

Dual Common Cathode Ultra Low VF Schottky	Reverse Voltage: 45V Forward Current: 10 Amp
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Features

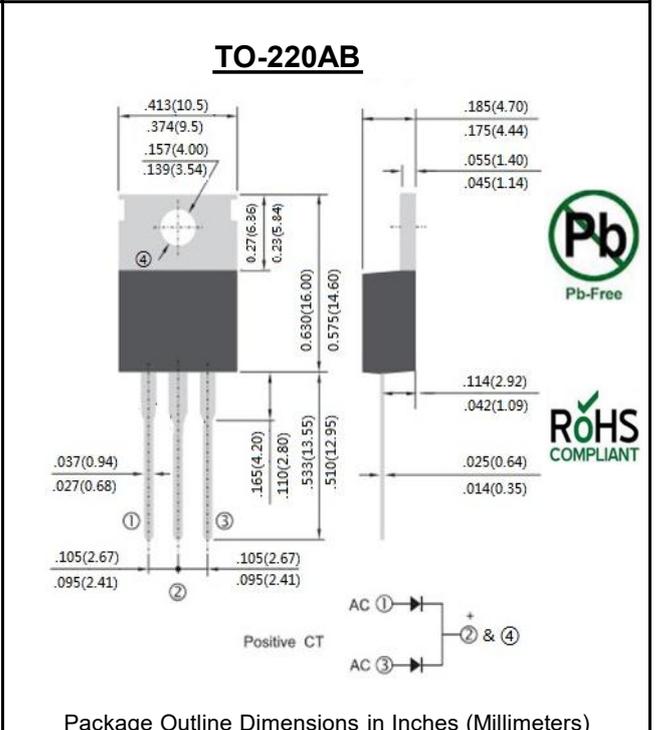
- Low power loss, high efficiency
- Guardring for overvoltage protection
- High forward surge capability
- Halogen-free according to IEC 61249-2-21 definition
- Compliant to RoHS Directive 2011/65/EU

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


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.	MBR10U45CT	Unit
Device marking code		MBR10U45CT	
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	5.0	A
	Per Device	10.0	
Peak Forward Surge Current 8.3ms Single Half Sine-wave Superimposed On Rated Load	I _{FSM}	125	A
Maximum Thermal Resistance, Junction To Ambient	R _{θJA}	60	°C/W
Operating junction range	T _J	-55 ~ +150	°C
Storage temperature range	T _{STG}	-55 ~ +150	°C

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

Parameter&Test Conditions	SYM.	MBR10U45CT	Unit
Maximum Instantaneous Forward Voltage per diode(Note1)	IF=5A, T _J =25°C	0.46	V
	IF=5A, T _J =125°C	0.40	
	IF=10A, T _J =25°C	0.56	
	IF=10A, T _J =125°C	0.50	
Maximum DC reverse current at rated DC blocking voltage per diode	T _A = 25°C	0.3	mA
	T _A = 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

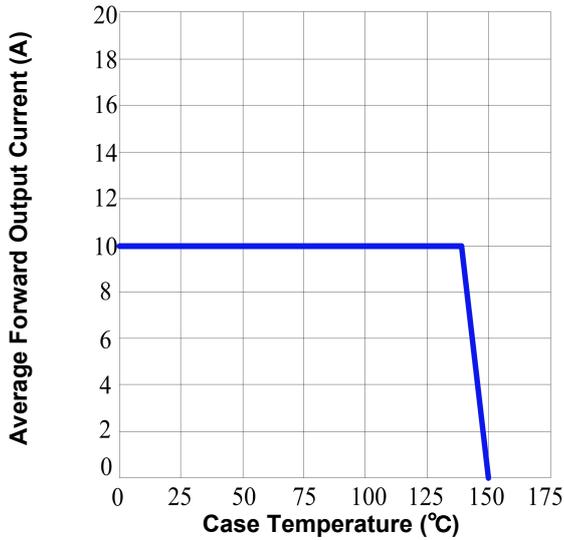


FIG. 2- -MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

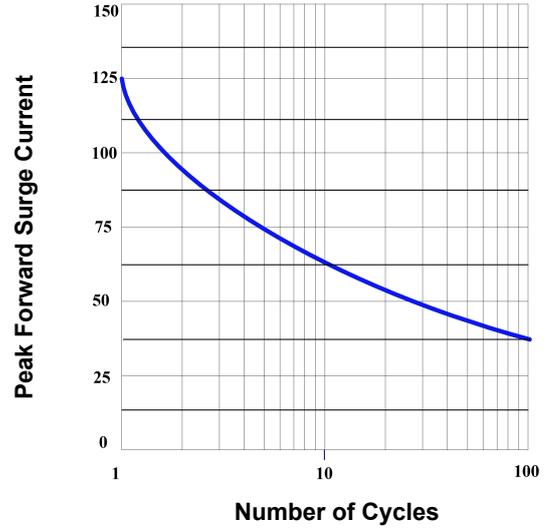


FIG. 3- TYPICAL FORWARD VOLTAGE

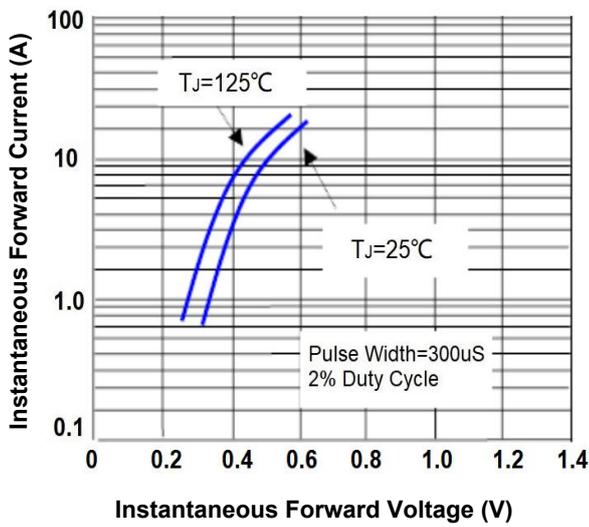
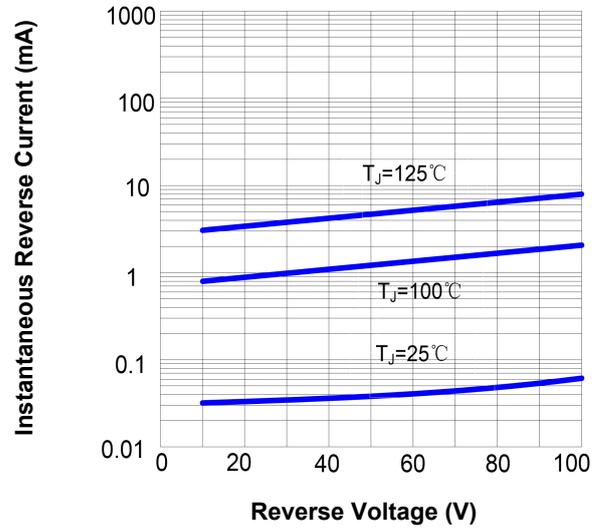


FIG. 4- TYPICAL REVERSE LEAKAGE



The curve above is for reference only.

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