

FrelTec

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Germany

High Efficient Surface Mount Rectifier SMC

SMC

High Efficient Surface Mount Rectifier

SPECIFICATION

68B	HS3_ xxxxxx	SMCX	L03
Type	Type	Package	Packing
68B: Surface Mount Superfast recovery Rectifier	HS2_	SMC	L03: tape and Reel(embossed tape)for 3k pc (13'REEL)

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



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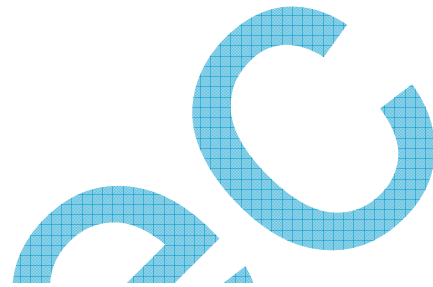
HS3A thru HS3M

PACKAGE OUTLINE

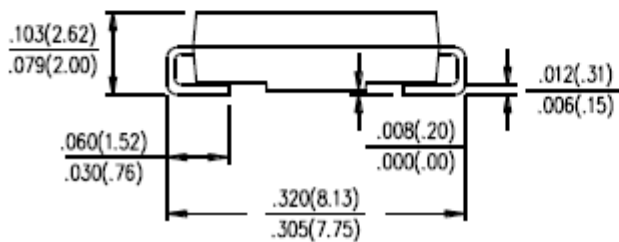
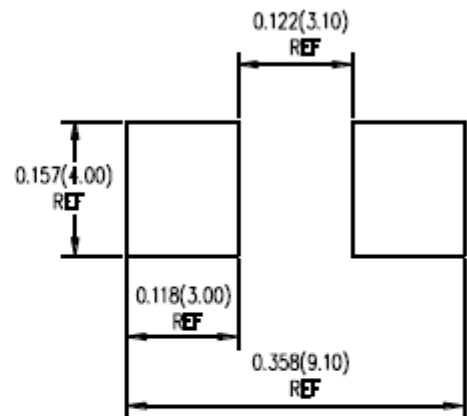
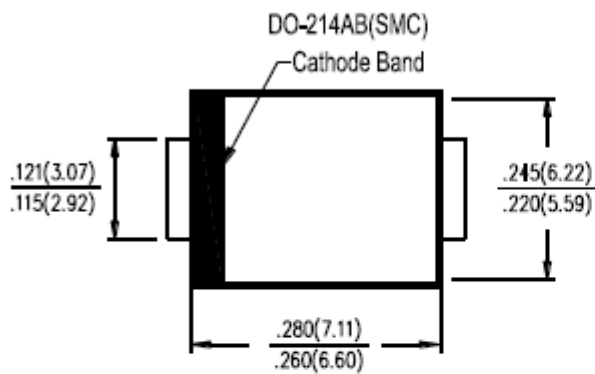


DO-214AB(SMC)

in inches (millimeters)



Mounting Pad Layout



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Maximum Ratings & Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbols	HS3A	HS3B	HS3D	HS3G	HS3J	HS3K	HS3M	Unit
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 superimposed on rated load	IFSM	125							A
Operating junction and storage temperature range	TJ,TSTG	-55 to +150							°C

Parameter	Test Conditions	Symbols	HS3A	HS3B	HS3D	HS3G	HS3J	HS3K	HS3M	Unit
Maximum instantaneous forward voltage	IF=3,0A Ta=25°C	VF	1,0		1,3		1,7			Volts
	IF=3,0A Ta=125°C		1,15							
Maximum DC reverse current at rated DC blocking voltage	TA=25°C	IR	5,0							uA
	TA=125°C		50							
Maximum reverse recovery time	IF=0,5A, IR=1,0A IRR=0,25A	tr	50,0				75,0			nS
Typical junction capacitance	4,0V, 1MHz	CJ	27,3							pF
Typical thermal resistance	Junction to lead ¹⁾	R θ JL	3,7							°C /W
	Junction to ambient ²⁾	R θ JA	56,0							
	Junction to case ²⁾	R θ JC	21,0							
	Junction to lead ²⁾	R θ JL	6,5							

Notes: 1). The thermal resistance from junction to lead, mounted on FR-4 P.C.B with 30X30mm copper pads

2). The thermal resistance from junction to ambient, case or lead, mounted on FR-4 P.C.B with 8X8mm copper pads

Characteristics(Typical)

11/5/2020

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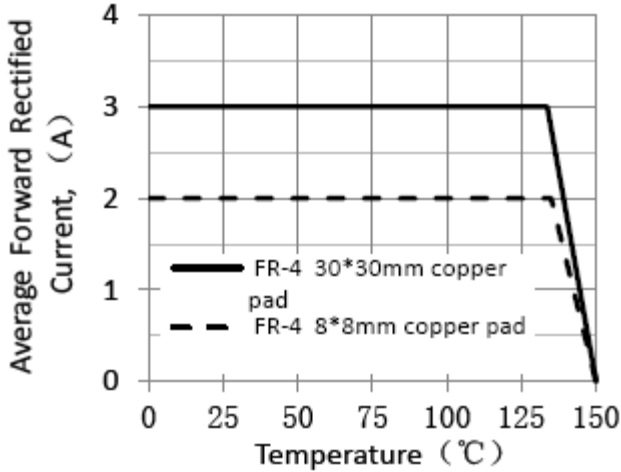


Figure 1. Forward Current Derating Curve

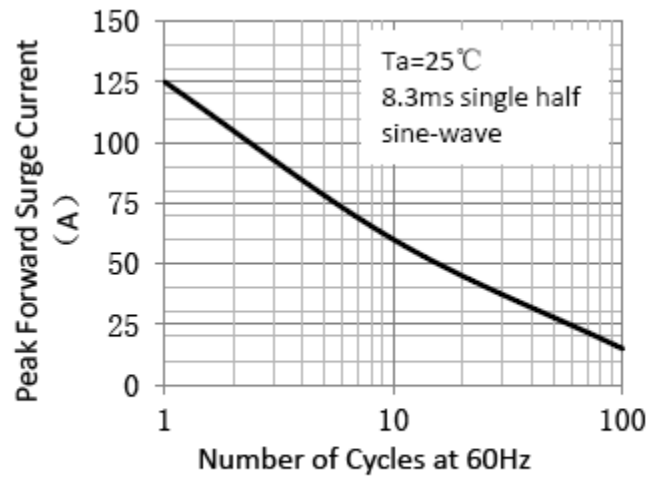


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

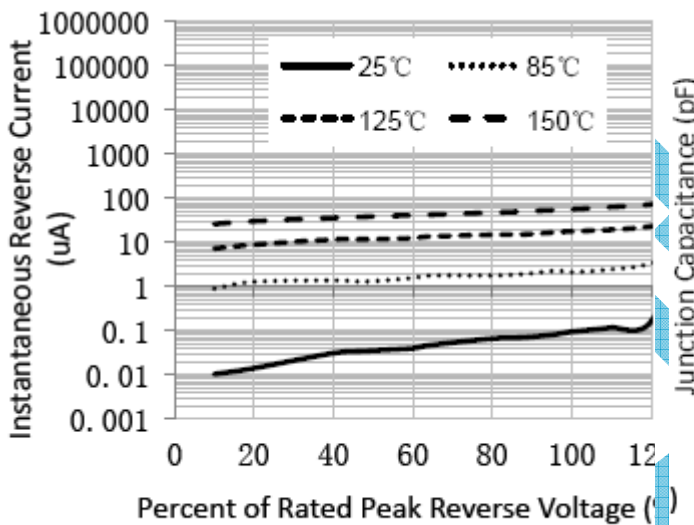


Figure 3. Typical Reverse Characteristics

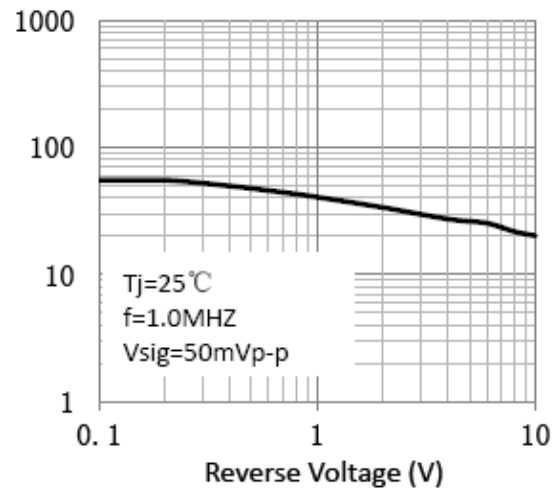


Figure 4. Typical Junction Capacitance

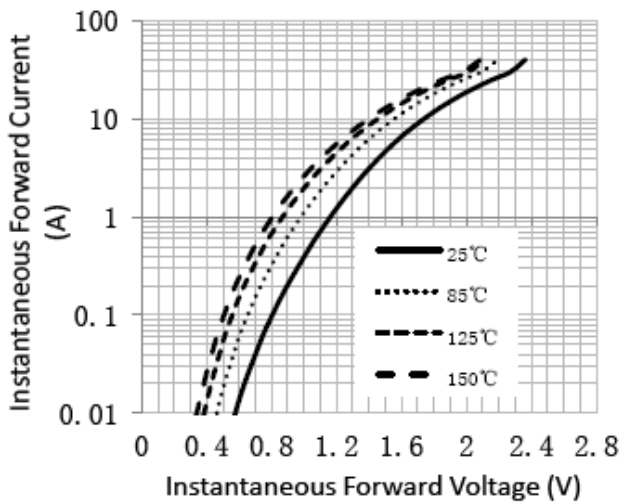


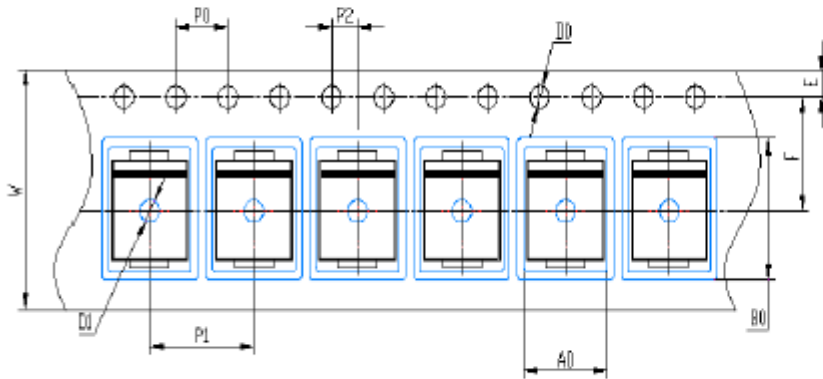
Figure 5. Typical Instantaneous Forward Characteristics

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Size (Unit:mm)

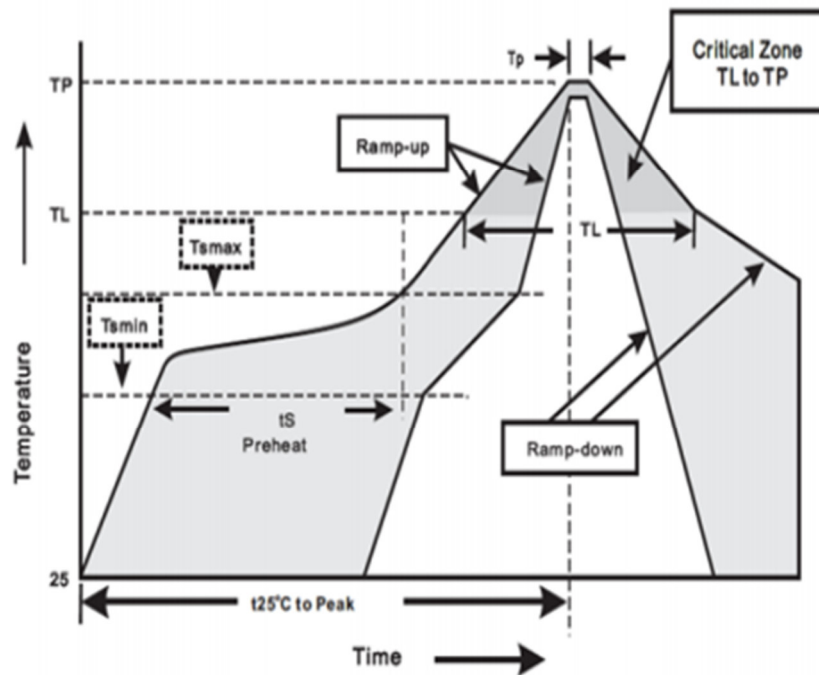
Tape & Reel Specification



Symbols	SMC(mm)
W	16±0.2
E	1.75±0.1
F	7.5±0.05
D0	1.5±0.1
D1	1.50 +0.1/-0
P0	4.0±0.1
P1	8.0±0.1
P2	2.0±0.05
A0	6.22±0.1
B0	8.31±0.1

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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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