



TTC20040 Supper Fast Diode Module

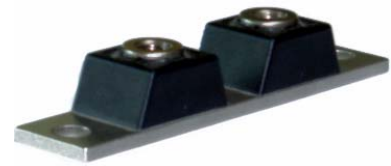
Features

High Surge Capability
 Fast Reverse Recovery Time
 BVR Up to 400V VRRM

200A-400V
 Rectifier

Typical Application

Welding, Electrical Plating
 UPS
 Half Bridge
 High Frequency, High Efficiency Industry



Maximum Ratings

$T_J=25^{\circ}\text{C}$ Unless Otherwise Specified

Symbol	Parameter	Conditions	Ratings
BVR	Reverse Break Down Voltage, Per Leg	$I_R=25\mu\text{A}$, $T_C=100^{\circ}\text{C}$	400V
$I_{F(AV)}$	Average Forward Current, Per Package		200A
I_{FSM}	Peak Forward Surge Current, Per Leg	8.3ms, half Sine	2000A
T_J	Operating Junction Temperature Range		-40°C to $+175^{\circ}\text{C}$
T_{STG}	Storage Temperature Range		-40°C to $+175^{\circ}\text{C}$

Static Electrical Characteristics

Per Leg, $T_J=25^{\circ}\text{C}$ Unless Otherwise Specified

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V_F	Forward Voltage, Per Leg	$I_F=100\text{A}$			1.7	V
I_R	Reverse Current	$V_R=400\text{V}$			25	μA
		$V_R=400\text{V}$, $T_J=125^{\circ}\text{C}$			1	mA
t_{rr}	Reverse Recovery Time	$I_F=0.5\text{A}$, $I_R=1\text{A}$, $I_{RR}=0.25\text{A}$			160	ns
$R_{\theta JC}$	Thermal Resistance				0.25	$^{\circ}\text{C}/\text{W}$

*Pulse Test: Pulse Width 300usec, Duty Cycle 2%.

Mechanical Characteristics

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
W_T	Weight			20		g
τ	Mounting Torque	1/4-20 Screw			6	In.lbf

Typical Performance Curves

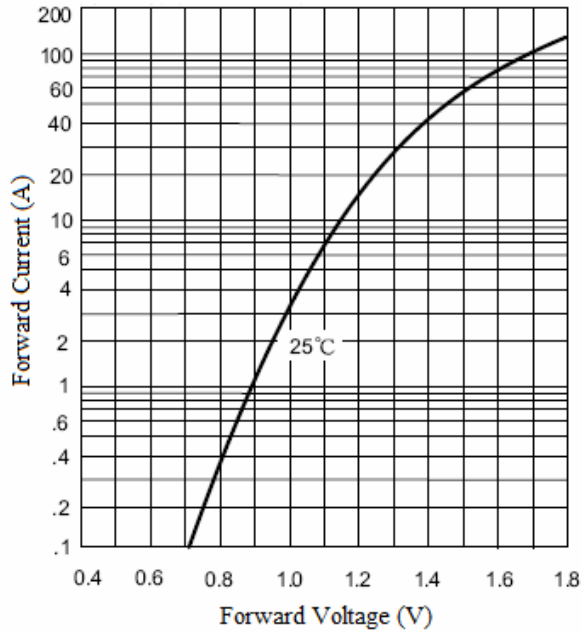


Figure 1- Typical Forward Characteristics Per Leg

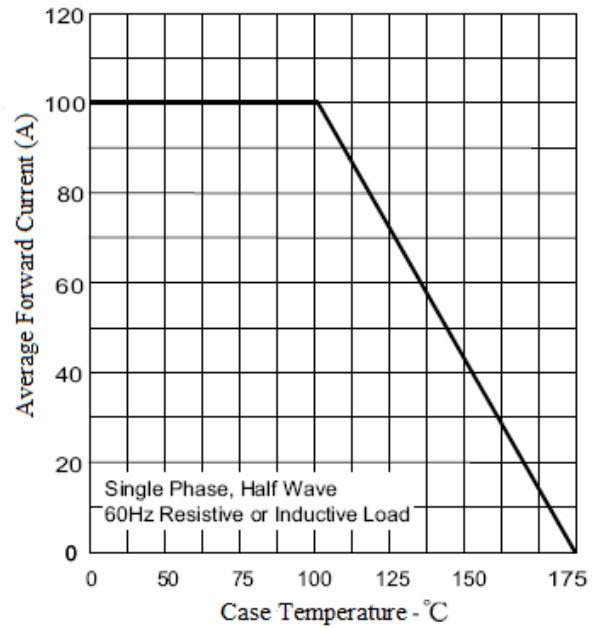


Figure 2- Forward Derating Curve

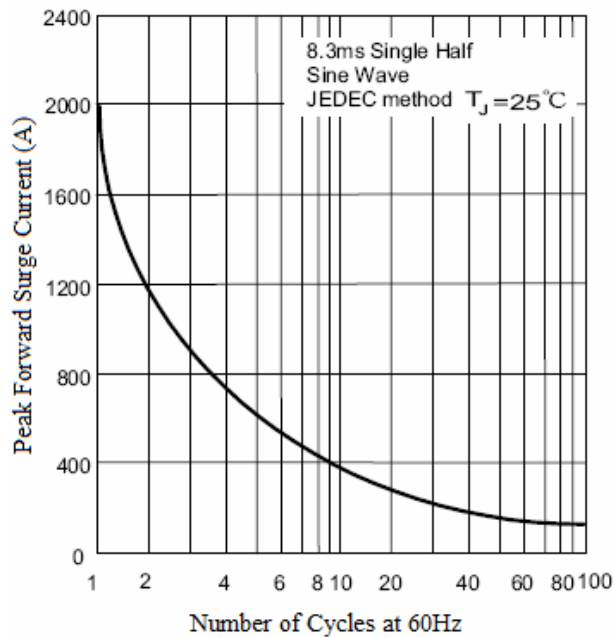


Figure 3- Peak Forward Surge Current

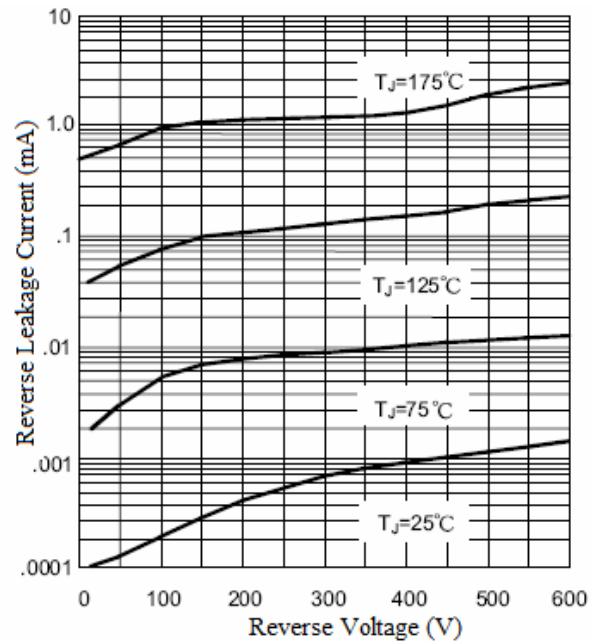


Figure 4- Typical Reverse Characteristics

Package Outline and Electrical Circuit

