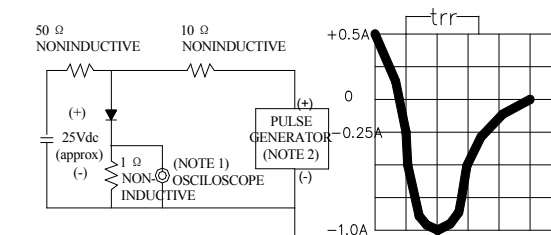


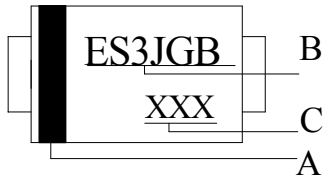
FIG.5-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



NOTES:1. Rise Time=7ns max, Input Impedance= 1 megohm.22pF.  
2. Rise Time=10ns max, Source Impedance= 50 ohms.

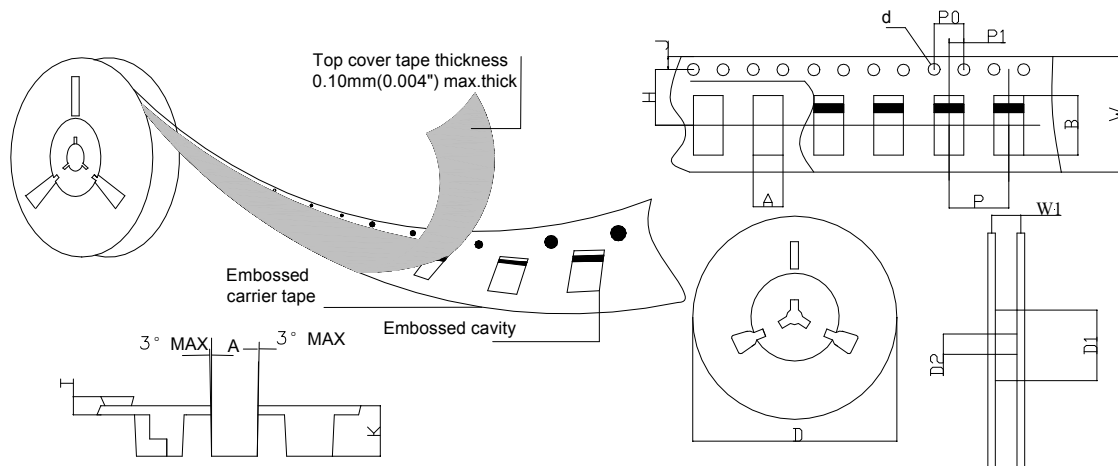
## Marking and packaging illustration

### 1、Marking



SYMBOL	Explanation
A	Color Band Denotes Cathode
B	Product Name
C	Date Code

### 2、Packaging



SPECIFICATIONS mm(inch)		PACKAGE	SPECIFICATIONS mm(inch)		PACKAGE
ITEM	SYM BOL	SMB(DO-214 AA)	ITEM	SYM BOL	SMB(DO-214A A)
Carrier width	A	3.81(0.150)Max	Carrier depth	K	2.45(0.965)Typ
Carrier length	B	5.41(0.213)Max	Punch hole pitch	P	8.00(0.315)Typ
Sprocket hole	d	ø1.55(0.061)Typ	Sprocket hole pitch	P0	4.00(0.157)Typ
Reel outer diameter	D	330.0(13.0)Typ	Embossment center	P1	2.00(0.079)Typ
Reel inner diameter	D1	50.0(1.969)Min	Overall tape thickness	T	0.30(0.012)Typ
Feed hole diameter	D2	13.0(0.512)Typ	Tape width	W	12.0(0.472)Typ
Sprocket hole position	J	1.75(0.069)Typ	Reel width	W1	12.4(0.488)Min
Punch hole position	H	5.55(0.219)Typ			

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