

# ES2A~ES2J

## SURFACE MOUNT SUPERFAST RECTIFIER

**VOLTAGE** 50 to 600 Volt **CURRENT** 2 Ampere

**SMA / DO-214AC**

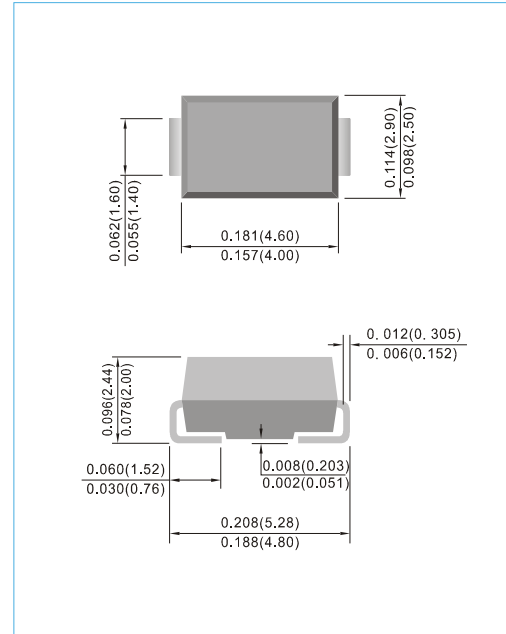
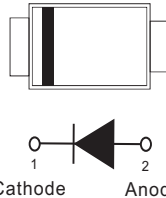
Unit : inch(mm)

### FEATURES

- For surface mounted applications in order to optimize board space
- Easy pick and place
- Superfast recovery times for high efficiency.
- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- Glass passivated junction
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

### MECHANICAL DATA

- Case: JEDEC DO-214AC molded plastic
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Standard packaging: 12mm tape (EIA-481)
- Weight: 0.0023 ounces, 0.0679 grams



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

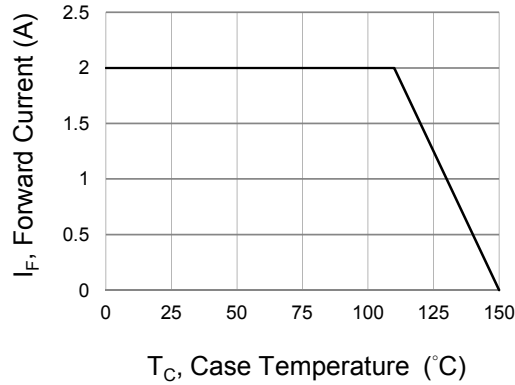
Ratings at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.

PARAMETER	SYMBOL	ES2A	ES2B	ES2C	ES2D	ES2E	ES2G	ES2J	UNITS
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	50	100	150	200	300	400	600	V
Maximum RMS Voltage	V <sub>RMS</sub>	35	70	105	140	210	280	420	V
Maximum DC Blocking Voltage	V <sub>DC</sub>	50	100	150	200	300	400	600	V
Maximum Average Forward Current	I <sub>F(AV)</sub>	2							A
Peak Forward Surge Current : 8.3ms single half sine-wave superimposed on rated load	I <sub>FSM</sub>	50							A
Maximum Forward Voltage at 2A	V <sub>F</sub>	0.95				1.25		1.7	V
Maximum DC Reverse Current at Rated DC Blocking Voltage	I <sub>R</sub>	1							μA
Maximum Reverse Recovery Time (Note 3)	t <sub>rr</sub>	35							ns
Typical Junction Capacitance Measured at 1MHz and applied V <sub>R</sub> =4V	C <sub>J</sub>	25							pF
Typical Thermal Resistance (Note 2) (Note 1)	R <sub>θJA</sub> R <sub>θJC</sub>	150 30							°C / W
Operating Junction and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-55 to +150							°C

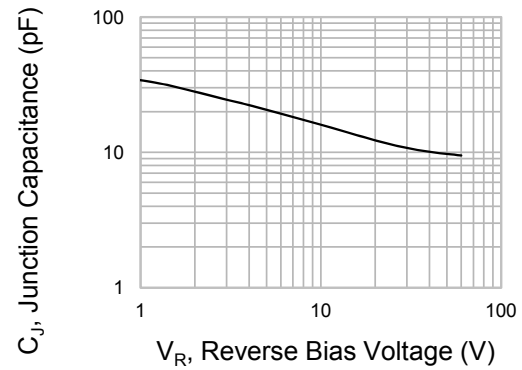
#### NOTES :

1. Mounted on a FR4 PCB, single-sided copper, with 100cm<sup>2</sup> copper pad area.
2. Mounted on a FR4 PCB, single-sided copper, mini pad.
3. Reverse Recovery Test Conditions:  $I_F=0.5A$ ,  $I_R=1A$   $t_{rr}=0.25A$ .

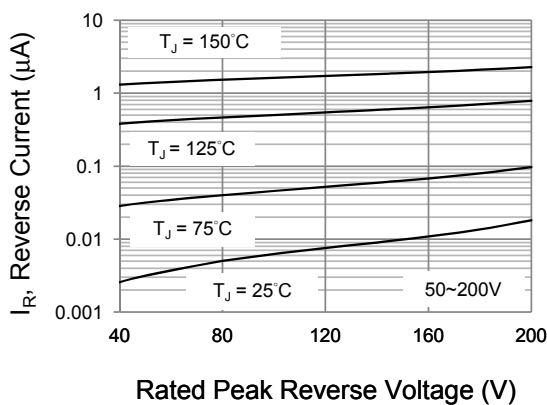
## ES2A~ES2J



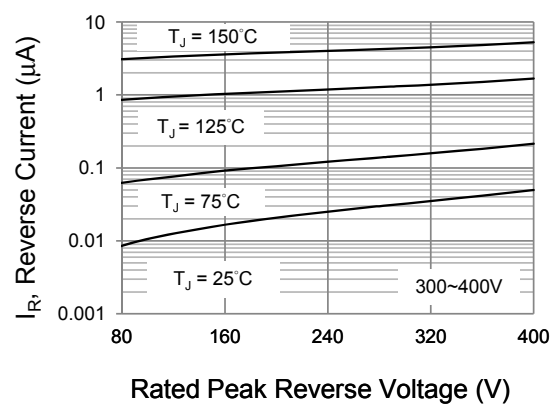
**Fig.1 Forward Current Derating Curve**



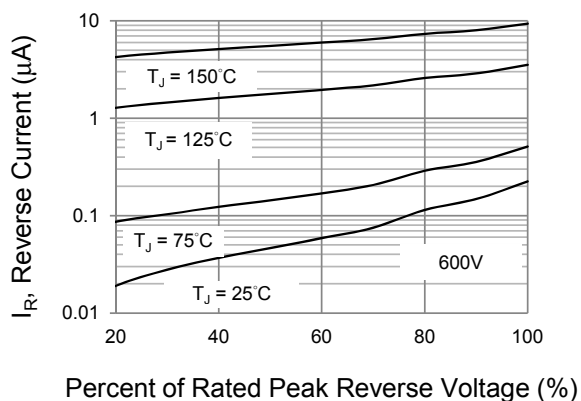
**Fig.2 Typical Junction Capacitance**



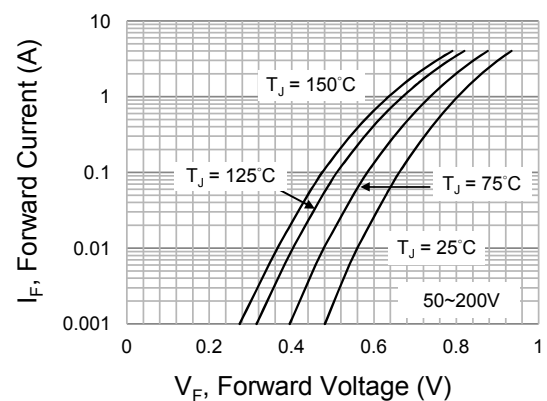
**Fig.3 Typical Reverse Characteristics**



**Fig.4 Typical Reverse Characteristics**



**Fig.5 Typical Reverse Characteristics**



**Fig.6 Typical Forward Characteristics**

## ES2A~ES2J

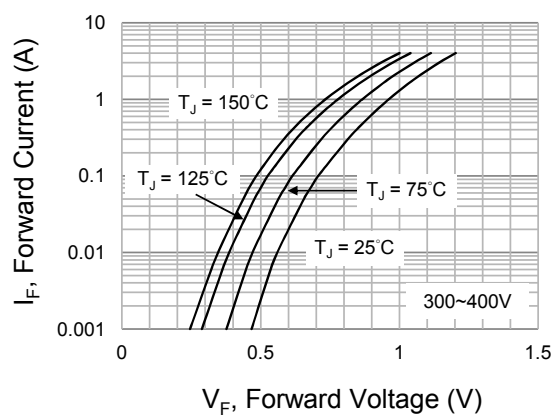


Fig.7 Typical Forward Characteristics

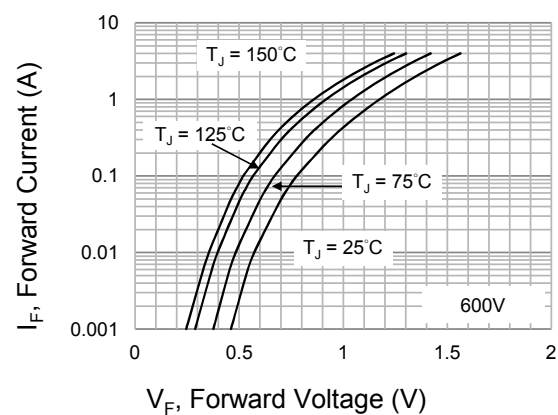


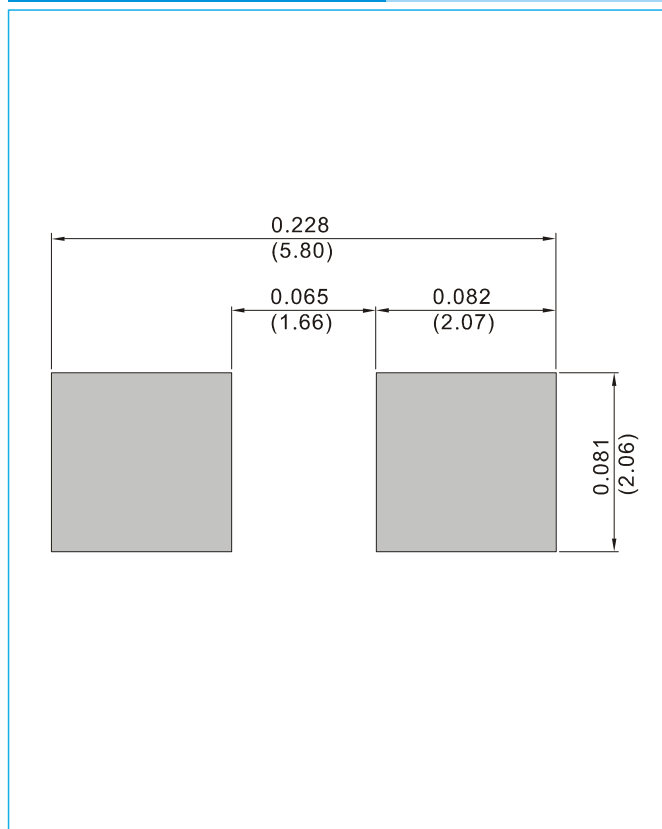
Fig.8 Typical Forward Characteristics

# ES2A~ES2J

## MOUNTING PAD LAYOUT

SMA / DO-214AC

Unit : inch(mm)



## ORDER INFORMATION

- Packing information
  - T/R - 7.5K per 13" plastic Reel
  - T/R - 1.8K per 7" plastic Reel

## ES2A~ES2J

### Part No\_packing code\_Version

ES2A\_R1\_00001

ES2A\_R2\_00001

For example :

RB500V-40\_R2\_00001

Part No.

Serial number

Version code means HF

Packing size code means 13"

Packing type means T/R

Packing Code XX				Version Code XXXXX		
Packing type	1 <sup>st</sup> Code	Packing size code	2 <sup>nd</sup> Code	HF or RoHS	1 <sup>st</sup> Code	2 <sup>nd</sup> ~5 <sup>th</sup> Code
Tape and Ammunition Box (T/B)	A	N/A	0	HF	0	serial number
Tape and Reel (T/R)	R	7"	1	RoHS	1	serial number
Bulk Packing (B/P)	B	13"	2			
Tube Packing (T/P)	T	26mm	X			
Tape and Reel (Right Oriented) (TRR)	S	52mm	Y			
Tape and Reel (Left Oriented) (TRL)	L	PANASERT T/B CATHODE UP (PBCU)	U			
FORMING	F	PANASERT T/B CATHODE DOWN (PBCD)	D			



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