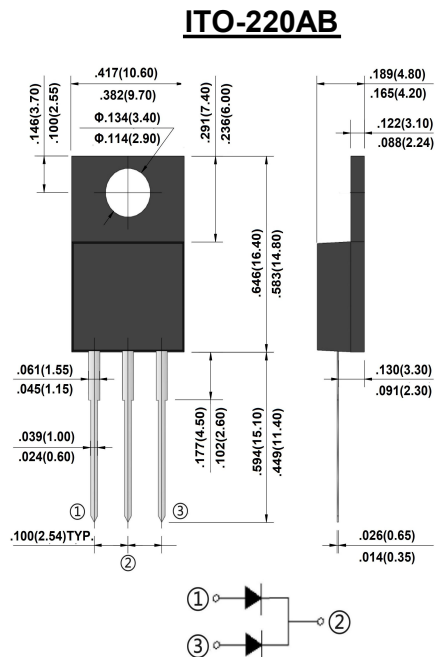


Dual Common Cathode Low VF Schottky		Reverse Voltage: 45V Forward Current: 40 Amp																																																																												
Features - Low power loss, high efficiency - Guardring for overvoltage protection - High forward surge capability - Halogen-free according to IEC 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°C ambient temperature unless otherwise specified. Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%. <table><tr><th colspan="2">Parameter&Test Conditions</th><th>SYM.</th><th>MBR40L45FCT</th><th>Unit</th></tr><tr><td colspan="2">Device marking code</td><td></td><td>MBR40L45FCT</td><td></td></tr><tr><td colspan="2">Maximum Recurrent Peak Reverse Voltage</td><td>V_{RRM}</td><td>45</td><td>V</td></tr><tr><td colspan="2">Maximum RMS Voltage</td><td>V_{RMS}</td><td>31.5</td><td>V</td></tr><tr><td colspan="2">Maximum DC Blocking Voltage</td><td>V_{DC}</td><td>45</td><td>V</td></tr><tr><td rowspan="2">Average rectified output current @60Hz sine wave, Resistance load(FIG.1)</td><td>Per Diode</td><td rowspan="2">I_{O(AV)}</td><td>20.0</td><td rowspan="2">A</td></tr><tr><td>Per Device</td><td>40.0</td></tr><tr><td colspan="2">Peak Forward Surge Current 8.3ms Single Half Sine-wave Superimposed On Rated Load</td><td>I_{FSM}</td><td>250</td><td>A</td></tr><tr><td colspan="2">Maximum Thermal Resistance, Junction To Ambient</td><td>R_{θJA}</td><td>60</td><td>°C/W</td></tr><tr><td colspan="2">Operating junction range</td><td>T_j</td><td>-55 ~ +150</td><td>°C</td></tr><tr><td colspan="2">Storage temperature range</td><td>T_{STG}</td><td>-55 ~ +175</td><td>°C</td></tr></table> Electrical Characteristics (Ta=25°C Unless otherwise specified) <table><tr><th colspan="2">Parameter&Test Conditions</th><th>SYM.</th><th>MBR40L45FCT</th><th>Unit</th></tr><tr><td rowspan="4">Maximum Instantaneous Forward Voltage per diode(Note1)</td><td>IF=20A, T_J=25°C</td><td rowspan="4">V_{FM}</td><td>0.53</td><td rowspan="4">V</td></tr><tr><td>IF=20A, T_J=125°C</td><td>0.49</td></tr><tr><td>IF=40A, T_J=25°C</td><td>0.65</td></tr><tr><td>IF=40A, T_J=125°C</td><td>0.60</td></tr><tr><td rowspan="2">Maximum DC reverse current at rated DC blocking voltage per diode</td><td>TA = 25°C</td><td rowspan="2">I_R</td><td>0.5</td><td rowspan="2">mA</td></tr><tr><td>TA = 125°C</td><td>25</td></tr></table> Notes: 1. Pulse test with PW=300μs, 2% duty cycle. 2. The typical data above is for reference only.				Parameter&Test Conditions		SYM.	MBR40L45FCT	Unit	Device marking code			MBR40L45FCT		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)}	20.0	A	Per Device	40.0	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 _{θJA}	60	°C/W	Operating junction range		T _j	-55 ~ +150	°C	Storage temperature range		T _{STG}	-55 ~ +175	°C	Parameter&Test Conditions		SYM.	MBR40L45FCT	Unit	Maximum Instantaneous Forward Voltage per diode(Note1)	IF=20A, T _J =25°C	V _{FM}	0.53	V	IF=20A, T _J =125°C	0.49	IF=40A, T _J =25°C	0.65	IF=40A, 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	25
Parameter&Test Conditions		SYM.	MBR40L45FCT	Unit																																																																										
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Rating and Characteristic Curves

FIG. 1- DERATING CURVE OUTPUT RECTIFIED

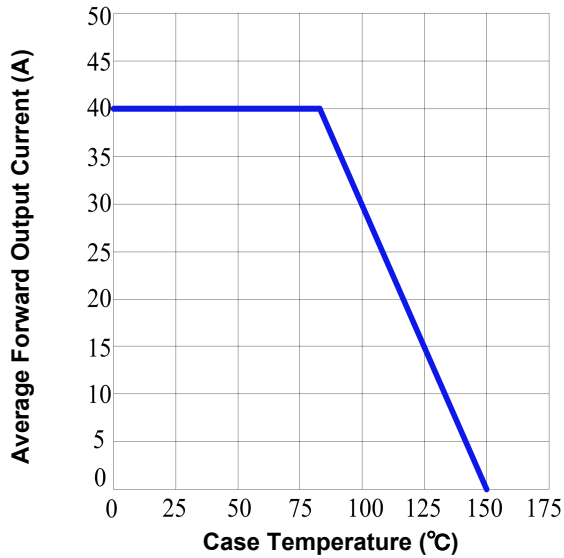


FIG. 2- -MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

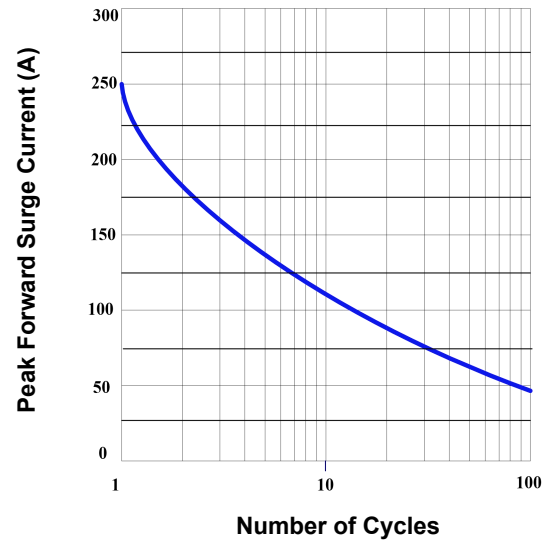


FIG. 3- TYPICAL FORWARD VOLTAGE

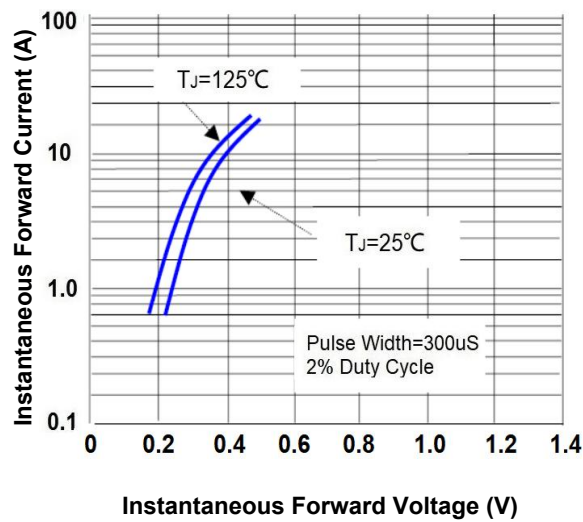
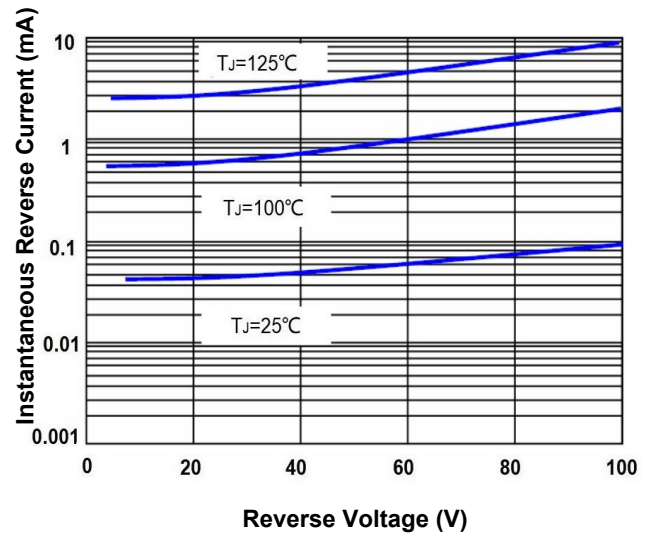


FIG. 4- TYPICAL REVERSE LEAKAGE



The curve above is for reference only.

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