

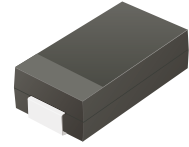
ES8AC-HF Thru. ES8JC-HF

Reverse Voltage: 50 to 600 Volts

Forward Current: 8 Amp

RoHS Device

Halogen Free



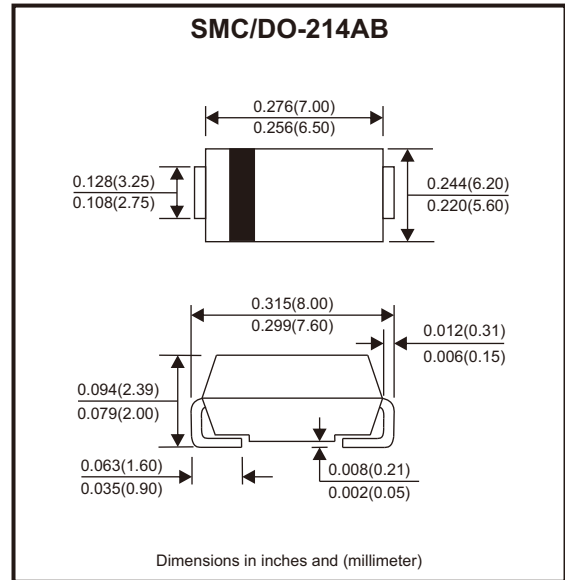
Features

- For surface mounted applications.
- Low profile package.
- Glass passivated chip junction.
- Super fast recovery times for high efficiency.

Mechanical data

- Case: SMC
- Terminals: Solderable per MIL-STD-750, method 2026.

Circuit Diagram



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 by 20%

| Parameter | Symbols | ES8AC -HF | ES8BC -HF | ES8CC -HF | ES8DC -HF | ES8EC -HF | ES8GC -HF | ES8JC -HF | Units | |
|--|--------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|-------|------|
| Maximum repetitive 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 rectified current at T _c = 50°C | I _{F(AV)} | 8 | | | | | | | A | |
| Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load | I _{FSM} | 125 | | | | | | | A | |
| Max. forward voltage at 8A | V _F | 0.98 | | | | 1.3 | | 1.7 | V | |
| Maximum DC reverse current at rated DC blocking voltage T _a = 25°C T _a = 125°C | I _R | 10 | | | | 350 | | | | µA |
| Typical junction capacitance at V _R = 4V, f = 1MHz | C _j | 90 | | | | | | | pF | |
| Maximum reverse recovery time (Note 1) | t _{rr} | 35 | | | | | | | ns | |
| Typical thermal resistance (Note 2) | R _{θJA} R _{θJC} | | | | | 75 | | 20 | | °C/W |
| Operating and storage temperature range | T _j , T _{stg} | -55 ~ +150 | | | | | | | °C | |

Notes: 1. Measured with I_F = 0.5A, I_R = 1A, I_{rr} = 0.25A.
2. P.C.B. mounted with 2.0" x 2.0" (5 x 5 cm) copper pad areas.

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REV:A

Rating and Characteristic Curves (ES8AC-HF Thru. ES8JC-HF)

Fig.1 - Max. Average Forward Current Rating

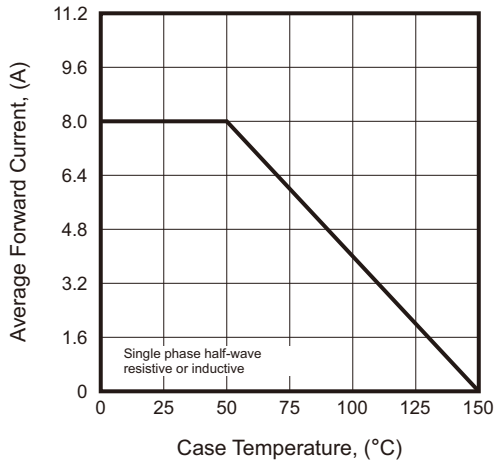


Fig.2 - Typical Reverse Characteristics

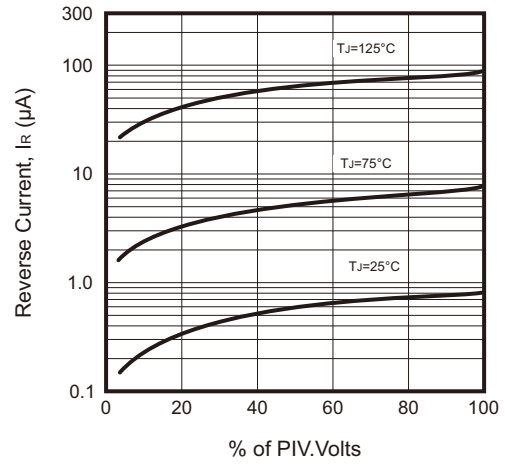


Fig.3 - Typical Forward Characteristic

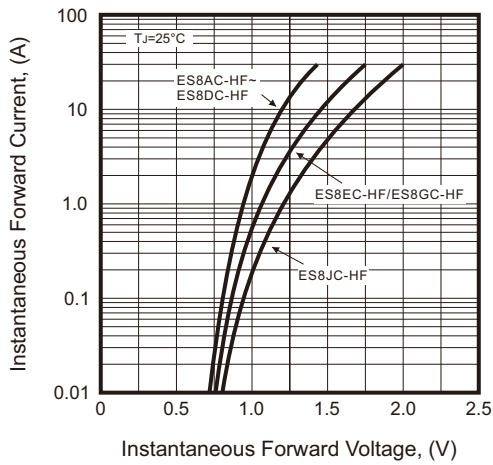


Fig.4 - Typical junction Capacitance

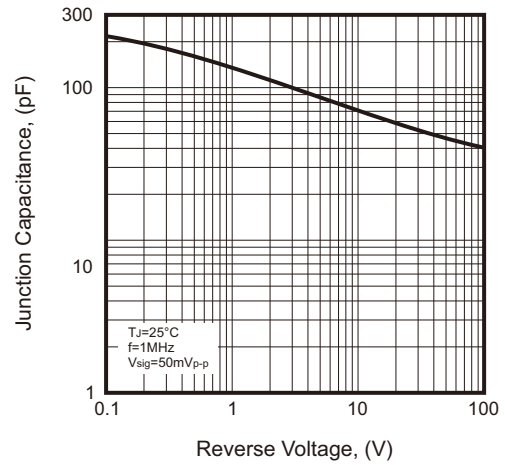
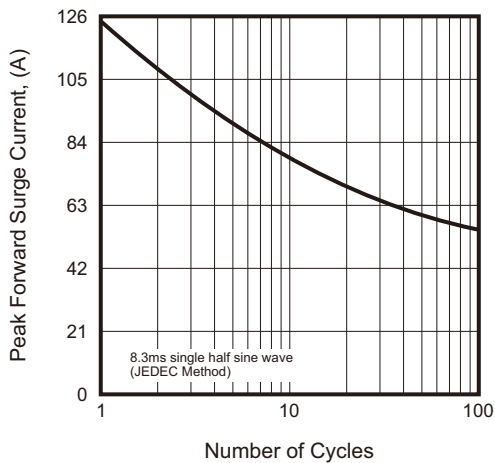


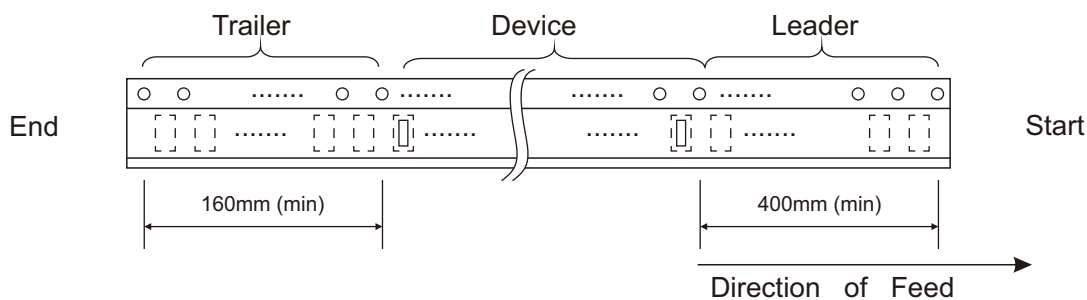
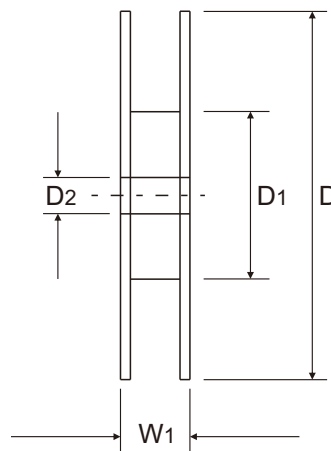
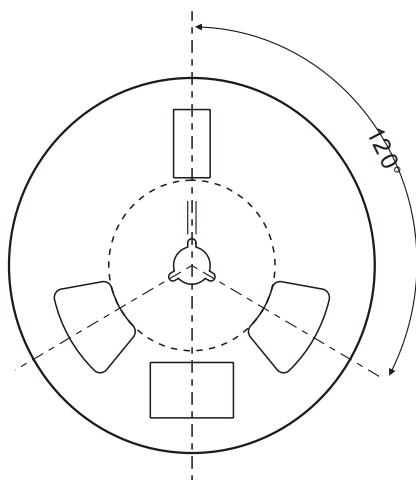
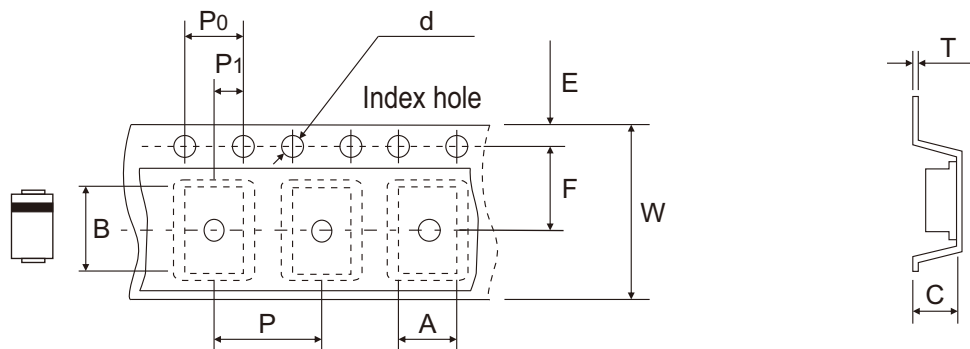
Fig.5 - Maximum Non-Repetitive Peak Forward Surge Current



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Reel Taping Specification



| DO-214AB (SMC) | SYMBOL | A | B | C | d | D | D1 | D2 |
|-------------------|--------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|
| | (mm) | 6.22 ± 0.10 | 8.31 ± 0.10 | 2.49 ± 0.10 | 1.55 ± 0.05 | 330 ± 2.00 | 100.00 ± 1.00 | 13.00 ± 0.20 |
| | (inch) | 0.245 ± 0.004 | 0.327 ± 0.004 | 0.098 ± 0.004 | 0.061 ± 0.002 | 12.992 ± 0.079 | 3.937 ± 0.039 | 0.512 ± 0.008 |

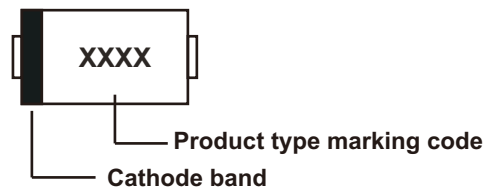
| DO-214AB (SMC) | SYMBOL | E | F | P | P0 | P1 | T | W | W1 |
|-------------------|--------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|--------------------------|
| | (mm) | 1.75 ± 0.10 | 7.50 ± 0.10 | 8.00 ± 0.10 | 4.00 ± 0.10 | 2.00 ± 0.05 | 0.28 ± 0.02 | 16.00 ± 0.30 | 21.00 + 2.00 - 1.00 |
| | (inch) | 0.069 ± 0.004 | 0.295 ± 0.004 | 0.315 ± 0.004 | 0.157 ± 0.004 | 0.079 ± 0.002 | 0.011 ± 0.001 | 0.630 ± 0.012 | 0.827 + 0.079 - 0.039 |

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REV:A

Marking Code

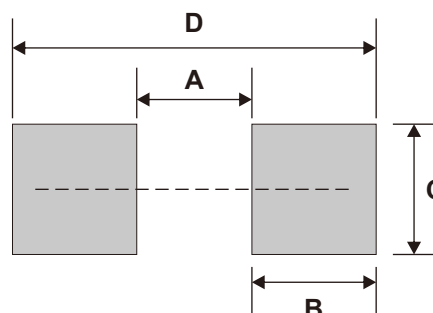
| Part Number | Marking Code |
|-------------|--------------|
| ES8AC-HF | ES8A |
| ES8BC-HF | ES8B |
| ES8CC-HF | ES8C |
| ES8DC-HF | ES8D |
| ES8EC-HF | ES8E |
| ES8GC-HF | ES8G |
| ES8JC-HF | ES8J |



xxxx = Product type marking code

Suggested PAD Layout

| SIZE | DO-214AB (SMC) | |
|------|----------------|--------|
| | (mm) | (inch) |
| A | 3.80 | 0.150 |
| B | 4.10 | 0.161 |
| C | 4.30 | 0.169 |
| D | 12.00 | 0.472 |



Note: 1. The pad layout is for reference purpose only.

Standard Packaging

| Case Type | REEL PACK | |
|----------------|--------------|------------------|
| | REEL (pcs) | Reel Size (inch) |
| DO-214AB (SMC) | 3,000 | 13 |