

FrelTec

Mathildenstr. 10A
82319 Starnberg
Germany

Surface Mount Standard Rectifier TO-277

TO-277

SPECIFICATION

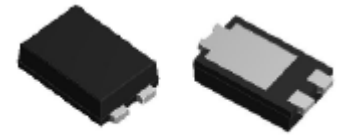
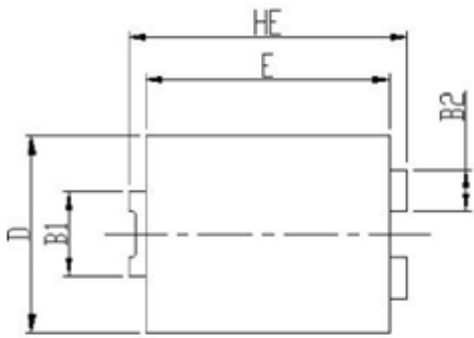
| 68B | SGC61_Axxxx | T277 | L05 |
|---|-------------|----------------|--|
| Type | Type | Package | Packing |
| 68B: Surface Mount Standard Rectifier | SGC6_A | TO-277 eSGC | L05: tape in Embossed tape and reel for 5000 pc (13" REEL) |

All products according to RoHS (2015/863/EU)

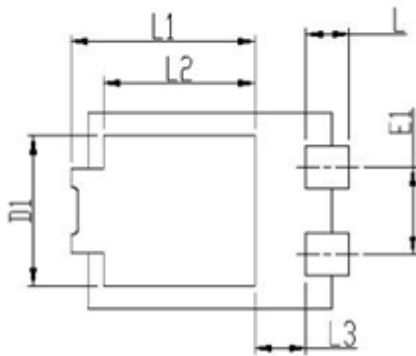
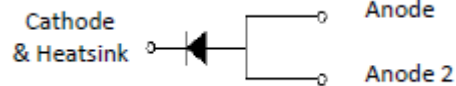


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PACKAGE OUTLINE

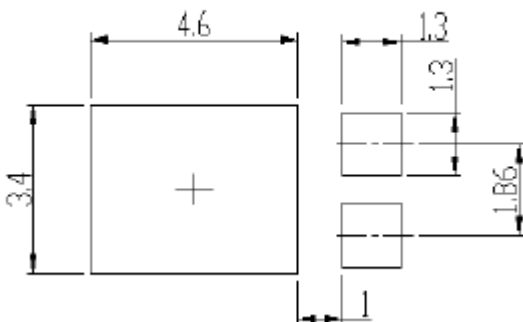


TO-277
eSGC



| | Min | Max |
|----|-----------|-----|
| HE | 6,4 | 6,6 |
| E | 5,6 | 5,8 |
| D | 4,1 | 4,3 |
| B1 | 1,7 | 1,9 |
| B2 | 0,8 | 1 |
| A | 1,05 | 1,2 |
| C | 0,3 | 0,4 |
| L | 0,85 | 1,1 |
| L1 | 4,2 | 4,4 |
| L2 | 3,52 Typ. | |
| L3 | 1,1 | 1,4 |
| D1 | 3 | 3,3 |
| E1 | 1,86 Typ. | |

Soldering footprint



TO-277

Surface Mount Standard Rectifier

Maximum Ratings & Characteristics

TA = 25°C unless otherwise noted

| Parameter | Symbol | SGC61A | SGC62A | SGC63A | SGC64A | SGC65A | SGC66A | SGC67A | Unit |
|--|----------------------|-------------|--------|--------|--------|--------|--------|--------|------|
| Maximum repetitive peak reverse | VRRM | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum RMS voltage | VRMS | 35 | 70 | 140 | 280 | 420 | 560 | 700 | V |
| Maximum DC blocking voltage | VDC | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum average forward rectified current | IF(AV) ¹⁾ | 3,0 | | | | | | | A |
| | IF(AV) ²⁾ | 6,0 | | | | | | | A |
| Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load | IFSM | 180 | | | | | | | A |
| Operating junction and storage temperature range | TJ, TSTG | -55 to +150 | | | | | | | °C |

Electrical Characteristics

TA = 25°C unless otherwise noted

| Parameter | Test conditions | Symbol | SGC61A | SGC62A | SGC63A | SGC64A | SGC65A | SGC66A | SGC67A | Unit |
|---|--------------------------------|--------------------------------|-------------------|--------|--------|--------|--------|--------|--------|-------|
| Maximum repetitive peak reverse | IF=6A, TA=25°C | VF | TYP:0,94; MAX:1,1 | | | | | | | V |
| Maximum DC reverse current at rated DC blocking voltage | TA=25°C | IR | 10 | | | | | | | uA |
| | TA=125°C | | 250 | | | | | | | |
| Typical reverse recovery time | IF=0.5A, IR=1.0A, Irr=0.25A | trr | 4 | | | | | | | uS |
| | | | | | | | | | | |
| Typical junction capacitance | 4.0 V, 1 MHz | CJ | 35 | | | | | | | pF |
| Typical thermal resistance ¹⁾ | junction to ambient | R _{θJA} ¹⁾ | 72 | | | | | | | °C /W |
| | junction to mount | R _{θJM} ²⁾ | 5 | | | | | | | |

Note: 1) Thermal resistance R_{θJA} is junction to ambient. Free air, mounted on P.C.B with recommended copper pad area, 2 OZ, FR4

2) Thermal resistance R_{θJM} is junction to mount. Mounted on P.C.B with 30*30mm copper pad area

TO-277 Ratings and Characteristics Curves

Surface Mount Standard Rectifier

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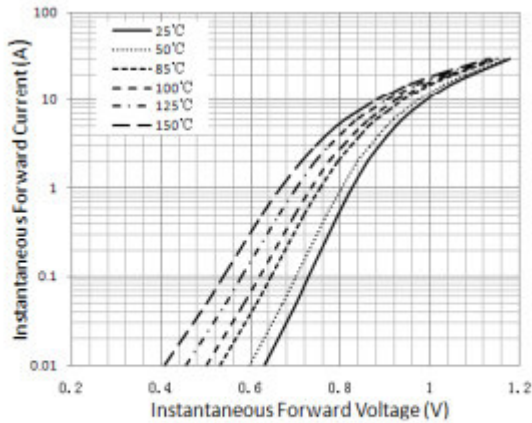


Figure 1. Typical Instantaneous Forward Characteristics

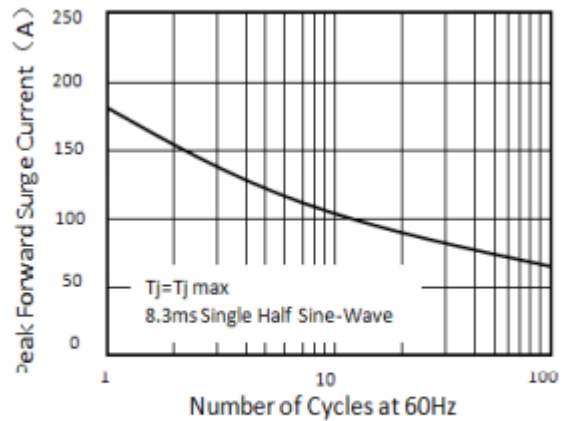


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

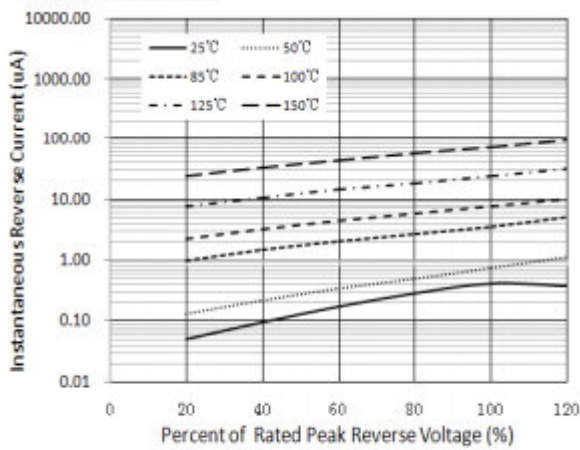


Figure 3. Typical Reverse Characteristics

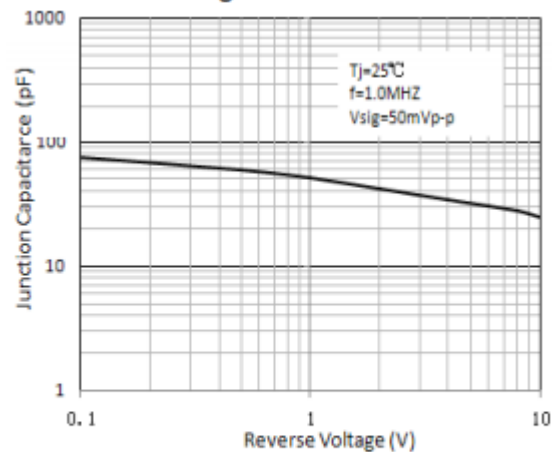


Figure 4. Typical Junction Capacitance

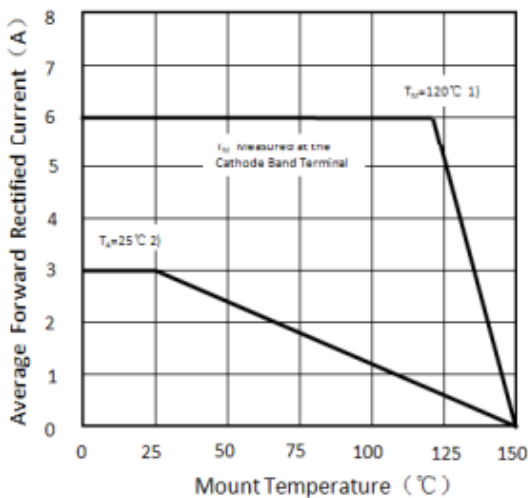
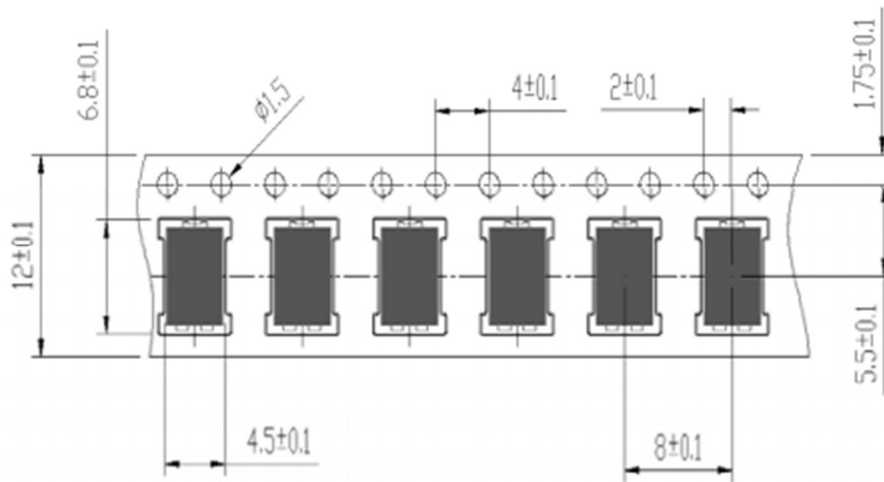


Figure 5. Forward Current Derating Curve

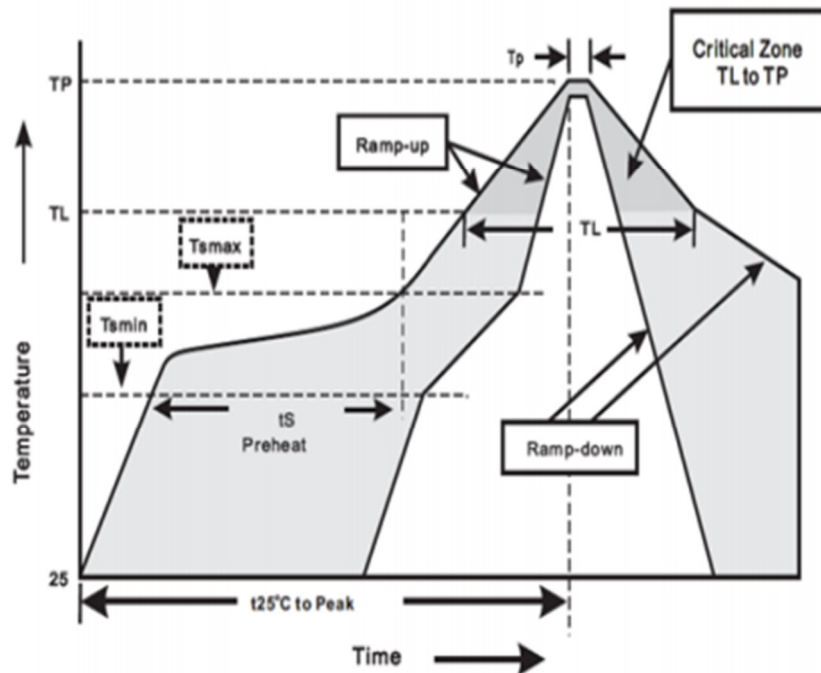
TO-277

SPECIFICATION

Tape And Reel Package



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Soldering Parameters

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Stock period

The performance of these products, including the solderability, is guaranteed for 12 month, provided that they remain packed as they were when delivered and stored at a temperature of 20-30°C and a relative humidity 20-60%RH

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