

S8GC thru S8MC

SURFACE MOUNT GLASS PASSIVATED RECTIFIERS

REVERSE VOLTAGE -400 to 1000 Volts FORWARD CURRENT - 8.0 Amperes

SMC

FEATURES

- · Glass passivated chip
- For surface mounted applications
- Low reverse leakage current
- · Low forward voltage drop
- · High current capability
- Plastic material has UL flammability classification 94V-0

MECHANICAL DATA

- · Case: Molded plastic
- Case Material molding compound, UL flammability classification 94V-0, (No Br. Sb. Cl.) "Halogen-free".
- · Polarity: Color band denotes cathode · Weight: 0.007 ounces, 0.21 grams

| | SMC | | | |
|-----------------------------|------|------|--|--|
| DIM. | MIN. | MAX | | |
| Α | 6.60 | 7.11 | | |
| В | 5.59 | 6.22 | | |
| С | 2.92 | 3.18 | | |
| D | 0.15 | 0.31 | | |
| Е | 7.75 | 8.13 | | |
| F | 0.05 | 0.20 | | |
| G | 2.01 | 2.50 | | |
| Н | 0.76 | 1.52 | | |
| All dimension in millimeter | | | | |

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

ABSOLUTE RATINGS

| PARAMETER | SYMBOL | S8GC | S8JC | S8KC | S8MC | UNIT |
|--|----------------------------------|-------------|------|------|------|------|
| Maximum repetitive peak reverse voltage | V_{RRM} | 400 | 600 | 800 | 1000 | V |
| Maximum DC blocking voltage | V _{DC} | 400 | 600 | 800 | 1000 | ٧ |
| Maximum average forward rectified current @ T _L =75°C | I _(AV) | 8.0 | | | Α | |
| Peak forward surge current single half sine-wave superimposed on rated load. (JDEEC METHOD)@ 8.3ms | I _{FSM} | 200 | | | Α | |
| Peak forward surge current single half sine-wave superimposed on rated load. (JDEEC METHOD)@ 1.0ms | I _{FSM} 450 | | | Α | | |
| Typical junction capacitance (Note1) | CJ | 45 | | | pF | |
| Operation and storage temperature range | T _J ,T _{STG} | -55 to +150 | | | | °C |

STATIC ELECTRICAL CHARACTERISTICS

| PARAMETER | TEST CONDITIONS | | PARAMETER TEST | | SYMBOL | MAX. | UNIT |
|-----------------|-----------------|---|----------------|-----------|--------|------|------|
| Forward voltage | IF=8.0A | T _J =25°C | V _F | 0.985 | ٧ | | |
| Leakage current | VR rated | T _J =25°C T _J =125°C | I _R | 10 250 | uA | | |

THERMAL CHARACTERISTICS

| PARAMETER | SYMBOL | TYP. | UNIT |
|------------------------------------|--|--------|------|
| Typical thermal resistance (Note2) | RthJ _A | 15 | °C/W |
| Typical thermal resistance | RthJ _c RthJ _∟ | 6 8 | °C/W |
| | RthJ _A | 60 | |

DYNAMIC ELECTRICAL CHARACTERISTICS

| PARAMETER | TEST CONDITIONS | SYMBOL | TYP. | | UNIT |
|-----------------------|--------------------------------|-----------------|------|---------------------|------|
| Reverse recovery time | IF= 0.5A, Irr= 0.25A, IR =1.0A | T _{RR} | 2700 | | ns |
| Note : | | | | REV.6, FEB2018, KSI | DC03 |

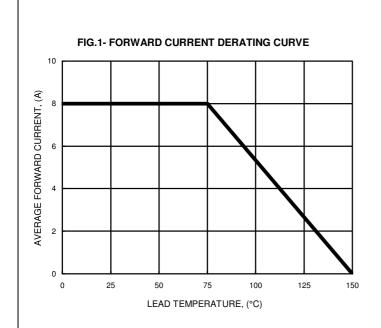
Note:

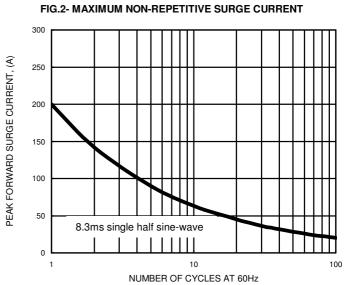
Measured at 1.0MHz and applied reverse voltage of 4.0V DC.

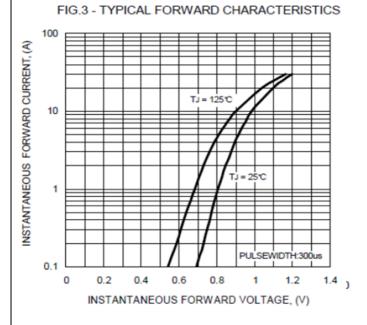
Thermal resistance junction to Ambient. in accordance with JESD-51. Unit mounted on 100mm*100mm*1.7mm copper pad, heatsink

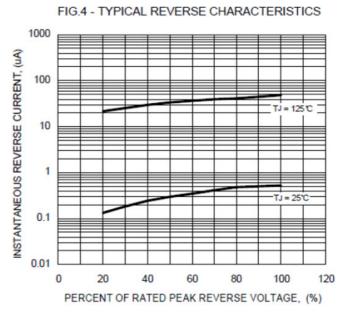
RATING AND CHARACTERISTIC CURVES S8GC thru S8MC













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