SBM2045VDC

UITRA LOW VF SCHOTTKY RECTIFIER

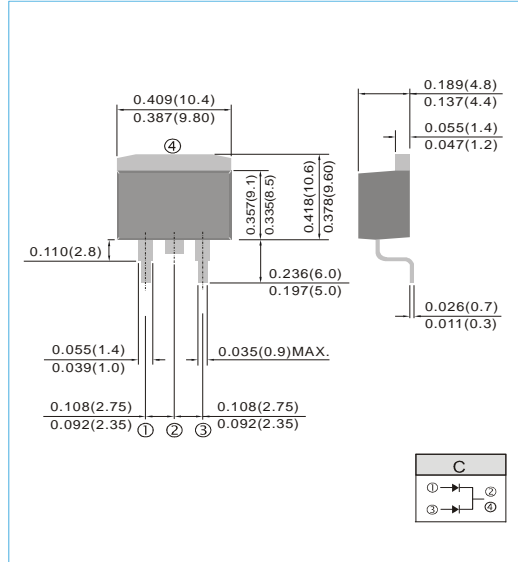| VOLTAGE	45 Volts	CURRENT	20 Amperes

FEATURES

- Ultra Low forward voltage drop, low power losses
- High efficiency operation
- Lead free in comply with EU RoHS 2011/65/EU directives

MECHANICAL DATA

Case : TO-263/D²PAK, Plastic

Terminals : Solderable per MIL-STD-750, Method 2026

Weight: 0.0514 ounces, 1.46 grams.

TO-263 / D²PAK   Unit : inch(mm)

MAXIMUM RATINGS(T$_A$=25ºC unless otherwise noted)

PARAMETER		SYMBOL	VALUE	UNIT
Maximum repetitive peak reverse voltage		V$_{RRM}$	45	V
Maximum average forward rectified current	per diode per device	I$_{F(AV)}$	20 10	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load	per diode	I$_{FSM}$	280	A
Typical junction capacitance (V$_R$=4V, f=1MHz)		C$_J$	860	pF
Typical thermal resistance per diode (Note 1)		R$_{\Theta JC}$	3.5	ºC/W
Operating junction temperature range		T$_J$	-55 to + 150	ºC
Storage temperature range		T$_{STG}$	-55 to + 150	ºC

Note : 1. Mounted on infinite heatsink.

ELECTRICAL CHARACTERISTICS(T$_A$=25ºC unless otherwise noted)

PARAMETER	SYMBOL	TEST CONDITIONS		MIN.	TYP.	MAX.	UNIT
Breakdown voltage per diode	V$_{BR}$	I$_R$=0.5mA		45	-	-	V
Instantaneous forward voltage per diode	V$_F$	I$_F$=1A I$_F$=5A I$_F$=10A	T$_J$=25ºC	- - -	0.28 0.36 0.41	- - 0.45	V
		I$_F$=1A I$_F$=5A I$_F$=10A	T$_J$=125ºC	- - -	0.18 0.28 0.36	- - -	V
Reverse current per diode	I$_R$	V$_R$=36V		-	100	-	μA
		V$_R$=45V	T$_J$=25ºC T$_J$=125ºC	- -	- 35	320 -	μA mA
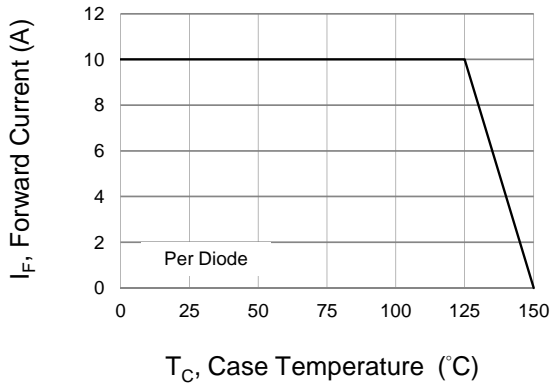
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Fig.1 Forward Current Derating Curve

- I_F, Forward Current (A) vs T_C, Case Temperature (°C)
- Per Diode

I_F, Forward Current (A)

T_C, Case Temperature (°C)

Fig.2 Typical Junction Capacitance

C_J, Junction Capacitance (pF)

V_R, Reverse Bias Voltage (V)
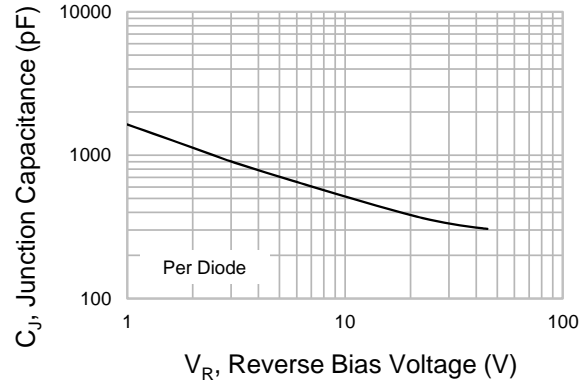
Per Diode
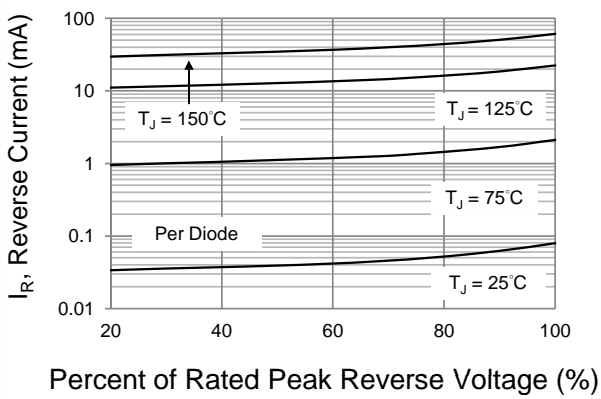
Fig.3 Typical Reverse Characteristics

I_R, Reverse Current (mA)

Percent of Rated Peak Reverse Voltage (%)

$T_J = 150°C$
$T_J = 125°C$
$T_J = 75°C$
$T_J = 25°C$

Per Diode
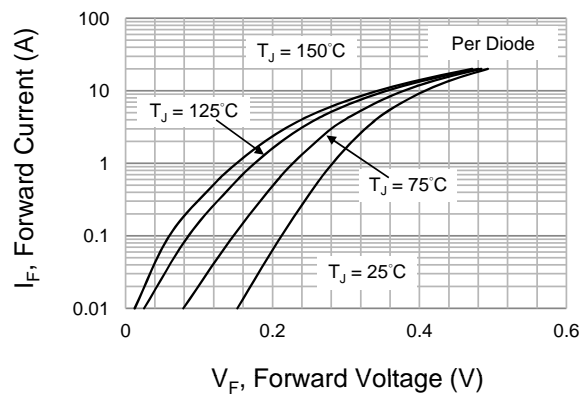
Fig.4 Typical Forward Characteristics

I_F, Forward Current (A)

V_F, Forward Voltage (V)

$T_J = 150°C$
$T_J = 125°C$
$T_J = 75°C$
$T_J = 25°C$

Per Diode

MOUNTING PAD LAYOUT

TO-263 / D²PAK   Unit：inch(mm)

0.428
(10.86)

0.309
(7.86)

0.458
(11.64)

0.143
(3.62)

0.045
(1.14)

0.200
(5.08)
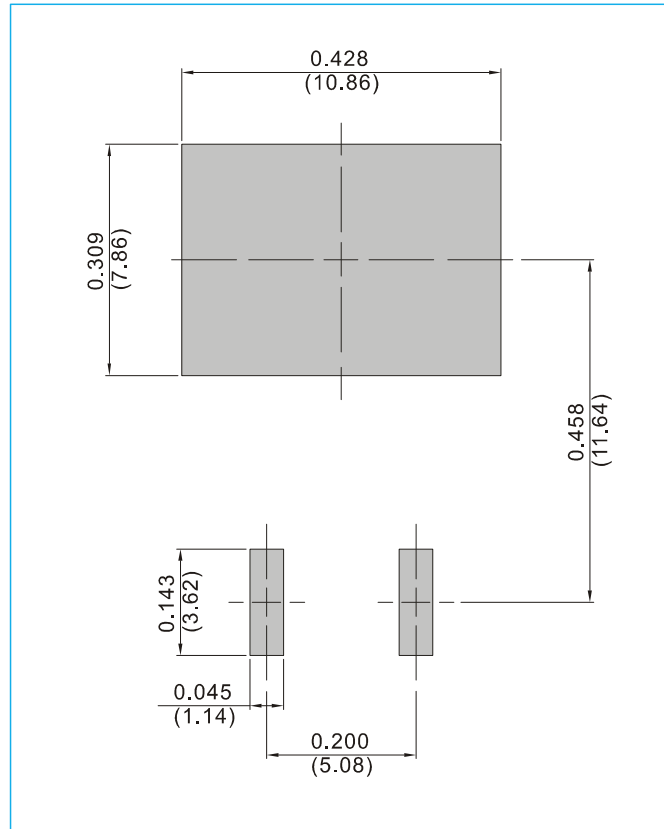
ORDER INFORMATION

- Packing information

  T/R - 0.8K per 13" plastic Reel

SBM2045VDC

Part No_packing code_Version

SBM2045VDC_R2_00001
SBM2045VDC_R2_10001

For example :

RB500V-40_R2_00001

Part No.

- Serial number
- Version code means HF
- Packing size code means 13"
- Packing type means T/R

Packing Code XX				Version Code XXXXX		
Packing type	**1st Code**	**Packing size code**	**2nd Code**	**HF or RoHS**	**1st Code**	**2nd~5th Code**
Tape and Ammunition Box (T/B)	A	N/A	0	HF	0	serial number
Tape and Reel (T/R)	R	7"	1	RoHS	1	serial number
Bulk Packing (B/P)	B	13"	2			
Tube Packing (T/P)	T	26mm	X			
Tape and Reel (Right Oriented) (TRR)	S	52mm	Y			
Tape and Reel (Left Oriented) (TRL)	L	PANASERT T/B CATHODE UP (PBCU)	U			
FORMING	F	PANASERT T/B CATHODE DOWN (PBCD)	D			

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