

# ES2A~ES2J

## SURFACE MOUNT SUPERFAST RECTIFIER

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

**SMA / DO-214AC**

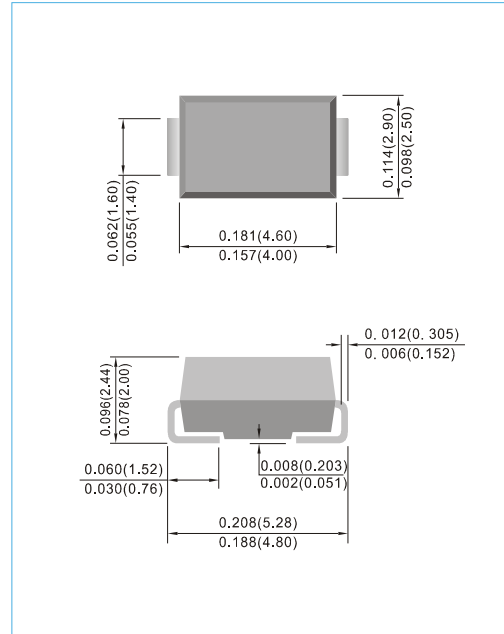
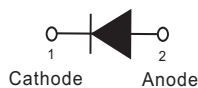
Unit : inch(mm)

### 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	$V_{RRM}$	50	100	150	200	300	400	600	V
Maximum RMS Voltage	$V_{RMS}$	35	70	105	140	210	280	420	V
Maximum DC Blocking Voltage	$V_{DC}$	50	100	150	200	300	400	600	V
Maximum Average Forward Current	$I_{F(AV)}$	2							A
Peak Forward Surge Current : 8.3ms single half sine-wave superimposed on rated load	$I_{FSM}$	50							A
Maximum Forward Voltage at 2A	$V_F$	0.95				1.25		1.7	V
Maximum DC Reverse Current at Rated DC Blocking Voltage	$I_R$	1							$\mu A$
Maximum Reverse Recovery Time (Note 3)	$t_{rr}$					35			ns
Typical Junction Capacitance Measured at 1MHz and applied $V_R=4V$	$C_J$					25			pF
Typical Thermal Resistance (Note 2) (Note 1)	$R_{\theta JA}$ $R_{\theta JC}$					150		30	$^{\circ}C / W$
Operating Junction and Storage Temperature Range	$T_J, T_{STG}$	-55 to +150							$^{\circ}C$

#### 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:  $I_F=0.5A$ ,  $I_R=1A$   $I_{rr}=0.25A$ .

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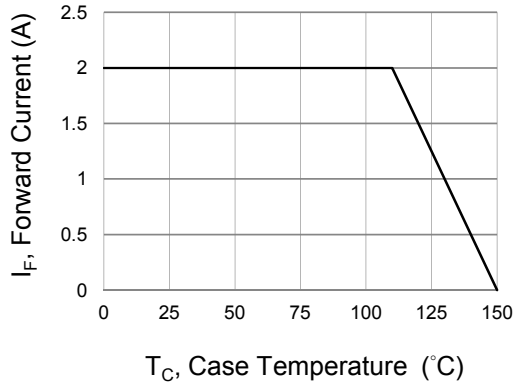


Fig.1 Forward Current Derating Curve

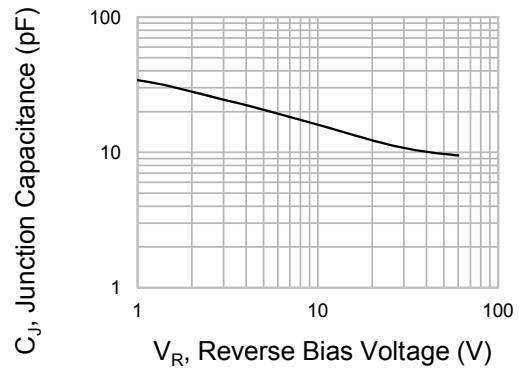


Fig.2 Typical Junction Capacitance

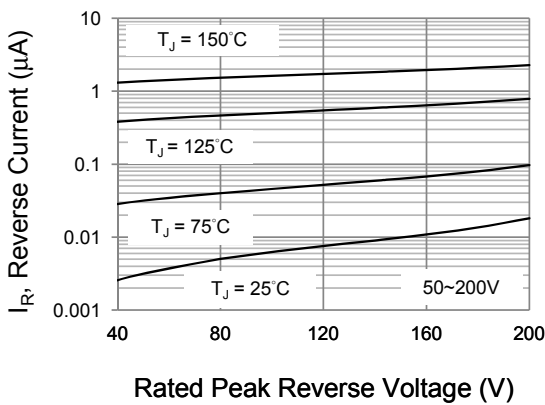


Fig.3 Typical Reverse Characteristics

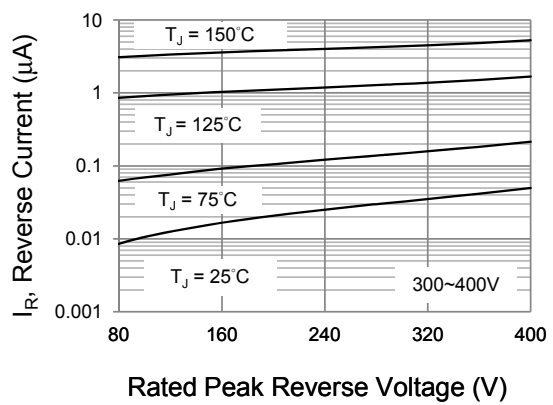


Fig.4 Typical Reverse Characteristics

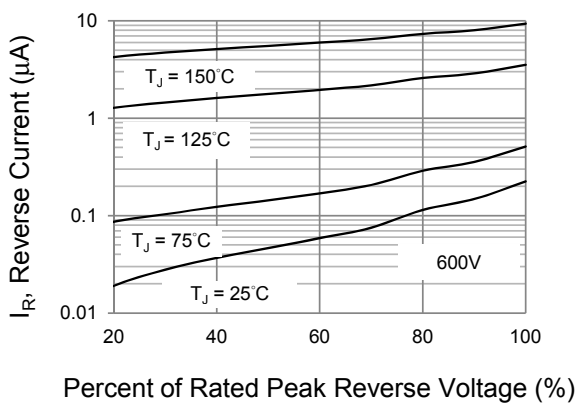


Fig.5 Typical Reverse Characteristics

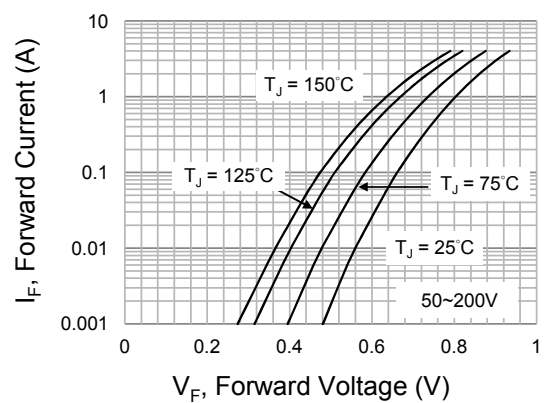


Fig.6 Typical Forward Characteristics