Dual Common Cathode Ultra Low VF Schottky

Reverse Voltage: 45V

Forward Current: 20 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

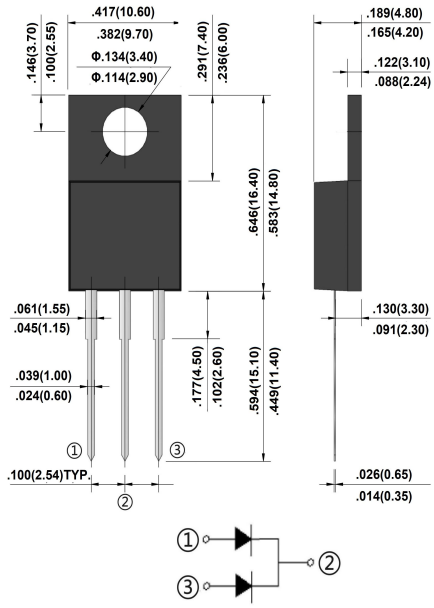
Mechanical Data

- **Package**: ITO-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

ITO-220AB



Package Outline Dimensions in Inches (Millimeters)

Maximum Ratings and Electrical Characteristics

Rating at 25℃ 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.	MBR20U45FCT	Unit
Device marking code			MBR20U45FCT	
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	$I_{O(AV)}$	10.0	A
	Per Device		20.0	
Peak Forward Surge Current 8.3ms Single Half Sine-wave Superimposed On Rated Load		I_{FSM}	250	A
Maximum Thermal Resistance, Junction To Ambient		$R_{\theta JA}$	60	℃/W
Operating junction range		T_j	-55 ~ +150	℃
Storage temperature range		T_{STG}	-55 ~ +150	℃

Electrical Characteristics (Ta=25℃ Unless otherwise specified)

Parameter&Test Conditions		SYM.	MBR20U45FCT	Unit
Maximum Instantaneous Forward Voltage per diode(Note1)	IF=10A, TJ=25℃	V_{FM}	0.45	V
	IF=10A, TJ=125℃		0.40	
	IF=20A, TJ=25℃		0.55	
	IF=20A, TJ=125℃		0.50	
Maximum DC reverse current at rated DC blocking voltage per diode	TA = 25℃	I_R	0.5	mA
	TA = 125℃		25	

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

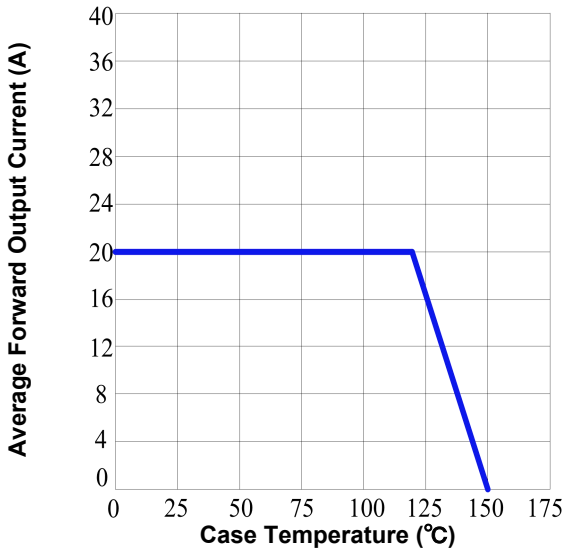


FIG. 2- -MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

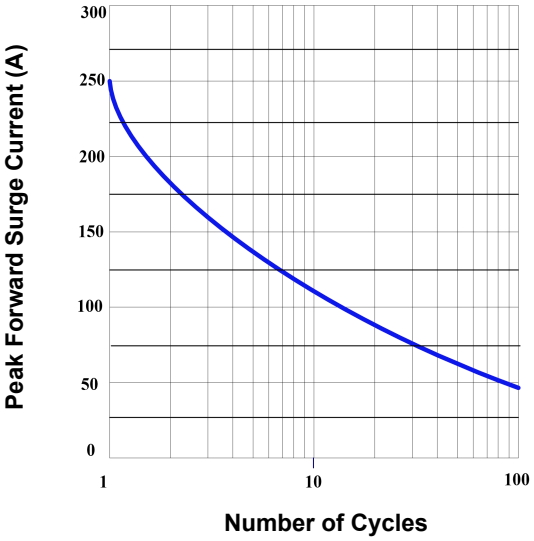


FIG. 3- TYPICAL FORWARD VOLTAGE

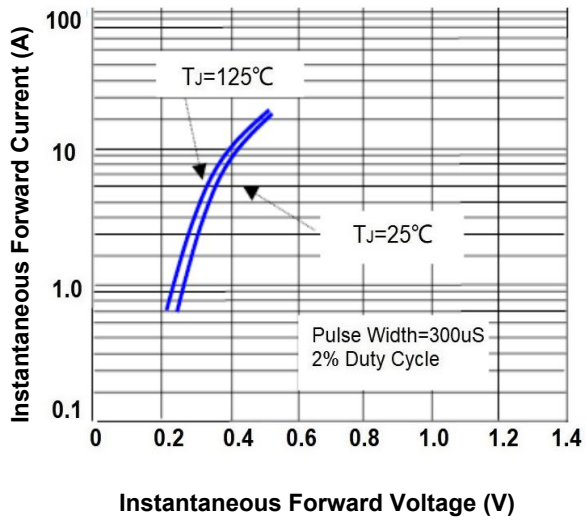
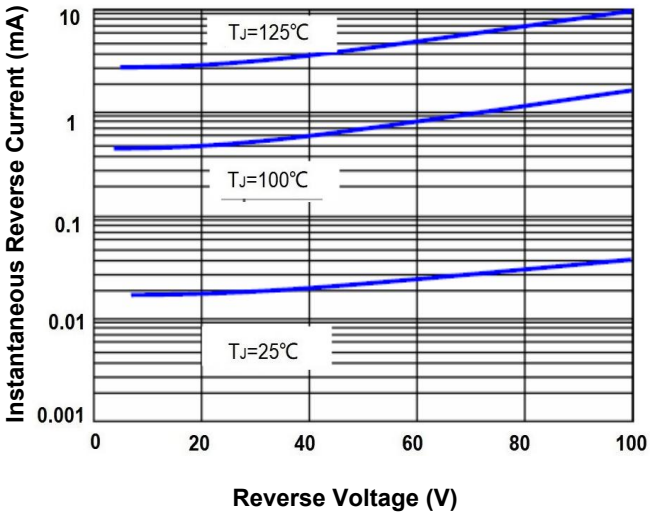


FIG. 4- TYPICAL REVERSE LEAKAGE



The curve above is for reference only.

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