

/ Descriptions

45V 5.0A SMBF

Surface Mount Schottky Barrier Rectifier, Reverse Voltage:45V,Forward Current:5.0A,SMBF thin package.

/ Features

Low power loss, high efficiency, High forward surge current capability, For use in low voltage, high frequency inverters, and polarity protection applications,For surface mounted applications.Halogen free product.

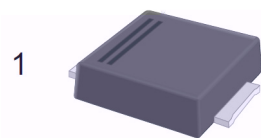
/ Applications

General purpose.

/ Equivalent Circuit



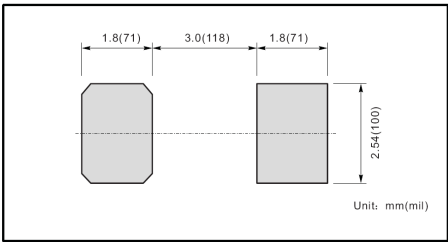
/ Pinning



2

PIN	DESCRIPTION
1	Cathode
2	Anode

The recommended mounting pad size



/ Marking

Type number	Marking code
BRLV5T45BF	5T45

/ Absolute Maximum Ratings(Ta=25)

Parameter	Symbol	Rating	Unit
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	45	V
Maximum DC Blocking Voltage	V_R	45	V
Maximum RMS voltage	V_{RMS}	32	V
Maximum Average Forward Rectified Current	$I_{F AV}$	5.0	A
Peak Forward Surge Current,8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	150	A
Typical Junction Capacitance ¹⁾	C_j	500	pF
Typical Thermal Resistance ²⁾	R_{JA}	135	/W
Operating Junction Temperature Range	T_j	-55~+150	
Storage Temperature Range	T_{stg}	-55~+150	

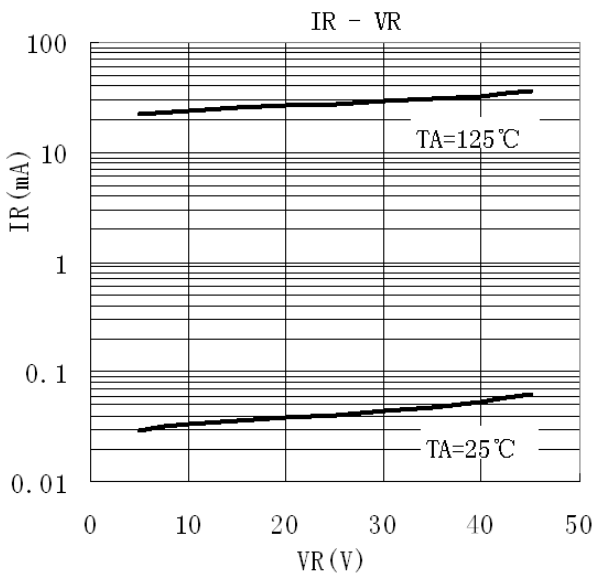
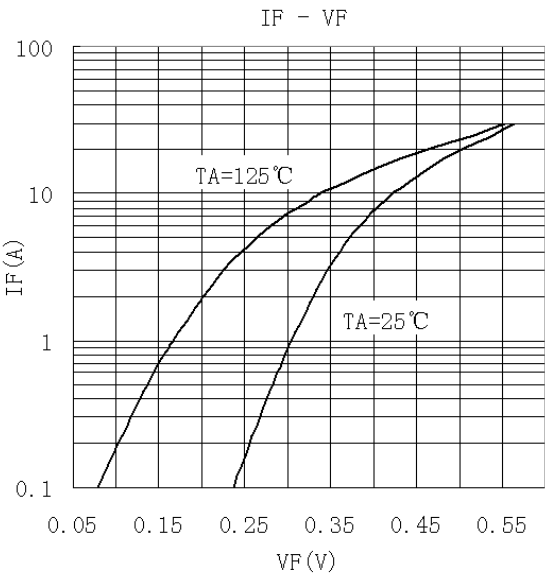
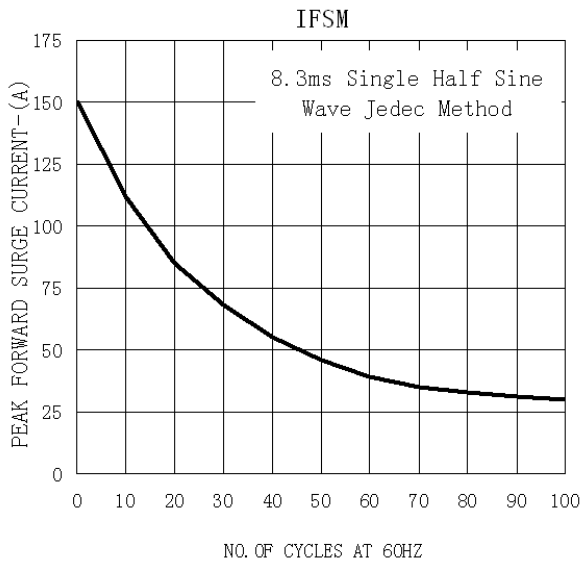
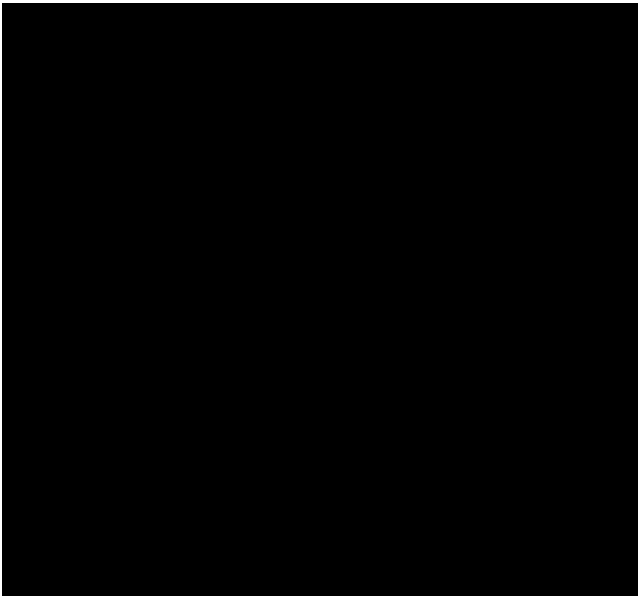
Notes:

- 1) Mounted at 1MHz and applied reverse voltage of 4V D.C.
- 2) Mounted on a FR4 PCB, single-sided copper, mini pad.

/ Electrical Characteristics(Ta=25)

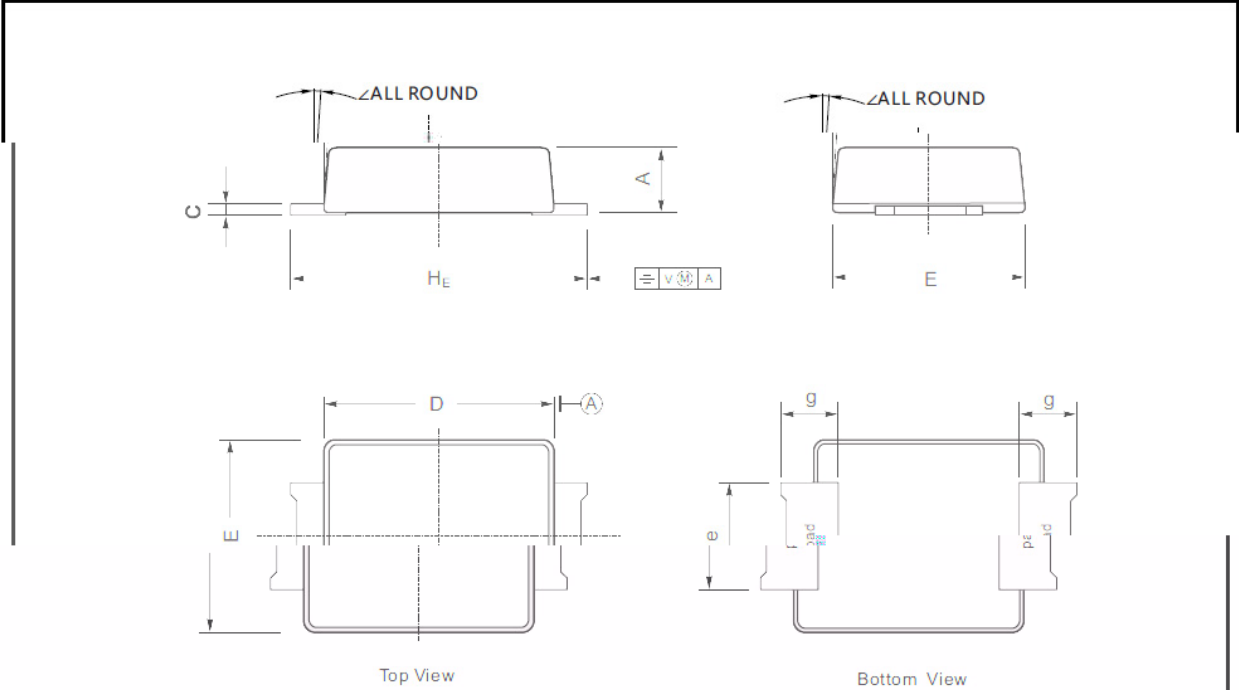
Parameter	Symbol	Test condition	Rating			Unit
			MIN.	TYP.	MAX.	
Breakdown Voltage	V_{BR}	$I_R=0.5mA$ $T_a=25$	45			V
Max Instantaneous Forward Voltage	V_F	$I_F=1.0A$ $T_a=25$		0.30		V
		$I_F=1.0A$ $T_a=125$		0.18		
		$I_F=5.0A$ $T_a=25$		0.39	0.43	
		$I_F=5.0A$ $T_a=125$		0.29		
Maximum DC Reverse Current at Rated DC Reverse Voltage	I_R	$V_R=36V$ $T_a=25$		30		μA
		$V_R=45V$ $T_a=25$			210	μA
		$V_R=45V$ $T_a=125$		19		mA

/ Electrical Characteristic Curve



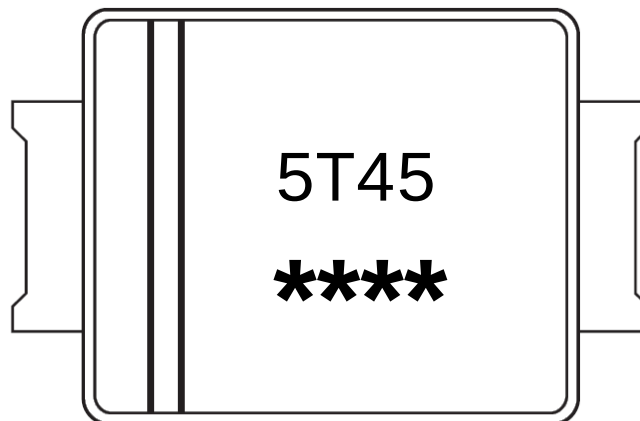
/ Package Dimensions

SMBF



UNIT		A	C	D	E	H _E	e	g	∠	
	max	1.3	0.26	4.4	3.7	5.5	2.2			
mm	min	1.1	0.18	4.2	3.5	5.1	1.9	1.0	9°	
	mil	max	51	10	173	146	216	86		40
		min	43	7	165	138	200	75		

/ Marking Instructions



5T45

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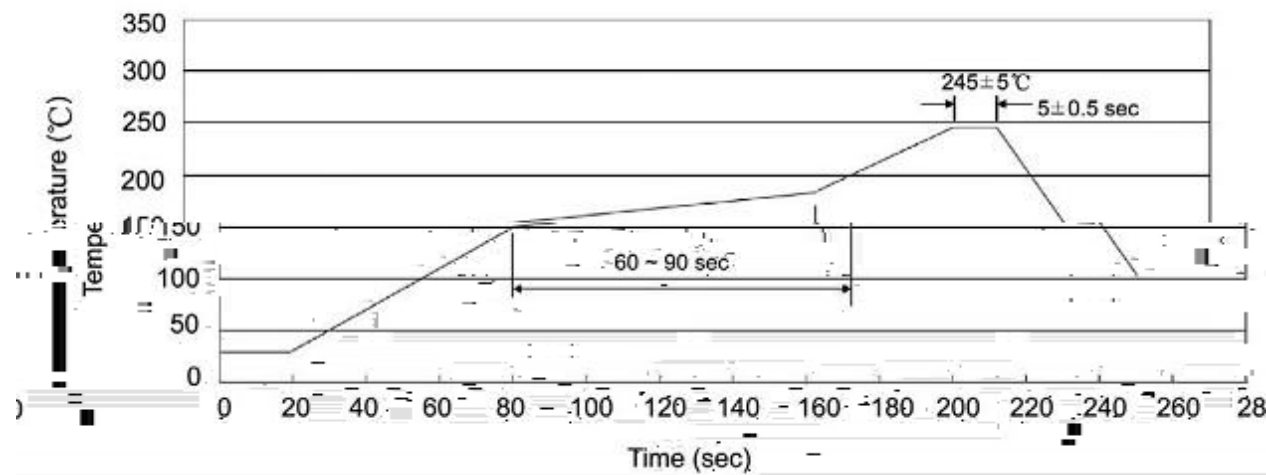
3 *

Note:

5T45 Product Type Code

**** Lot No. Code The 1st * means:YM Code The last 3 * means:little Lot No
Code

() / Temperature Profile for IR Reflow Soldering(Pb-Free)



Note:

- 1

150 180

60 90sec;
- 2

245±5

5±0.5sec;
- 3

2 10

/sec.
- 1.Preheating:150~180

, Time:60~90sec.
- 2.Peak Temp.:245±5

, Duration:5±0.5sec.
3. Cooling Speed: 2~10

/sec.

/ Resistance to Soldering Heat Test Conditions

260±5 10±1 sec. Temp.:260±5 Time:10±1 sec

/ Packaging SPEC.

/ REEL

Package Type	Units					Dimension (unit mm ³)		
SMBF	5000	2	10000	5	50000	13 ×15	336X332X40	380X335X366

/ Notices