

# FrelTec

Mathildenstr. 10A  
82319 Starnberg  
Germany

High-efficiency Rectifier  
SMC

SMC

SPECIFICATION

683	US3_XXXXXX	SMCX	L03
Type	Type	Package	Packing
683: Ultra-fast Recover Rectifier	US3_	SMC	L03: tape in box (paper tape) for 3k pc (13'REEL)

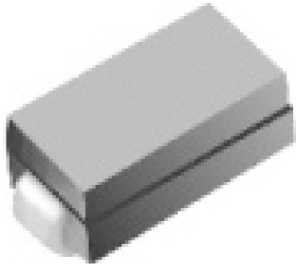
All products according to RoHS (2015/863/EU)

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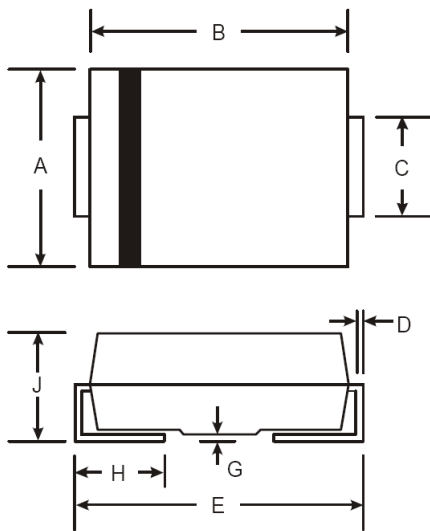
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FrelTec  
High-efficiency Rectifier  
US3\_

**PACKAGE OUTLINE**



**DIMENSIONS**



Dim	Min(mm)	Max(mm)
A	5,59	6,22
B	6,60	7,11
C	2,75	3,25
D	0,15	0,31
E	7,75	8,13
G	0,05	0,20
H	0,76	1,27
J	2,00	2,62

Maximum Ratings &amp; Characteristics

Ratings at 25°C ambient temperature unless otherwise specified

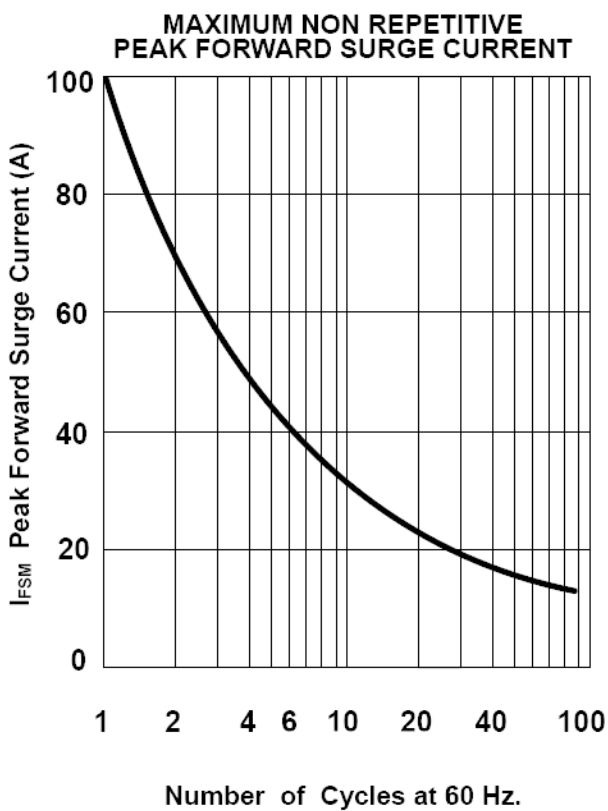
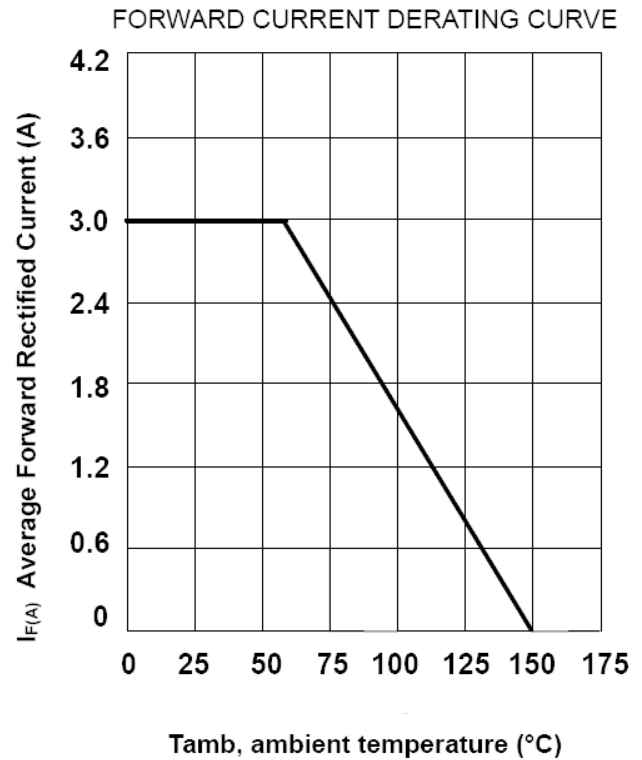
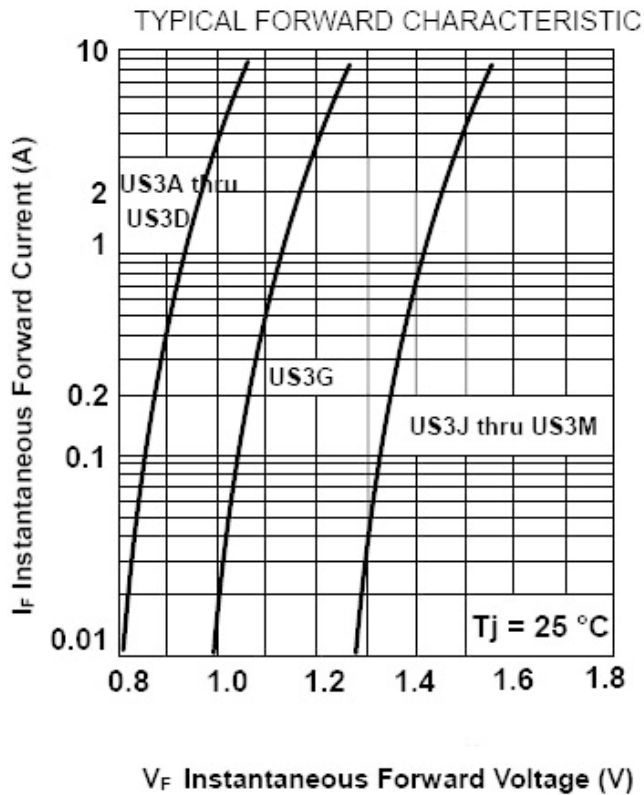
Parameter	Symbols	US3	US3	US3	US3	US3	US3	US3	Unit
		A	B	D	G	J	K	M	
Maximum repetitive peak reverse voltage	VRRM	50	100	200	400	600	800	1000	V
Maximum RMS voltage	VRMS	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	VDC	50	100	200	400	600	800	1000	V
Maximum average forward rectified current	IF(AV)	3,0							A
Peak forward surge current 8,3 ms single half sine-wave	IFSM	100							A
Typical thermal resistance	RθJA	60							°C/W
Operating junction and storage temperature range	Tj, TSTG	-55 --- +150							°C

Electrical Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbol	US3	US3	US3	US3	US3	US3	US3	Unit
		A	B	D	G	J	K	M	
IF = 3,0A Maximum forward voltage	VF	1,0			1,3	1,7			V
Maximum reverse current TA= 25°C TA=125°C	IR				10 500				µA
IF=0,5A IR=1,0A IRR=0,25A MAX, Reverse Recovery Time	trr	50			75			nS	
VR = 4,0V, f = 1MHz Type junction capacitance	Cj				15			pF	

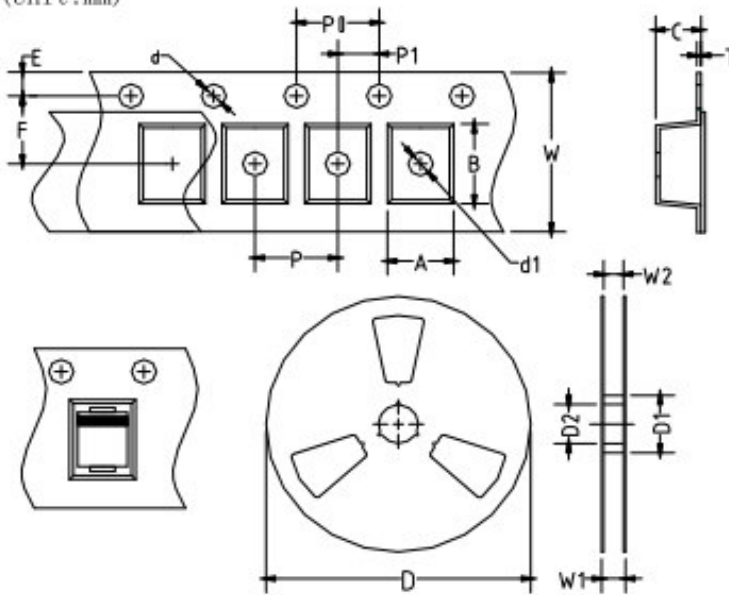
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Characteristics(Typical)

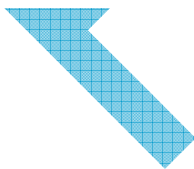


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Size (Unit:mm)



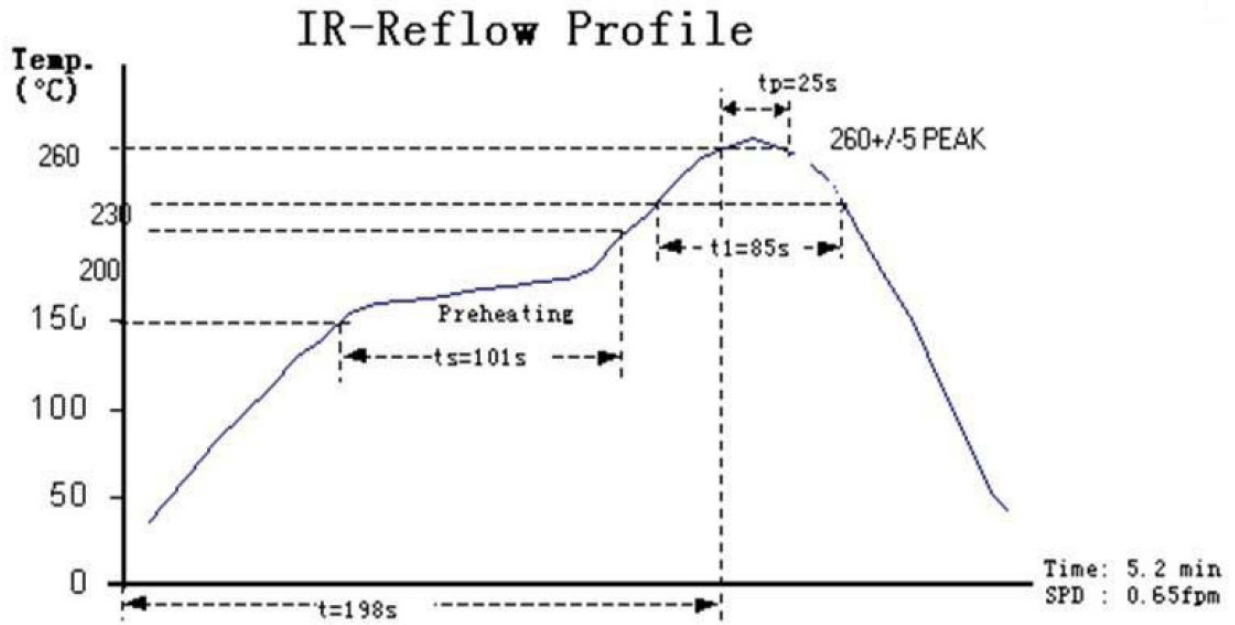
Item	Symbol	SMA-W
Carrier width	A	2.79±0.15
Carrier length	B	5.33±0.15
Carrier depth	C	2.36±0.15
Sprocket hole	d	1.50±0.10
Carrier hole	d1	1.50±0.10
Reel outside diameter	D	330.0±1.0
Reel inner diameter	D1	75±1.0
Feed hole diameter	D2	13.5±1.0
Sprocket hole position	E	1.75±0.10
Punch hole position	F	5.50±0.05
Punch hole pitch	P	4.00±0.10
Sprocket hole pitch	P0	4.00±0.10
Embossment center	P1	2.00±0.10
Total tape thickness	T	0.30±0.10
Tape width	W	12.00±0.15
Reel width	W1	18.1±1.5
Reel width	W2	13.5±1.0



**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 0-35°C and a relative humidity 35-75%RH

# Lead Free Reflow Soldering Profile



Freltec

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Mathildenstr. 10A; 82319 Starnberg; Germany  
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