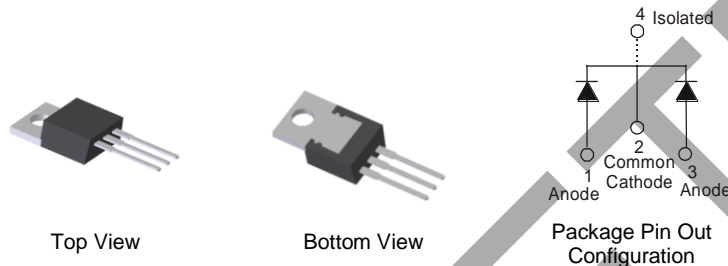


### Features

- Low Forward Voltage Drop
- Soft, Fast Switching Capability
- Schottky Barrier Chip
- ITO-220S Heat Sink Tab Electrically Isolated from Cathode
- UL Approval in Accordance with UL 1557, Reference No. E94661

### Mechanical Data

- Case: ITO-220S
- Case Material: Molded Plastic, UL Flammability Classification Rating 94V-0
- Terminals: Matte Tin Finish annealed over Copper leadframe. Solderable per MIL-STD-202, Method 208 (E3)
- Weight: 1.335 grams (approximate)

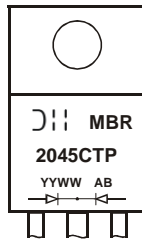


### Ordering Information (Note 1)

Part Number	Case	Packaging
MBR2045CTP	ITO-220S	50 pieces/tube

Notes: 1. For packaging details, go to our website at <http://www.diodes.com>.

### Marking Information



MBR2045CTP = Product Type Marking Code  
 AB = Foundry and Assembly Code  
 YYWW = Date Code Marking  
 YY = Last two digits of year (ex: 09 = 2009)  
 WW = Week (01 - 53)

OBSOLETE – PART DISCONTINUED

OBSOLETE - PART DISCONTINUED

**Maximum Ratings (Per Leg)** @T<sub>A</sub> = 25°C unless otherwise specified

Single phase, half wave, 60Hz, resistive or inductive load.  
For capacitance load, derate current by 20%.

Characteristic	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	V <sub>RRM</sub>	45	V
Working Peak Reverse Voltage	V <sub>RWM</sub>		
DC Blocking Voltage	V <sub>RM</sub>		
Average Rectified Output Current	I <sub>o</sub>	10	A
		(Per Leg)	
	(Total)	20	
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I <sub>FSM</sub>	150	A
Isolation Voltage From terminal to heatsink t = 1min.	V <sub>AC</sub>	2000	V

**Thermal Characteristics (Per Leg)**

Characteristic	Symbol	Value	Unit
Maximum Thermal Resistance Junction to Case	R <sub>θJC</sub>	3	°C/W
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-65 to +175	°C

**Electrical Characteristics (Per Leg)** @T<sub>A</sub> = 25°C unless otherwise specified

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Forward Voltage Drop	V <sub>F</sub>	-	0.59	0.65	V	I <sub>F</sub> = 10A, T <sub>J</sub> = 25°C
		-	0.55	-		I <sub>F</sub> = 10A, T <sub>J</sub> = 125°C
Leakage Current (Note 2)	I <sub>R</sub>	-	6	100	μA	V <sub>R</sub> = 45V, T <sub>J</sub> = 25°C
		-	-	15		mA

Notes: 2. Short duration pulse test used to minimize self-heating effect.  
3. Device mounted on Black Aluminum Heatsink, 45mm \* 20mm \* 12mm.

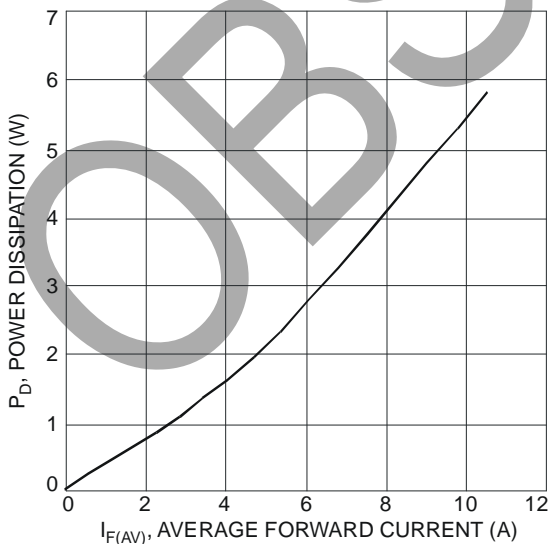


Fig. 1 Forward Power Dissipation

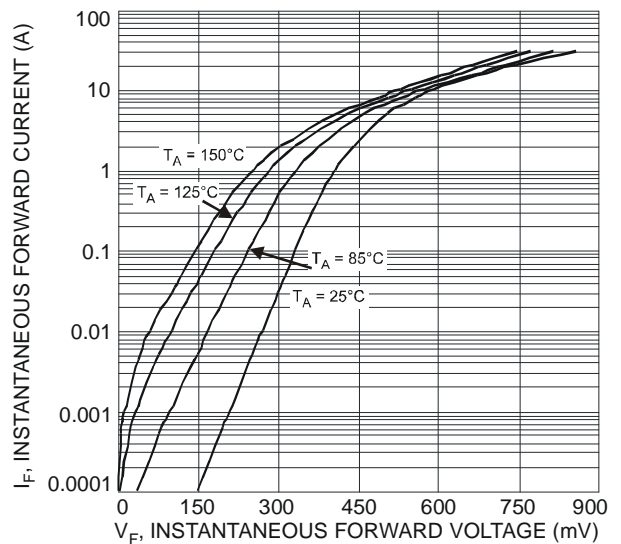


Fig. 2 Typical Forward Characteristics

OBSOLETE - PART DISCONTINUED

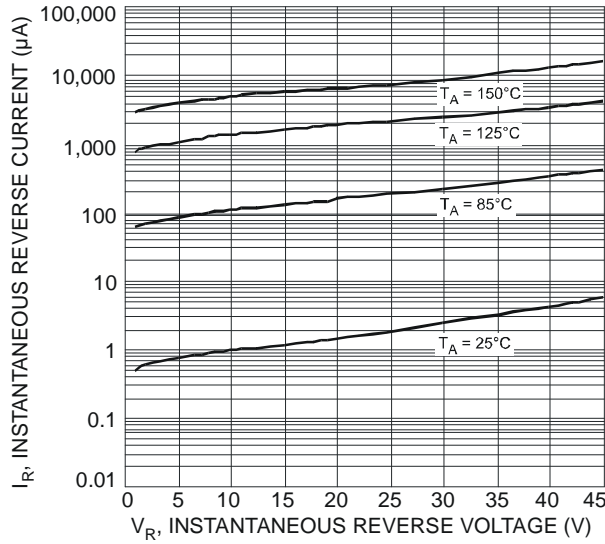


Fig. 3 Typical Reverse Characteristics

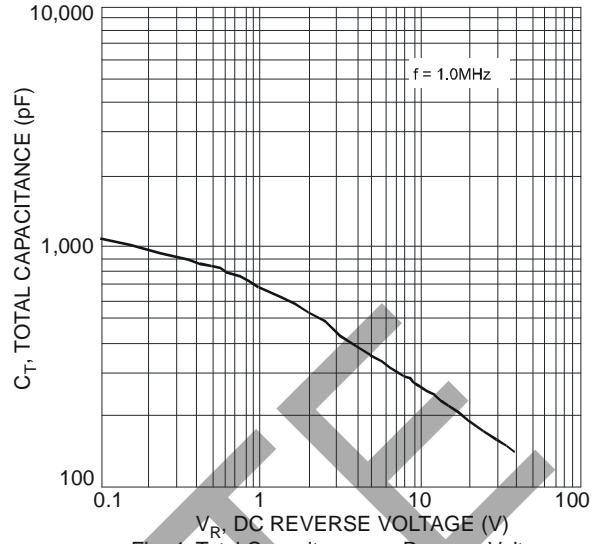


Fig. 4 Total Capacitance vs. Reverse Voltage

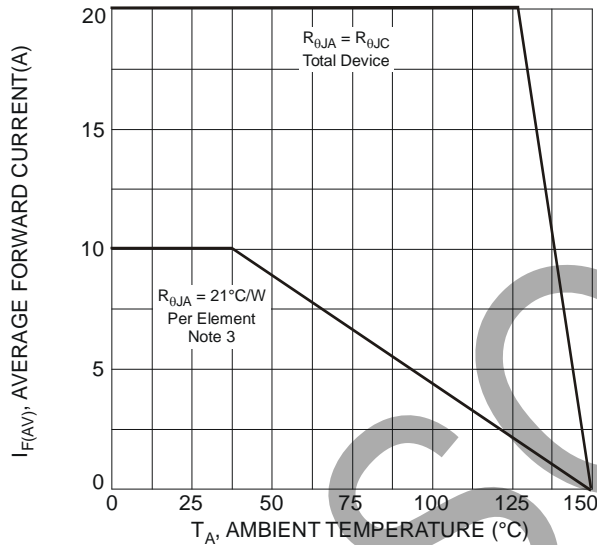


Fig. 5 Forward Current Derating Curve

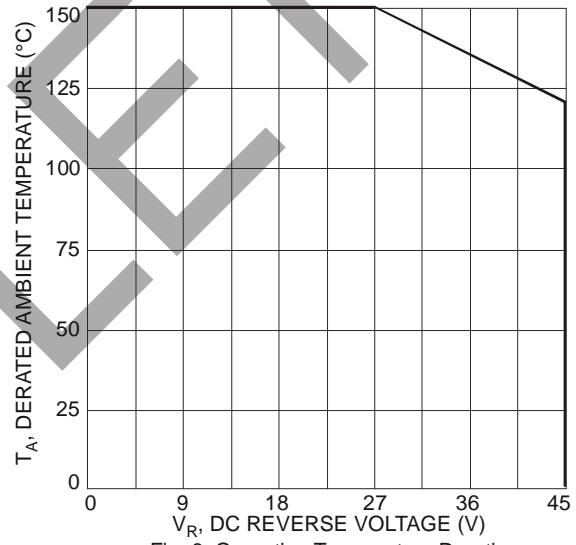
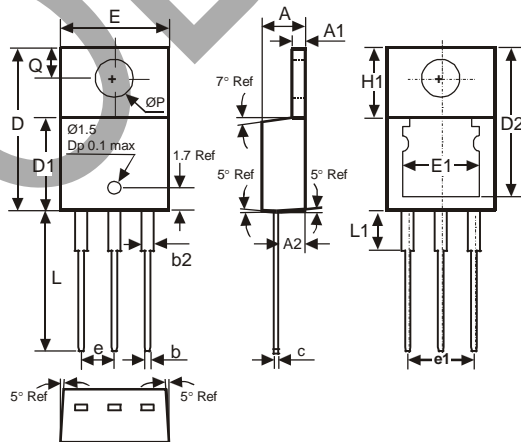


Fig. 6 Operating Temperature Derating

**Package Outline Dimensions**



ITO-220S			
DIM.	MIN.	MAX.	TYP.
A	4.52	4.62	4.57
A1	1.17	1.39	-
A2	2.57	2.77	2.67
b	0.72	0.95	0.84
b2	1.15	1.54	1.26
c	0.356	0.61	-
D	14.22	16.51	15.00
D1	8.60	8.80	8.70
D2	13.68	14.08	-
e	2.49	2.59	2.54
e1	4.98	5.18	5.08
E	10.01	10.21	10.11
E1	6.86	8.89	-
H1	5.85	6.85	-
L	13.30	13.90	13.60
L1	-	6.35	-
P	3.54	4.08	-
Q	2.54	3.42	-
All Dimensions in mm			

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