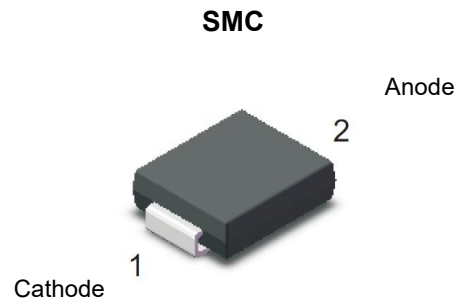


Surface Mount Superfast Recovery Rectifier

ES5AC-ES5JC
50 to 600V
5A
SMC

Features

- ◆ Low profile package
- ◆ Ideal for automated placement
- ◆ Glass passivated chip junction
- ◆ High forward surge capability
- ◆ Super fast reverse recovery time



Mechanical Data

- ◆ Case : SMC.
- ◆ Terminals: Solderable per MIL-STD-750, Method 2026
- ◆ High temperature soldering guaranteed: 260 °C /10 seconds
- ◆ Polarity: Cathode line denotes the cathode end
- ◆ Mounting Position: Any

Functional Diagram



Absolute Maximum Ratings and Characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

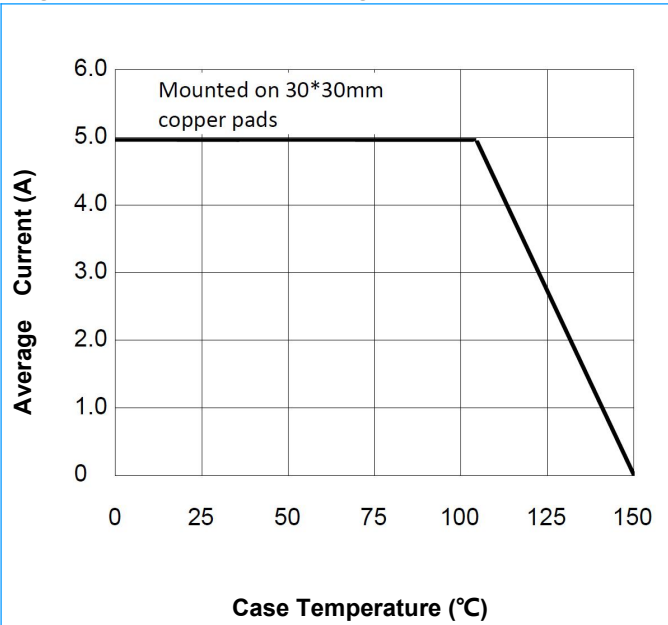
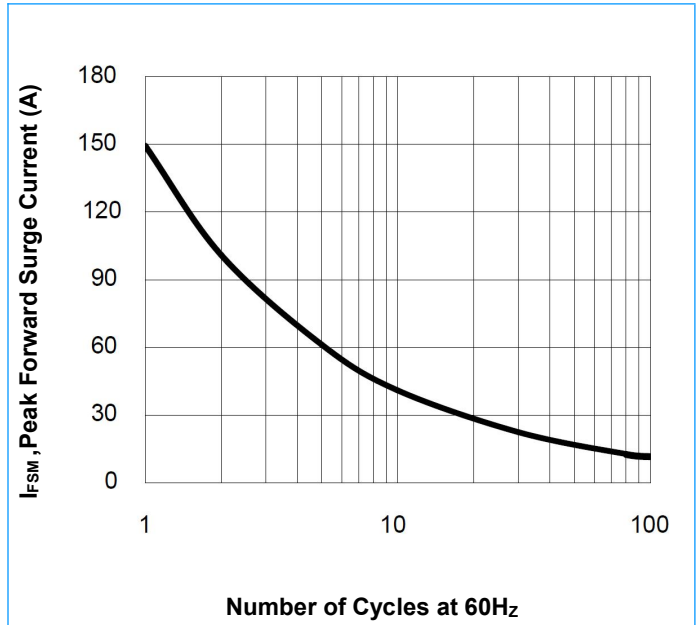
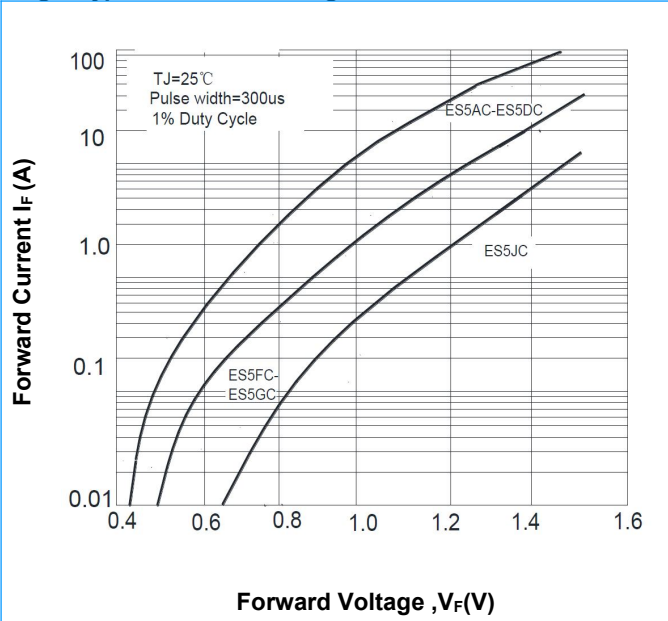
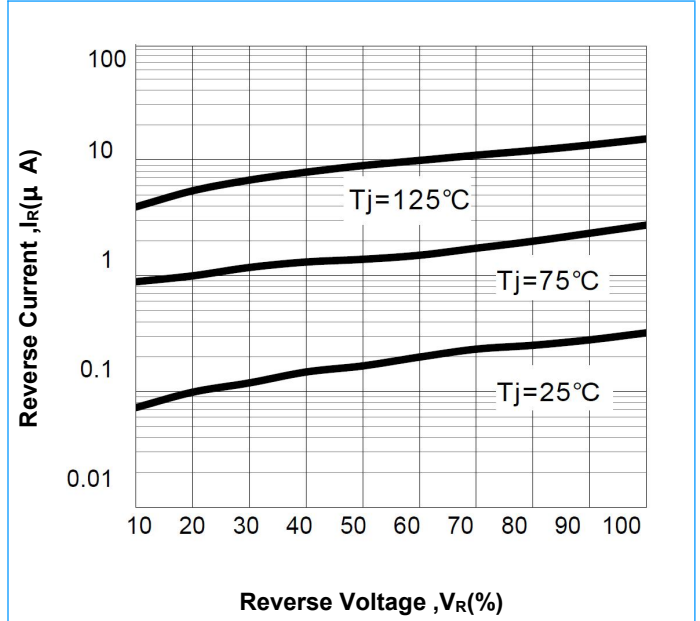
| Parameter | | Symbol | ES5AC | ES5BC | ES5DC | ES5FC | ES5GC | ES5JC | Unit |
|--|----------------------|--|-------------|-------|-------|-------|-------|-------|-------|
| Peak repetitive reverse voltage | | V_{RRM} | 50 | 100 | 200 | 300 | 400 | 600 | V |
| RMS reverse voltage | | V_{RMS} | 35 | 70 | 140 | 210 | 280 | 420 | V |
| DC blocking voltage | | V_{DC} | 50 | 100 | 200 | 300 | 400 | 600 | V |
| Maximum average forward output current | | I_{F(AV)} | 5 | | | | | | A |
| Peak Forward Surge Current: 8.3ms Single Half Sine Wave @T _J = 25° C | | I_{FSM} | 150 | | | | | | A |
| Rating for fusig (t<8.3ms) | | I²t | 93.4 | | | | | | A2sec |
| Maximum Reverse current Rated V _R | T _A =25℃ | I_R | 10 | | | | | | μA |
| | T _A =125℃ | | 250 | | | | | | |
| Maximum instantaneous forward Voltage @ 5A | | V_F | 0.95 | | | 1.3 | | 1.7 | V |
| Maximum Reverse Recovery Time ⁽¹⁾ | | t_{rr} | 35 | | | | | | ns |
| Typical Thermal Resistance ⁽²⁾ | | R_{θJA} R_{θJC} | 27 4 | | | | | | ℃/W |
| Operating and Storage Temperature Range | | T_J,T_{STG} | -55 to +150 | | | | | | ℃ |

NOTES:

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

(2) Units mounted on P.C.B. with 30 x30 mm land areas.

Surface Mount Superfast Recovery Rectifier

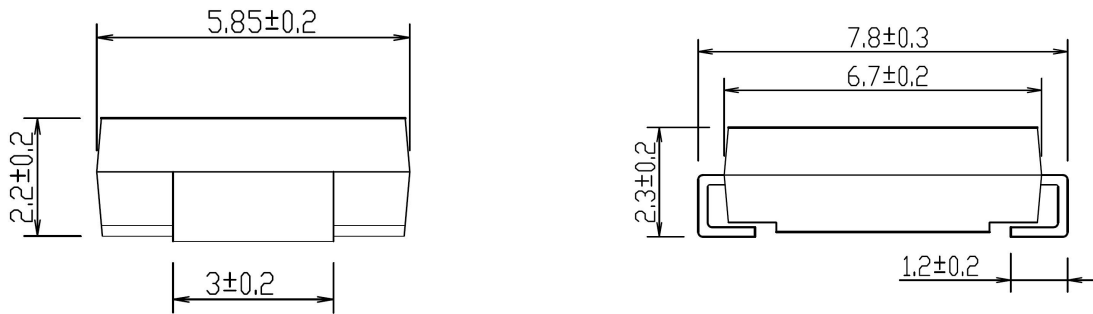
ES5AC-ES5JC
50 to 600V
5A
SMC
Rating and Characteristic Curves ($T_A=25^\circ\text{C}$ unless otherwise noted)
Fig1. Forward Current Derating Curve

Fig2. Surge Current Derating Curve

Fig3. Typical Forward Voltage Characteristic

Fig4. Typical Reverse Characteristic


Surface Mount Superfast Recovery Rectifier

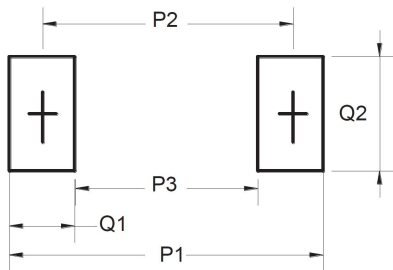
ES5AC-ES5JC
50 to 600V
5A
SMC

SMC Package Outline (Unit:mm)

DO-214AB (SMC)



Mounting Pad Layout (Unit:mm)



| Symbol | Millimeters |
|--------|-------------|
| P1 | 9.80 |
| P2 | 6.80 |
| P3 | 3.80 |
| Q1 | 3.00 |
| Q1 | 4.00 |

Packaging Information

| Part Number | Component Package | Quantity |
|--------------------|-------------------|----------|
| ES5AC-ES5JC | SMC | 3000 PCS |