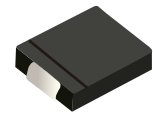
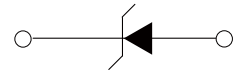


FEATURES

- | Low reverse leakage
- | High forward surge capability
- | High reliability
- | High temperature soldering guaranteed:260 °C/10seconds
- | Lead and body according with RoHS standard
- | Green compound with suffix "-F" on Marking



DO-214AB(SMC)



Schematic Symbol

APPLICATIONS

- | Polarity: Color band denotes cathode end
- | Mounting Position: Any

APPROVALS

| | |
|-------------|------------------------------------|
| RoHS | Compliance with 2011/65/EU |
| HF | Compliance with IEC61249-2-21:2003 |

ABSOLUTE MAXIMUM RATINGS (T_A=25°C)

| Parameter | Symbol | SS82C | SS83C | SS84C | SS85C | SS86C | SS88C | SS810C | SS815C | SS820C | Unit |
|--|----------------------------------|-------------|-------|-------|-------|-------|-------|--------|--------|--------|------|
| Marking | | SS82 | SS83 | SS84 | SS85 | SS86 | SS88 | SS810 | SS815 | SS820 | |
| Repetitive peak reverse voltage | V _{RRM} | 20 | 30 | 40 | 50 | 60 | 80 | 100 | 150 | 200 | V |
| Reverse voltage,total RMS Value | V _{RMS} | 14 | 21 | 28 | 35 | 42 | 56 | 70 | 105 | 140 | V |
| Maximum DC blocking voltage | V _{DC} | 20 | 30 | 40 | 50 | 60 | 80 | 100 | 150 | 200 | V |
| Maximum average forward rectified current | I _{F(AV)} ¹⁾ | 8.0 | | | | | | | | | A |
| Non-repetitive peak forward surge current 8.3 ms singlehalf sine-wave | I _{FSM} | 200 | | | | | | | | | A |
| Maximum forward voltage @I _F =8.0A | V _F | 0.55 | | | 0.75 | | 0.90 | | 0.95 | | V |
| Maximum DC reverse current at rated DC blocking voltage | T _A =25°C | 0.5 | | | | | 0.1 | | | | mA |
| | T _A =100°C | 20 | | | | | 10 | | | | mA |
| Typical thermal resistance Note 1 | R _{θJA} | 60 | | | 75 | | 90 | | | °C/W | |
| | R _{θJI} | 12 | | | 16 | | 20 | | | °C/W | |
| Type junction capacitance V _R =4.0V,f=1MHz | C _J | 400 | | | | | | | | | pF |
| Operating junction temperature range | T _J | -55 to +150 | | | | | | | | | °C |
| Storage temperature range | T _{STG} | -55 to +150 | | | | | | | | | °C |

Note1):Thermal resistance from junction to ambient , PCB mounted

CHARACTERISTIC CURVES

Fig. 1- Typical Forward Characteristic

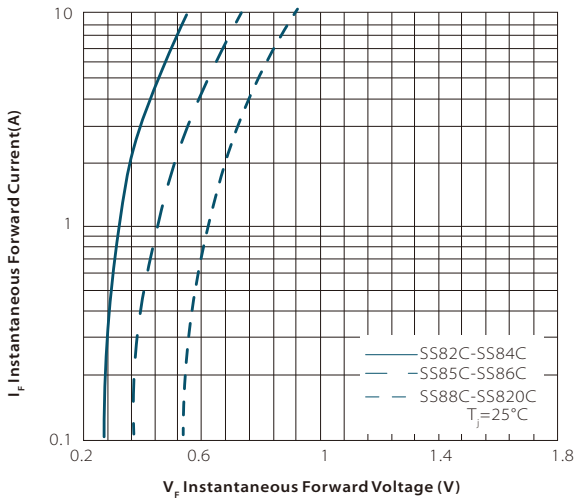


Fig. 2-Forward Current Derating Curve

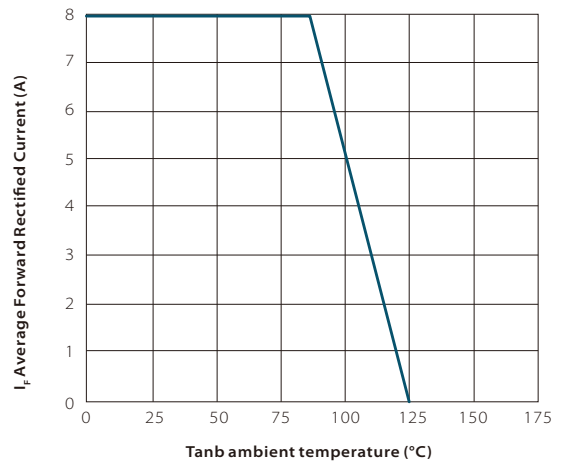


Fig. 3-Maximum Non Repetitive Peak Forward Surge Current

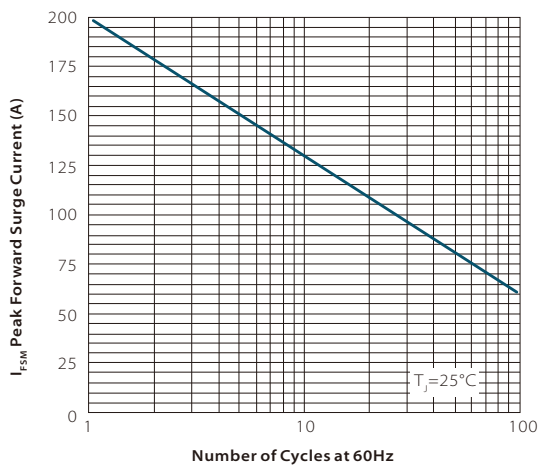
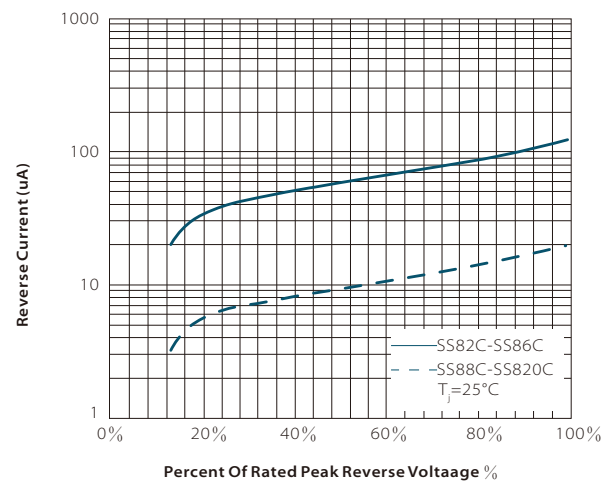
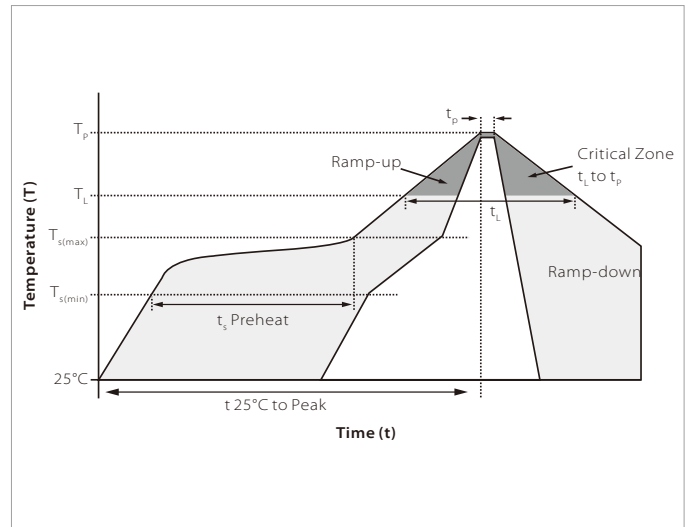


Fig. 4-Typical Reverse Characteristics

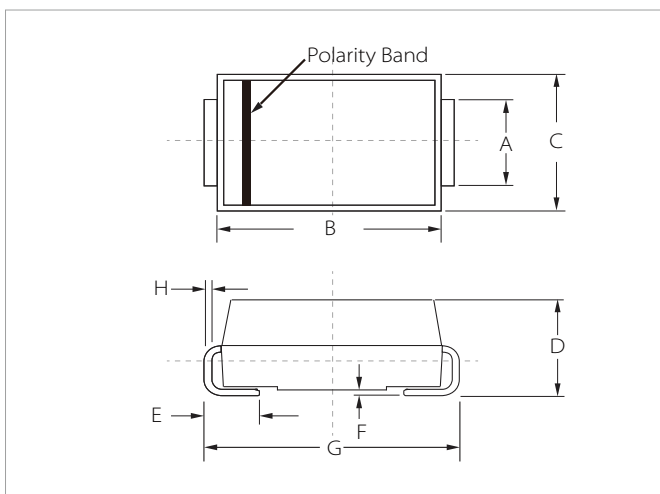


SOLDERING PARAMETERS

| Reflow Condition | | Lead-free assembly |
|--|----------------------------------|--------------------|
| Pre Heat | Temperature Max ($T_{s(min)}$) | 150°C |
| | Temperature Max ($T_{s(max)}$) | 200°C |
| | Time (min to max) (t_s) | 60 – 180 secs |
| Average ramp up rate (Liquidus Temp (T_L) to peak) | | 3°C/second max |
| $T_{s(max)}$ to T_L - Ramp-up Rate | | 3°C/second max |
| Reflow | Temperature (T_L) (Liquidus) | 217°C |
| | Time (min to max) (t_L) | 60 – 150 seconds |
| Peak Temperature (T_p) | | 260°C |
| Time within 5°C of actual peak Temperature (t_p) | | 20 – 40 seconds |
| Ramp-down Rate | | 6°C/second max |
| Time 25°C to peak Temperature (T_p) | | 8 minutes max. |
| Do not exceed | | 260°C |

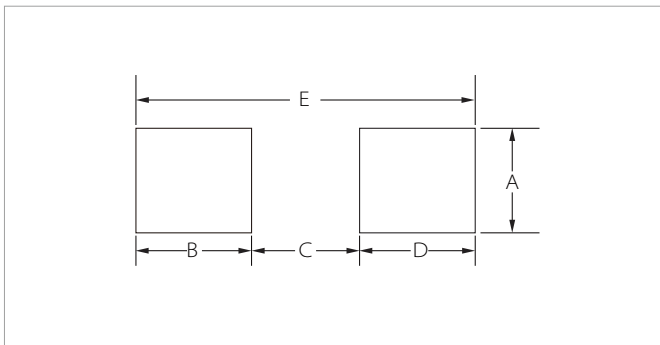


DO-214AB(SMC) PACKAGE INFORMATION



| Ref. | Millimeters | | Inches | |
|------|-------------|------|--------|-------|
| | Min. | Max. | Min. | Max. |
| A | 2.80 | 3.20 | 0.110 | 0.126 |
| B | 6.60 | 7.20 | 0.260 | 0.283 |
| C | 5.70 | 6.10 | 0.224 | 0.240 |
| D | 2.15 | 2.75 | 0.085 | 0.108 |
| E | 1.00 | 1.60 | 0.039 | 0.063 |
| F | 0.02 | 0.20 | 0.000 | 0.008 |
| G | 7.60 | 8.00 | 0.299 | 0.315 |
| H | 0.15 | 0.30 | 0.006 | 0.012 |

RECOMMENDED PAD LAYOUT DIMENSIONS



| Ref. | Millimeters | | Inches | |
|------|-------------|------|----------|-------|
| | Min. | Max. | Min. | Max. |
| A | 3.30 | - | 0.129 | - |
| B | 2.40 | - | 0.094 | - |
| C | - | 4.20 | - | 0.165 |
| D | 2.40 | - | 0.094 | - |
| E | 8.20REF | | 0.323REF | |

ORDERING INFORMATION

| Part Number | Component Package | QTY/Reel | Reel Size |
|--------------|-------------------|----------|-----------|
| SS82C-SS820C | DO-214AB(SMC) | 3000PCS | 13" |

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