



ES2J

DIODE

SURFACE MOUNT SUPER FAST RECTIFIER

DESCRIPTION

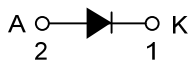
The UTC **ES2J** is a surface mount super fast rectifier, it uses UTC's advanced technology to provide customers with high forward surge current and low reverse leakage, etc.

The UTC **ES2J** is suitable for surface mounted applications.

FEATURES

- * Low reverse leakage
- * High forward surge current capability

SYMBOL



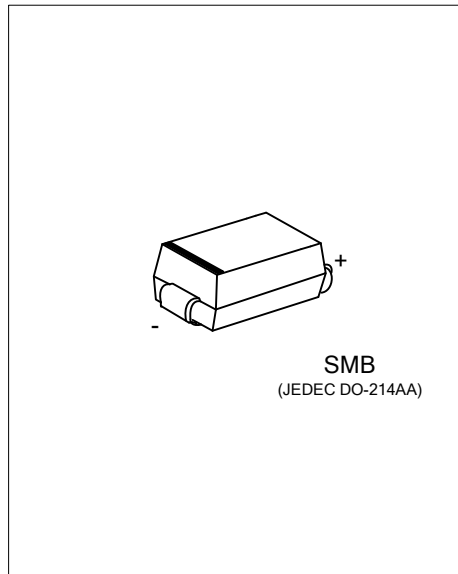
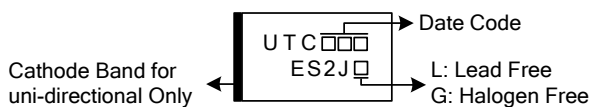
ORDERING INFORMATION

| Ordering Number | | Package | Pin Assignment | | Packing |
|-----------------|--------------|---------|----------------|---|-----------|
| Lead Free | Halogen Free | | 1 | 2 | |
| ES2JL-SMB-R | ES2JG-SMB-R | SMB | K | A | Tape Reel |

Note: Pin Assignment: A: Anode K: Cathode

| | |
|--|--|
| | <p>(1) R: Tape Reel</p> <p>(2) SMB: SMB</p> <p>(3) L: Lead Free, G: Halogen Free</p> |
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MARKING



■ ABSOLUTE MAXIMUM RATINGS

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

| PARAMETER | SYMBOL | RATINGS | UNIT |
|---|-----------|----------|------|
| Working Peak Reverse Voltage | V_{RWM} | 600 | V |
| Repetitive Peak Reverse Voltage | V_{RRM} | 600 | V |
| Maximum RMS Reverse Voltage | V_{RMS} | 420 | V |
| DC Blocking Voltage | V_R | 600 | V |
| Average Rectified Output Current ($T_A=55^\circ\text{C}$) | I_O | 2.0 | A |
| Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load | I_{FSM} | 50 | A |
| Junction Temperature | T_J | -55~+150 | °C |
| Storage Temperature | T_{STG} | -55~+150 | °C |

Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged.

Absolute maximum ratings are stress ratings only and functional device operation is not implied.

■ THERMAL DATA

| PARAMETER | SYMBOL | RATINGS | UNIT |
|------------------------------|---------------|---------|------|
| Junction to Ambient (Note 3) | θ_{JA} | 40 | °C/W |

■ ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

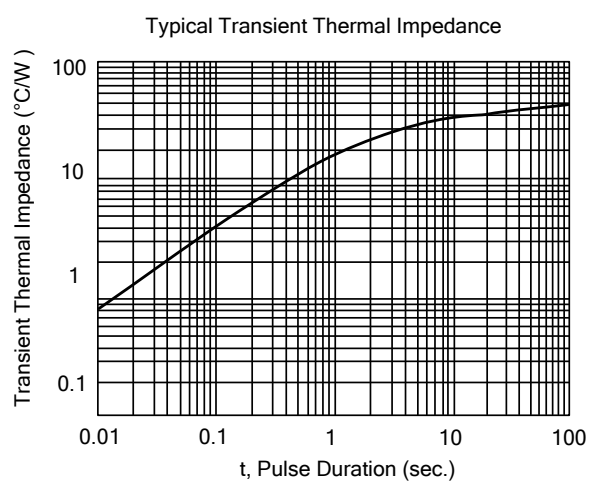
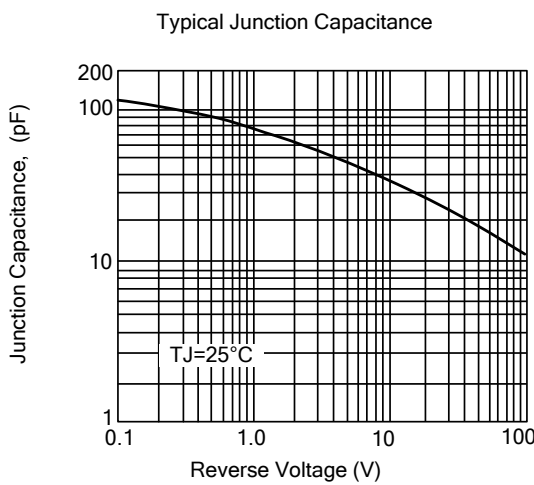
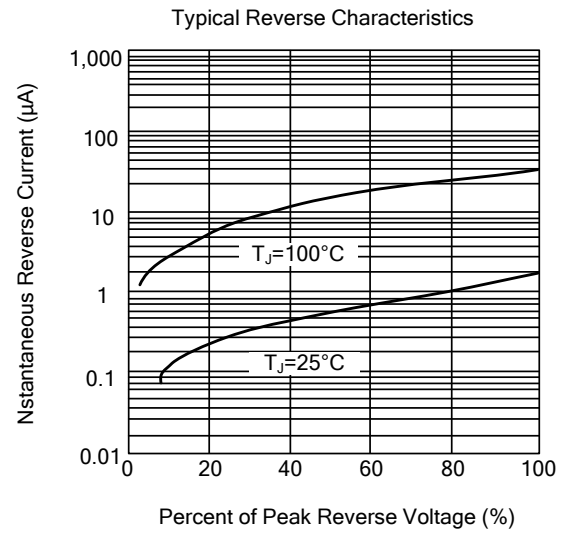
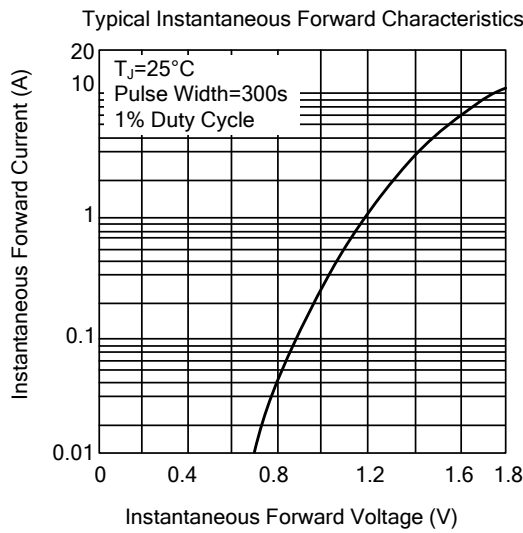
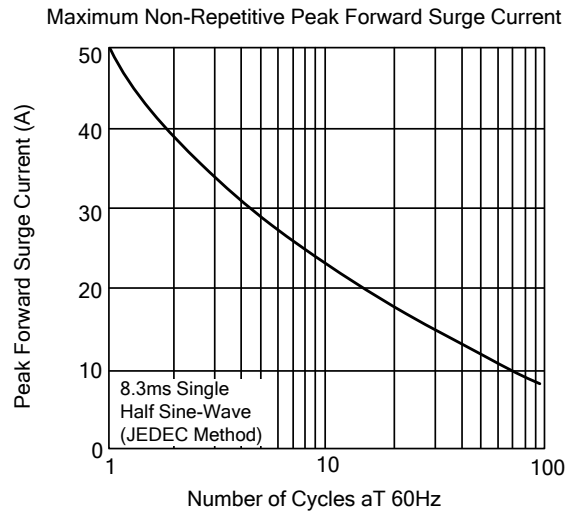
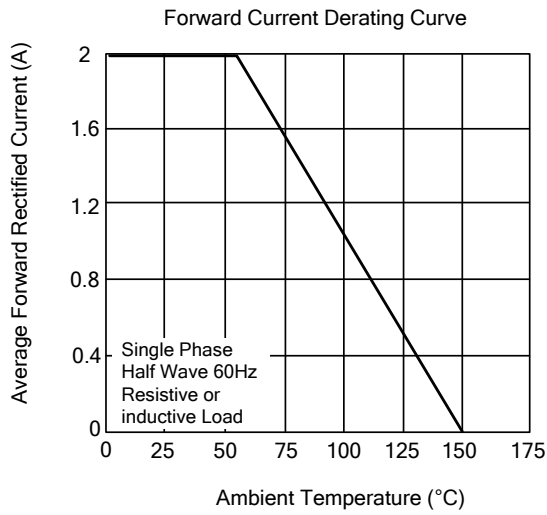
| PARAMETER | SYMBOL | TEST CONDITIONS | MIN | TYP | MAX | UNIT |
|---|----------|-------------------------|-----|-----|-----|---------------|
| Instantaneous Forward Voltage | V_{FM} | $I_F=2.0A$ | | | 1.7 | V |
| DC Reverse Current at Rated DC Blocking Voltage | I_{RM} | $T_A=25^\circ\text{C}$ | | | 5 | μA |
| | | $T_A=100^\circ\text{C}$ | | | 50 | μA |
| Reverse Recovery Time (Note 1) | t_{rr} | | | | 35 | ns |
| Junction Capacitance (Note 2) | C_J | | | | 60 | pF |

Notes: 1. Reverse recovery condition $I_F=0.5A$, $I_R=1.0A$, $I_{rr}=0.25A$.

2. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

3. P.C.B. mounted with 0.2×0.2" (5.0×5.0mm) copper pad areas.

■ TYPICAL CHARACTERISTICS



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