

# MBR20L45CT

## Product profile

Dual Common-Cathode Ultra Low VF Schottky Rectifier

## General description

Rectifiers 20 Amp 45V

## Features

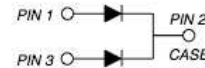
- Guard ring for overvoltage protection
- Lower power losses, high efficiency
- Low forward voltage drop
- Low leakage current
- High forward surge capability
- High frequency operation
- Solder Dip 260 °C, 40 s
- Component in accordance to ROHS 2002/95/EC

and WEEE 2002/96/EC

## Typical applications

For use in high frequency rectifier of switching mode power supplies, freewheeling diodes, dc-to-dc converters or polarity protection application.

TO-220AB



## Mechanical data

Case: TO-220AB

Molding compound meets UL 94 V-0 flammability rating

Terminals: Matte tin plated leads, solderable per meets

JESD 201

Polarity: As marked

Weight: 2.35 grams

Mounting Torque: 10 in-lbs maximum

## Maximum Ratings (Tc=25°C unless otherwise noted)

Parameter	Symbol	MBR20L45CT	Unit
Maximum repetitive peak reverse voltage	VRRM	45	V
RMS Voltage (Max.)	VRMS	31	V
Working peak reverse voltage	VRWM	45	V
Maximum average forward rectified current	IF(AV)	20	A
Peak forward surge current	IFSM	200	A
8.3ms single half sine-wave superimposed on rated load (JEDEC Method)			
Operating junction temperature range	TJ	-55 to +150	°C
Storage temperature range	TSTG	-55 to +150	°C

## THERMAL CHARACTERISTICS

Parameter	Symbol	Value	Unit
Typical thermal resistance	RθJL	3	°C/W

Notes:

(1) Pulse test: 300 μs pulse width, 1 % duty cycle

(2) Pulse test: Pulse width ≤ 40 ms

## MBR20L45CT

### Electrical characteristics (Tc=25°C unless otherwise noted)

#### OFF CHARACTERISTICS

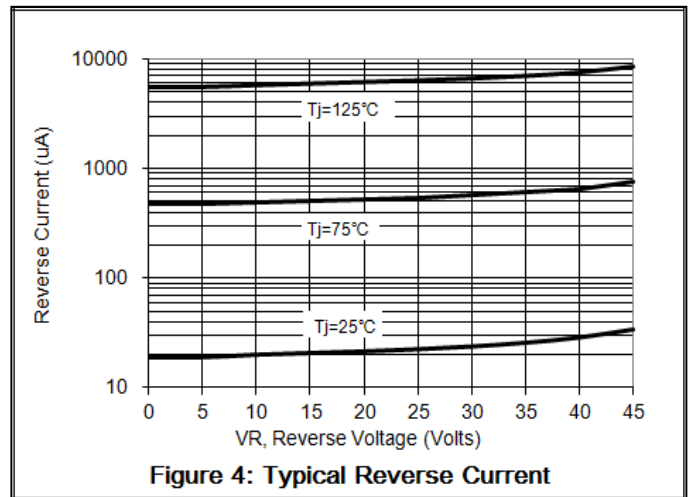
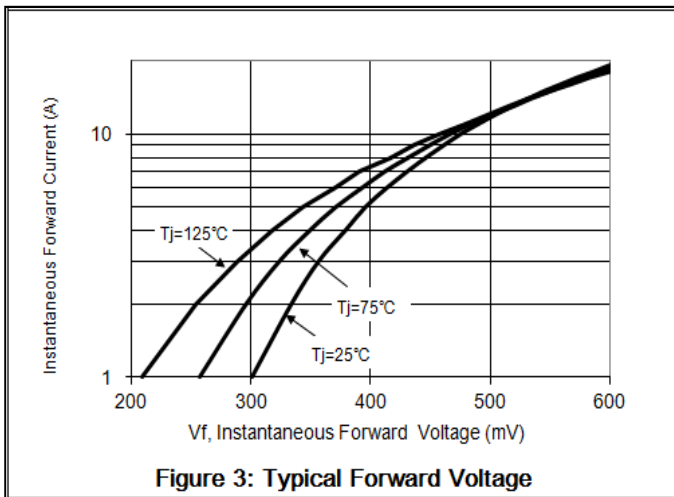
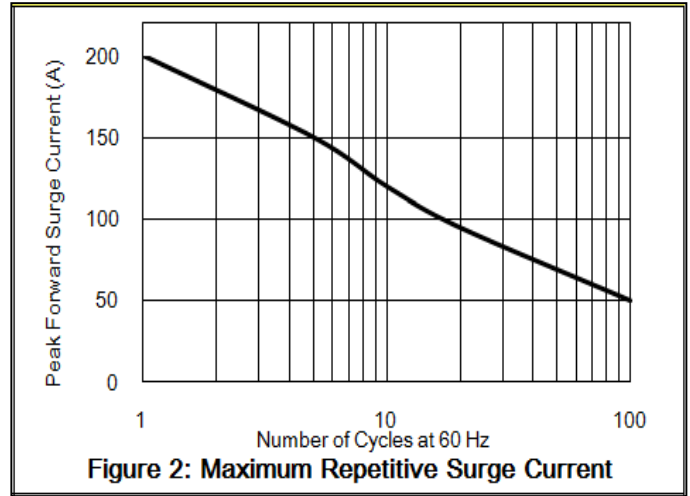
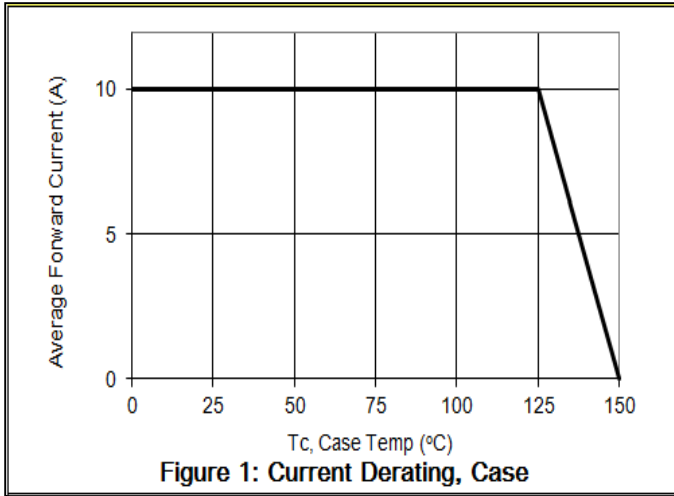
Parameter	Symbol	Value		Unit
		Typical	Max	
Instantaneous forward voltage at IF=3A, Tj=25°C at IF=10A, Tj=25°C at IF=3A, Tj=125°C at IF=10A, Tj=125°C	VF	0.36	0.54	V
		0.48		
		0.34	0.52	
		0.46		
Maximum reverse current Tj=25°C	IR	200		u'A
at working peak reverse voltage Tj=125°C		75		m'A
Junction Capacitance @ DC 5V	CJ	500		pF

#### DEVICE MARK

MBR20L45CT

## MBR20L45CT

### ■ Characteristic Curves



## MBR20L45CT

### Disclaimer

ALL PRODUCT, PRODUCT SPECIFICATIONS AND DATA ARE SUBJECT TO CHANGE WITHOUT NOTICE TO IMPROVE RELIABILITY, FUNCTION OR DESIGN OR OTHERWISE. Bruckewell Technology Inc., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, "Bruckewell"), disclaim any and all liability for any errors, inaccuracies or incompleteness contained in any datasheet or in any other disclosure relating to any product. Bruckewell makes no warranty, representation or guarantee regarding the suitability of the products for any particular purpose or the continuing production of any product. To the maximum extent permitted by applicable law, Bruckewell disclaims

- (i) Any and all liability arising out of the application or use of any product.
- (ii) Any and all liability, including without limitation special, consequential or incidental damages.
- (iii) Any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.

Statements regarding the suitability of products for certain types of applications are based on Bruckewell's knowledge of typical requirements that are often placed on Bruckewell products in generic applications.

Such statements are not binding statements about the suitability of products for a particular application. It is the customer's responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application. Parameters provided in datasheets and/or specifications may vary in different applications and performance may vary over time.

Product specifications do not expand or otherwise modify Bruckewell's terms and conditions of purchase, including but not limited to the warranty expressed therein.