FrelTec

Mathildenstr. 10A
82319 Starnberg
Germany

Surface Mount Recover Rectifier
SMAF

Freltec

© FrelTec GmbH

Please read cautions and warnings and important notes at the end of this document.

SPECIFICATION

68B		LU_xxxxxxx		SMAX		L0H
Type		Type		Package		Packing
68B: Standard Mount Recovery Rectifier		LU_		SMAF		LOH: Embossed tape and reel for 7,5k pcs(13'' reel)

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

Freltec

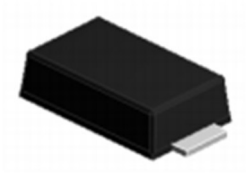
© FrelTec® GmbH

Please read cautions and warnings and important notes at the end of this document.

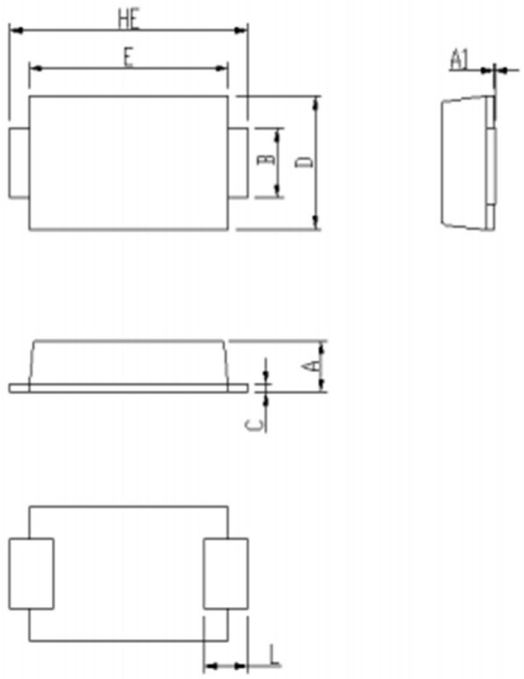
LU1 thru LU5

PACKAGE OUTLINE

RoHS COMPLIANT

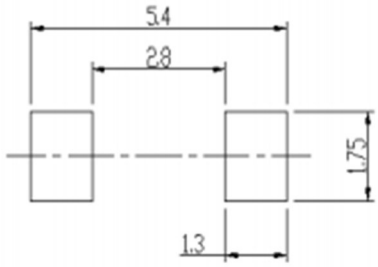


eSGB (SMAF)



DIM	Unit: mm		Unit: inch	
	MIN	MAX	MIN	MAX
A	0.92	1.08	0.036	0.043
A1	0	0.1	0.000	0.004
B	1.25	1.45	0.049	0.057
C	0.1	0.25	0.004	0.010
D	2.6	2.8	0.102	0.110
E	4.1	4.3	0.161	0.169
L	0.7	1.1	0.028	0.043
HE	4.8	5.2	0.189	0.205

Soldering footprint



© FrelTec® GmbH

www.freltec.com

Please read cautions and warnings and important notes at the end of this document.

Parameter	Symbols	LU1	LU2	LU3	LU4	LU5	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	V
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	V
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	V
Maximum average output rectified current	$I_{F(AV)}$	1,0					A
Peak forward surge current , 8,3ms single half sine-wave superimposed on rate load	I_{FSM}	30					A
Open junction and Storage temperature range	T_J, T_{STG}	-55 --- +150					°C

Parameter	Test Conditions	Symbols	LU1	LU2	LU3	LU4	LU5	Unit
Maximum instantaneous forward voltage	1,0A	V_F	1,0			1,3	1,7	Volts
Maximum DC reverse current at rated DC locking voltage	T_A=25 °C	I_R	5,0					uA
	T_A=125 °C		50					
Typical reverse recovery time	I_F=0,5A. I_R=1,0A I_{RR}=0,25A	t_{rr}	35					nS
Typical junction capacitance	4,0 V, 1MHz	C_J	10					pF
Typical thermal resistance [1]	Junction to ambient	$R_{\theta JA}$	60					°C /W
	Junction to case	$R_{\theta jC}$	32					
	Junction to mount	$R_{\theta jM}$	1					

Notes:1).The thermal resistance from junction to ambient and lead, mounted on P.C.B with 8x8mm copper pads,2 OZ, FR4 PCB.

FrelTec

© FrelTec® GmbH

www.freltec.com

Please read cautions and warnings and important notes at the end of this document.

Ratings and Characteristics curves

(TA = 25 °C unless otherwise noted)

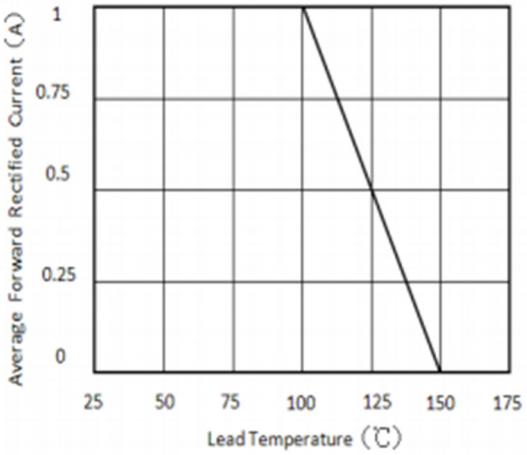


Figure 1.Forward Current Derating Curve

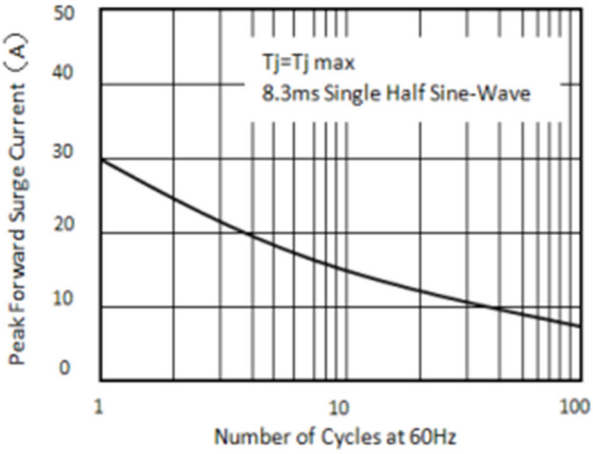


Figure 2.Maximum Non-Repetitive Peak Forward Surge Current

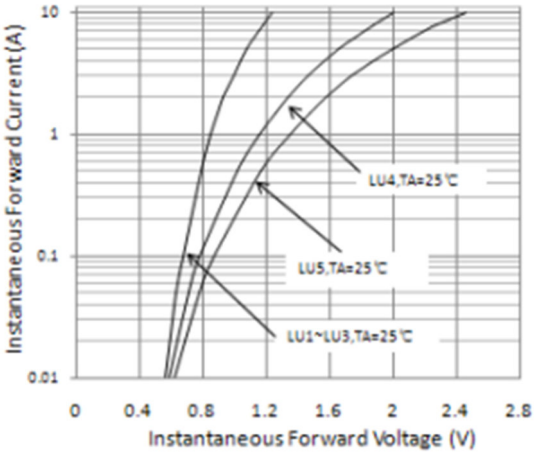


Figure 3. Typical Instantaneous Forward Characteristics

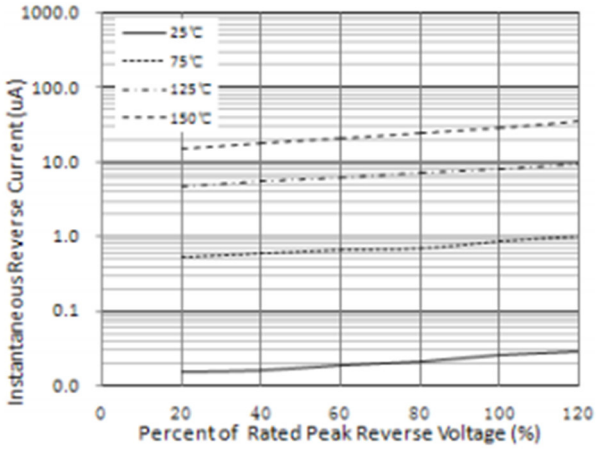


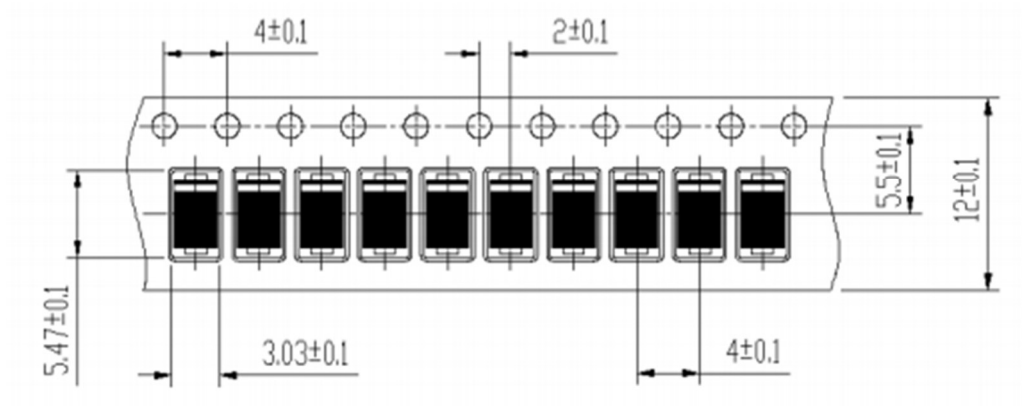
Figure 4. Typical Reverse Characteristics

© FrelTec® GmbH

www.freltec.com

Please read cautions and warnings and important notes at the end of this document.

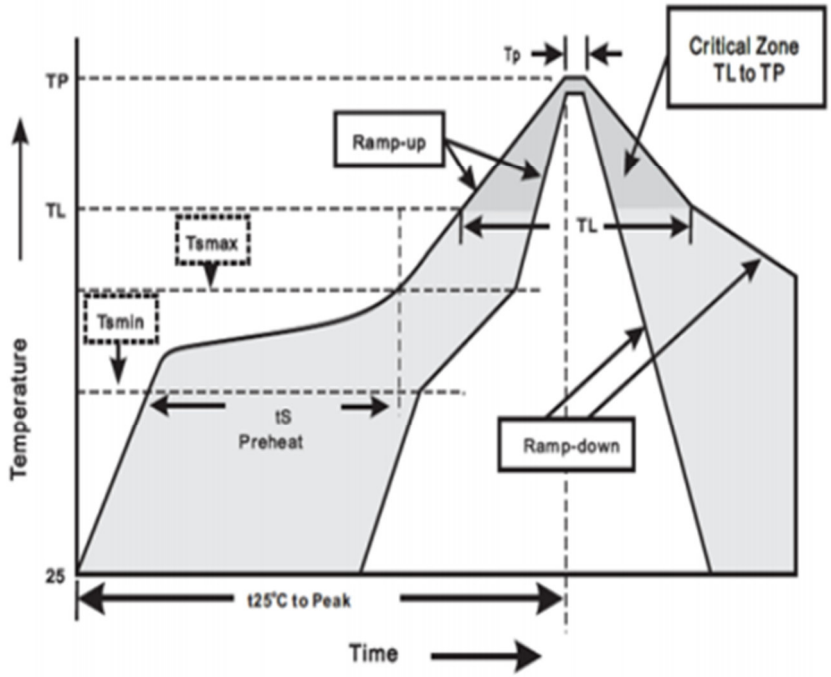
Tape & Reel Specification



FrelTec

© FrelTec® GmbH
www.freltec.com
Please read cautions and warnings and important notes at the end of this document.

Soldering Parameters



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

© FrelTec GmbH

Please read cautions and warnings and important notes at the end of this document.

Published by FrelTec® GmbH
Mathildenstr, 10A; 82319 Starnberg; Germany
© 2021 FrelTec® GmbH, All Rights Reserved,

The following applies to all products named in this publication:

1. The information describes the type of component and shall not be considered as assured characteristics,
2. Terms of delivery and rights to change design reserved,
3. Some parts of this publication contain statements about the suitability of our products for certain areas of application, These statements are based on our knowledge of typical requirements that are often placed on our products in the areas of application concerned, Nevertheless, we explicitly point out that such statements cannot be regarded as binding statements about the suitability of our products for a particular customer application, As a rule, FrelTec® is either unfamiliar with individual customer applications or less familiar with them than the customers themselves, For these reasons, it is always ultimately incumbent on the customer to check and decide whether a FrelTec® product with the properties described in the product specification is suitable for use in a particular customer application,
4. We also point out that in individual cases, a malfunction of electronic components or failure before the end of their usual service life cannot be completely ruled out in the current state of the art, even if they are operated as specified, In customer applications requiring a very high level of operational safety and especially in customer applications in which the malfunction or failure of an electronic component could endanger human life or health (e,g, in accident prevention or life-saving systems), it must therefore be ensured by means of suitable design of the customer application or other action taken by the customer (e,g, installation of protective circuitry or redundancy) that no injury or damage is sustained by third parties in the event of malfunction or failure of an electronic component,
5. The warnings, cautions and product-specific notes must be observed,
6. In order to satisfy certain technical requirements, some of the products described in this publication may contain substances subject to restrictions in certain jurisdictions (e,g, because they are classed as “hazardous”), Useful information on this will be found in our Material Data Sheets, Should you have any more detailed questions, please contact our sales offices,
7. We constantly strive to improve our products, Consequently, the products described in this publication may change from time to time, The same is true for the corresponding product specifications, Please check therefore to what extent product descriptions and specifications contained in this publication are still applicable before or when you place an order, We also reserve the right to discontinue production and delivery of products, Consequently, we cannot guarantee that all products named in this publication will always be available,
8. Unless otherwise agreed in individual contracts, all orders are subject to the current version of the “General conditions for the supply of products and services of the electrical and electronics industry” published by the German Electrical and Electronics Industry Association (ZVEI), available at www,freltec,com,
9. As far as patents or other rights of third parties are concerned, liability is only assumed for components per se, not for applications, processes and circuits implemented within components or assemblies,
10. The trade name FrelTec® is a trademark registered or pending in Europe and in other countries,

FrelTec