

# FrelTec

Mathildenstr. 10A  
82319 Starnberg  
Germany

## Surface Mount Standard Rectifier TO-277

## TO-277

## SPECIFICATION

68B	SGC030_Axx	T277	L05
Type	Type	Package	Packing
68B: Surface Mount Standard Rectifier	SGC030_A	TO-277 eSGC	L05: tape in Embossed tape and reel for 5000 pc (13" REEL)

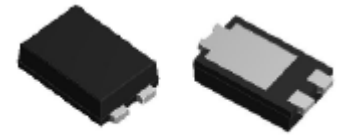
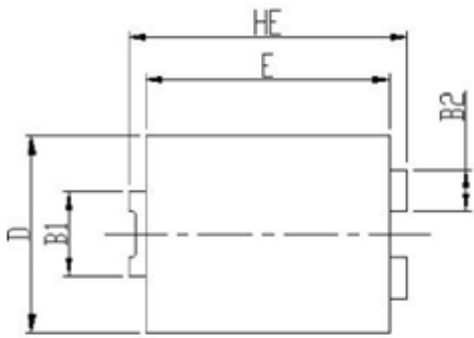
All products according to RoHS (2015/863/EU)

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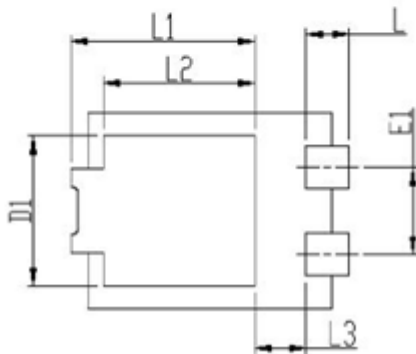
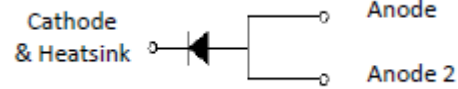
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Surface Mount Standard Rectifier

PACKAGE OUTLINE

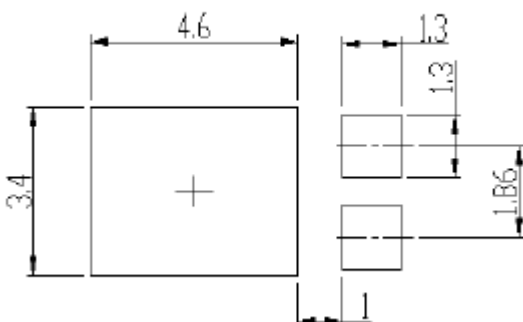


TO-277  
eSGC



	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 &amp; Characteristics

TA = 25°C unless otherwise noted

Parameter	Symbol	SGC0301 A	SGC0302 A	SGC0303 A	SGC0304 A	SGC0305 A	SGC0306 A	SGC0307 A	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) <sup>1)</sup>	3,0							A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	IFSM	80							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	SGC0301 A	SGC0302 A	SGC0303 A	SGC0304 A	SGC0305 A	SGC0306 A	SGC0307 A	Unit
Maximum repetitive peak reverse	IF=3 A ,TA=25°C	VF	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,	trr	3							uS
	Irr=0.25A									
Typical junction capacitance	4.0 V, 1 MHz	CJ	25							pF
Typical thermal resistance <sup>1)</sup>	junction to mount	R <sub>θJM</sub>	5							°C /W
	junction to ambient	R <sub>θJA</sub>	35							

Note:1), The thermal resistance from junction to ambient, case or mount, mounted on P.C.B with 30x30mm copper pads.

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Surface Mount Standard Rectifier

Ratings and Characteristics Curves

TA = 25°C unless otherwise noted

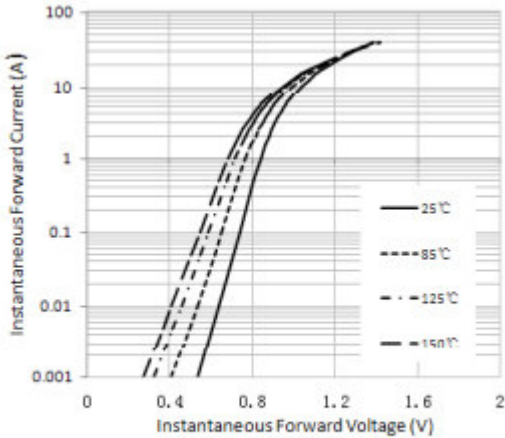


Figure 1. Typical Instantaneous Forward Characteristics

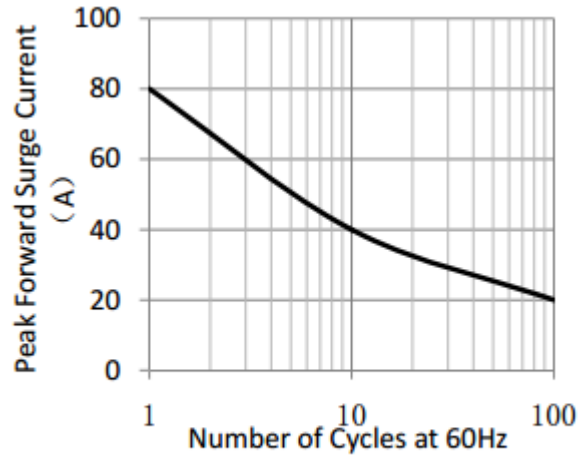


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

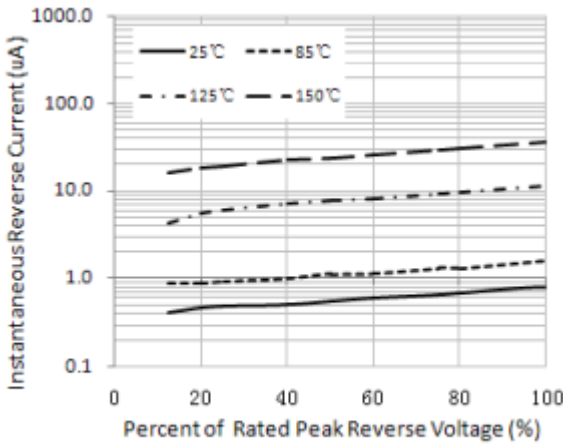


Figure 3. Typical Reverse Characteristics

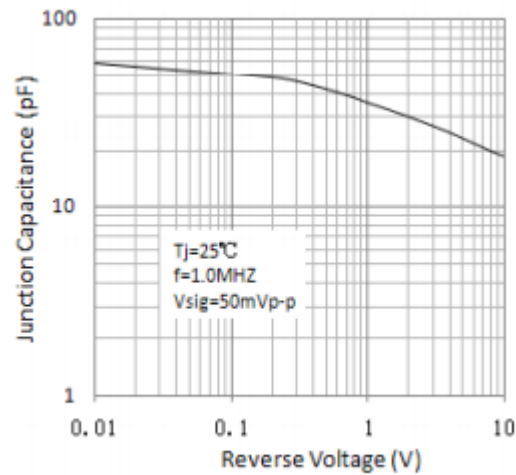


Figure 4. Typical Junction Capacitance

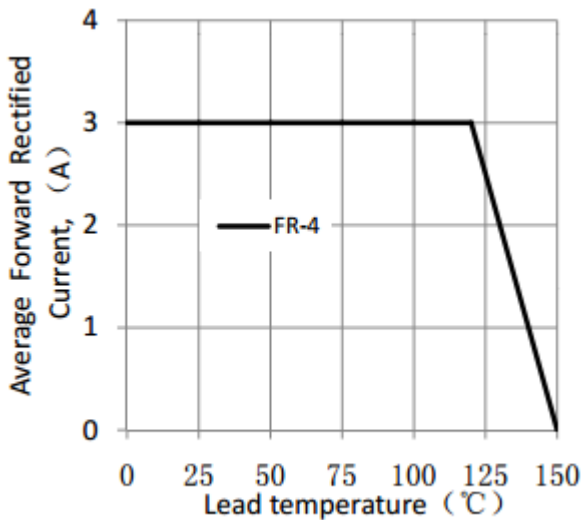
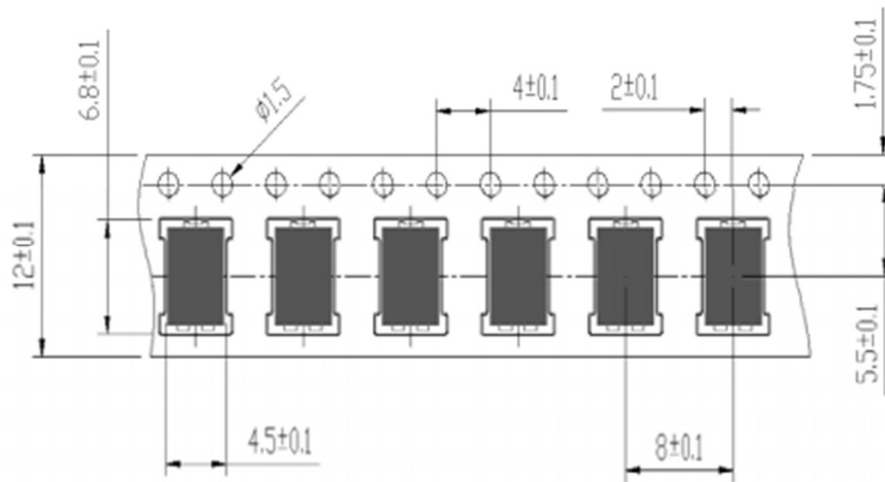


Figure 5. Forward Current Derating Curve

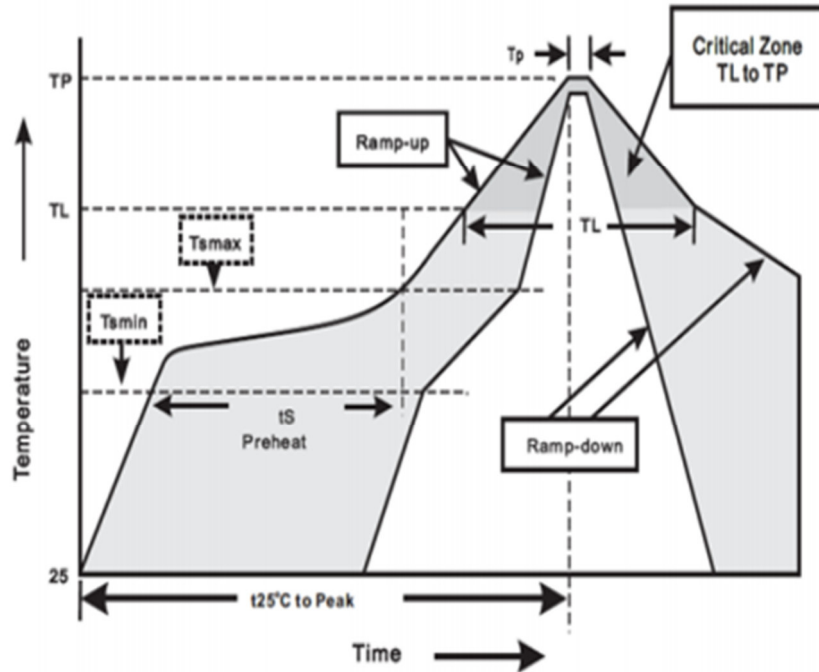
TO-277  
SPECIFICATION

***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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