

Dual Common Cathode Low VF Schottky

Reverse Voltage: 45V
Forward Current: 10 Amp

Features

- Low power loss, high efficiency
- Guardring for overvoltage protection
- High forward surge capability
- Halogen-free according to IEC 61249-2-21 definition
- Compliant to RoHS Directive 2011/65/EU

Mechanical Data
• Package: TO-220AB

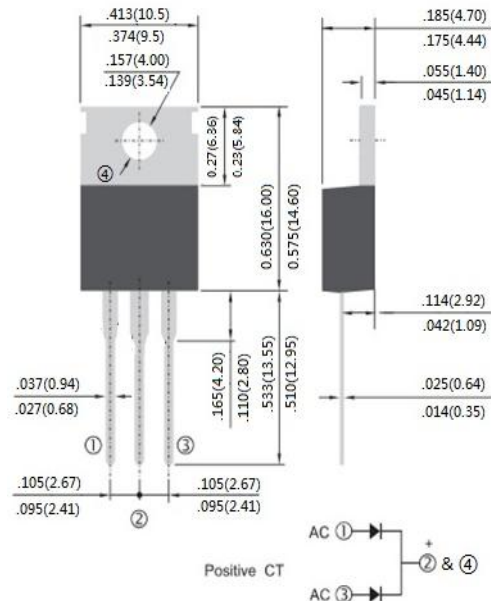
Molding compound meets UL 94 V-0 flammability rating

- **Terminals:** Matte tin plated leads, solderable per JESD22-B102

- **Polarity:** As marked

Typical Applications

- Switching mode power supply (SMPS)
- Adapters
- DC to DC converters

TO-220AB


Package Outline Dimensions in Inches (Millimeters)

Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Parameter&Test Conditions		SYM.	MBR10L45CT	Unit
Device marking code			MBR10L45CT	
Maximum Recurrent Peak Reverse Voltage		V _{RRM}	45	V
Maximum RMS Voltage		V _{RMS}	31.5	V
Maximum DC Blocking Voltage		V _{DC}	45	V
Average rectified output current @60Hz sine wave, Resistance load(FIG.1)	Per Diode	I _{O(AV)}	5.0	A
	Per Device		10.0	
Peak Forward Surge Current 8.3ms Single Half Sine-wave Superimposed On Rated Load		I _{FSM}	100	A
Maximum Thermal Resistance, Junction To Ambient		R _{θJA}	60	°C/W
Operating junction range		T _J	-55 ~ +125	°C
Storage temperature range		T _{STG}	-55 ~ +150	°C

Electrical Characteristics (Ta=25°C Unless otherwise specified)

Parameter&Test Conditions		SYM.	MBR10L45CT	Unit
Maximum Instantaneous Forward Voltage per diode(Note1)	IF=5A, T _J =25°C	V _{FM}	0.48	V
	IF=5A, T _J =125°C		0.46	
	IF=10A, T _J =25°C		0.65	
	IF=10A, T _J =125°C		0.60	
Maximum DC reverse current at rated DC blocking voltage per diode	TA = 25°C	I _R	0.5	mA
	TA = 125°C		15	

Notes:

1. Pulse test with PW=300μs, 2% duty cycle.
2. The typical data above is for reference only.

Rating and Characteristic Curves

FIG. 1- DERATING CURVE OUTPUT RECTIFIED

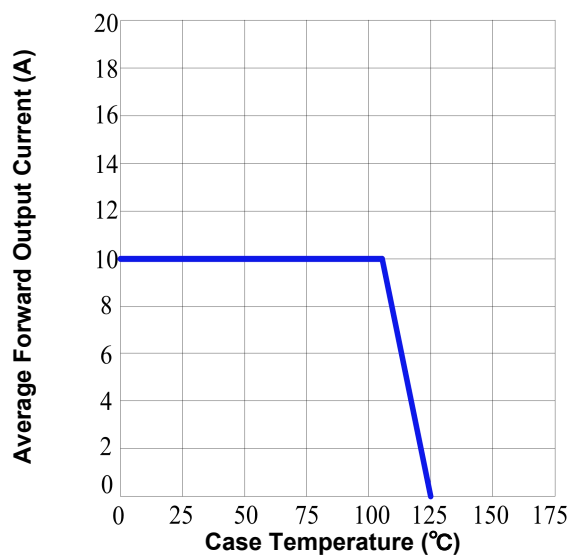


FIG. 2- -MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

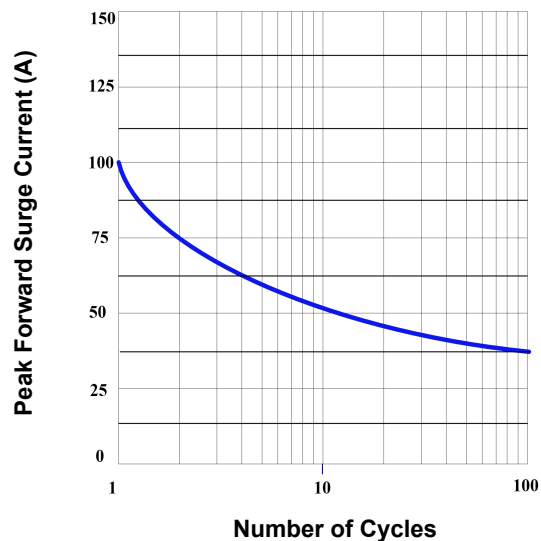


FIG. 3- TYPICAL FORWARD VOLTAGE

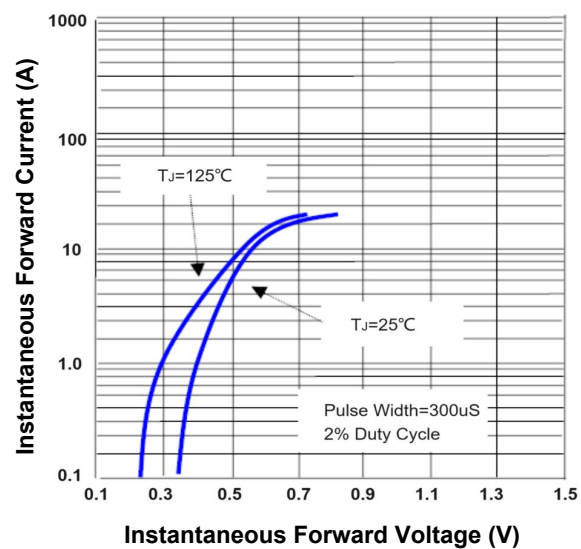
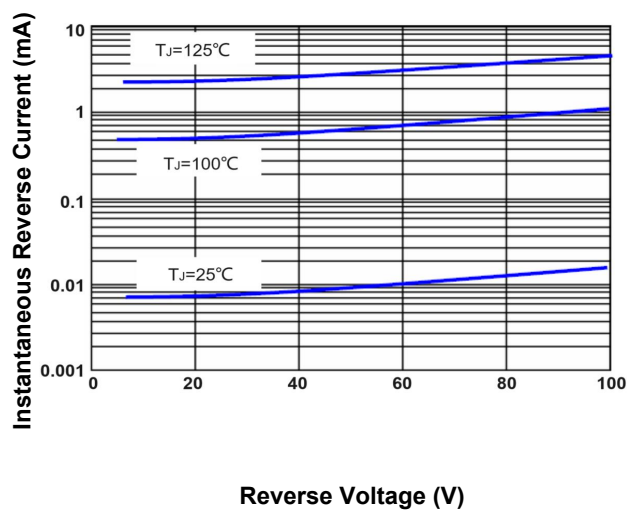


FIG. 4- TYPICAL REVERSE LEAKAGE



The curve above is for reference only.

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