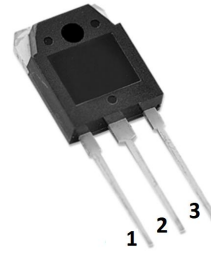


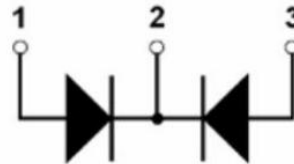
Features

- Ultra fast Recovery Time
- Soft Recovery Characteristics
- Low Recovery Loss
- Low Forward Voltage
- High Surge Current Capability
- Low Leakage Current



Applications

- Freewheeling, Snubber, Clamp
- Inversion Welder
- PFC
- Plating Power Supply
- Ultrasonic Cleaner and Welder
- Converter & Chopper
- UPS



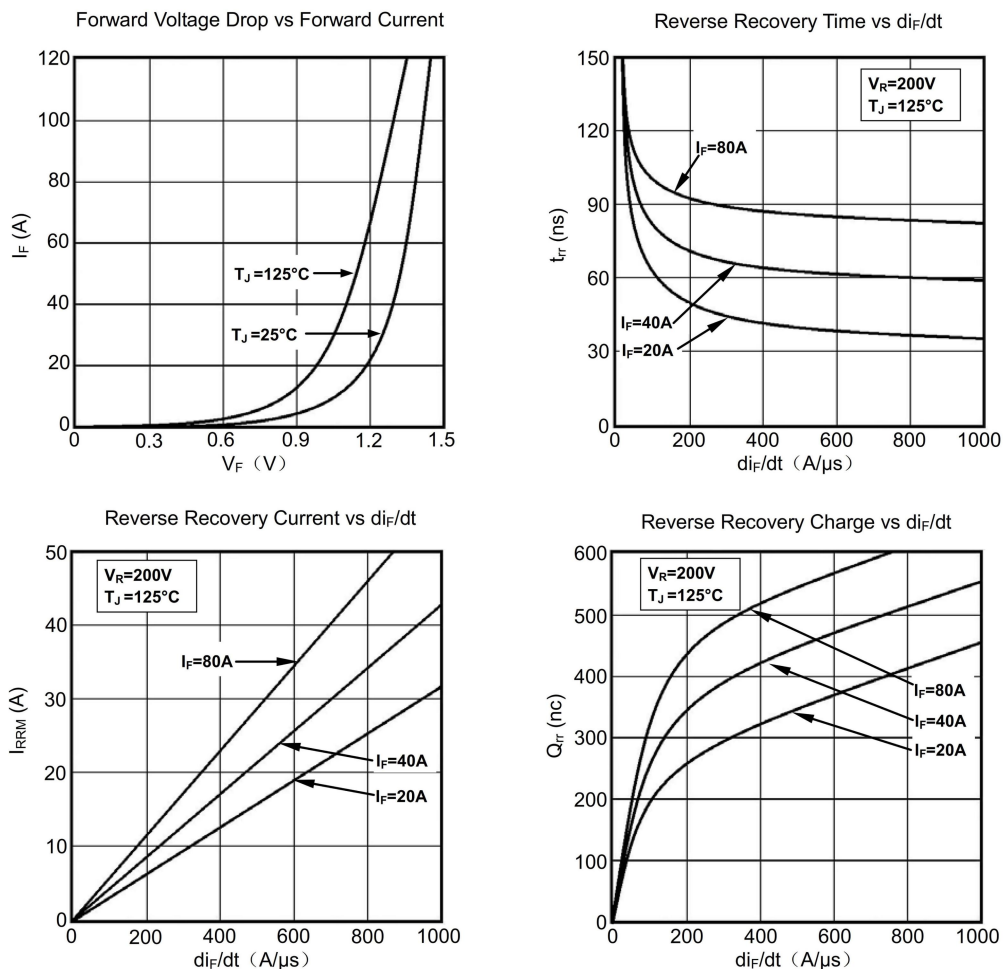
Absolute Maximum Ratings

Parameter	Symbol	Test Conditions	Values	Unit
Maximum D.C. Reverse Voltage	V_R		400	V
Maximum Repetitive Reverse Voltage	V_{RRM}		400	
Average Forward Current	$I_{F(AV)}$	$T_C=110^{\circ}\text{C}$, Per Diode	40	A
		$T_C=110^{\circ}\text{C}$, Per Package	80	
RMS Forward Current	$I_{F(RMS)}$	$T_C=110^{\circ}\text{C}$, Per Diode	56	A
Non-Repetitive Surge Forward Current	I_{FSM}	$t=10\text{ms}$, $T_J=45^{\circ}\text{C}$, 50Hz, Sin	400	A
Power Dissipation	P_D		156	W
Junction Temperature	T_J		-40~150	$^{\circ}\text{C}$
Storage Temperature Range	T_{STG}		-40~150	
Thermal Resistance	$R_{\theta JC}$	Junction-to-Case	0.8	$^{\circ}\text{C/W}$
Module-to-Sink	Torque	Recommended(M3)	1.1	N.m
	Weigh		6.0	g

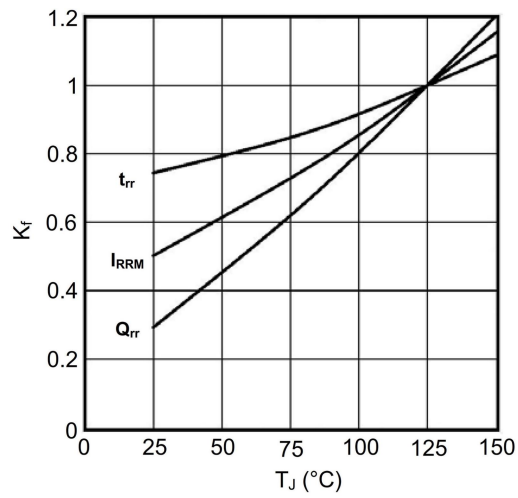
Electrical Characteristics ($T_C=25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Reverse Leakage Current	I_{RM}	$T_J=25^\circ\text{C}, V_R=V_{RRM}$	-	-	10	μA
		$T_J=125^\circ\text{C}, V_R=V_{RRM}$	-	-	150	
Forward Voltage	V_F	$I_F=40\text{A}, T=25^\circ\text{C}$	-	1.3	1.8	V
		$I_F=40\text{A}, T=125^\circ\text{C}$	-	1.1		
Reverse Recovery Time	t_{rr}	$I_F=1\text{A}, V_R=30\text{V}, di/dt=-200\text{A}/\mu\text{s}$	-	22	-	ns
Reverse Recovery Time	t_{rr}	$I_F=40\text{A}, V_R=200\text{V}, di/dt=-200\text{A}/\mu\text{s}, T_J=25^\circ\text{C}$	-	52	-	ns
Max.Reverse Recovery Current	I_{RRM}		-	4.5	-	A
Reverse Recovery Time	t_{rr}	$I_F=40\text{A}, V_R=200\text{V}, di/dt=-200\text{A}/\mu\text{s}, T_J=125^\circ\text{C}$	-	71	-	ns
Max.Reverse Recovery Current	I_{RRM}		-	9	-	A

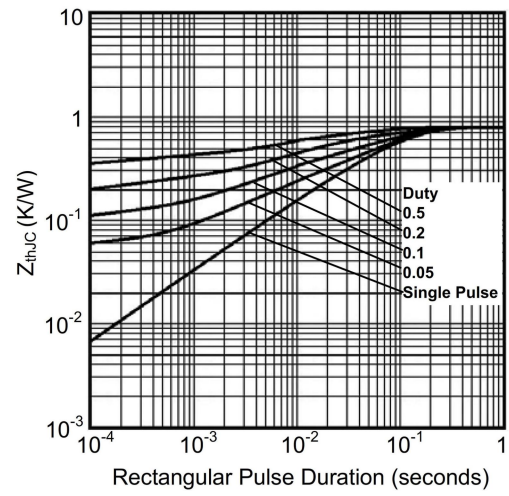
Typical Performance Curves



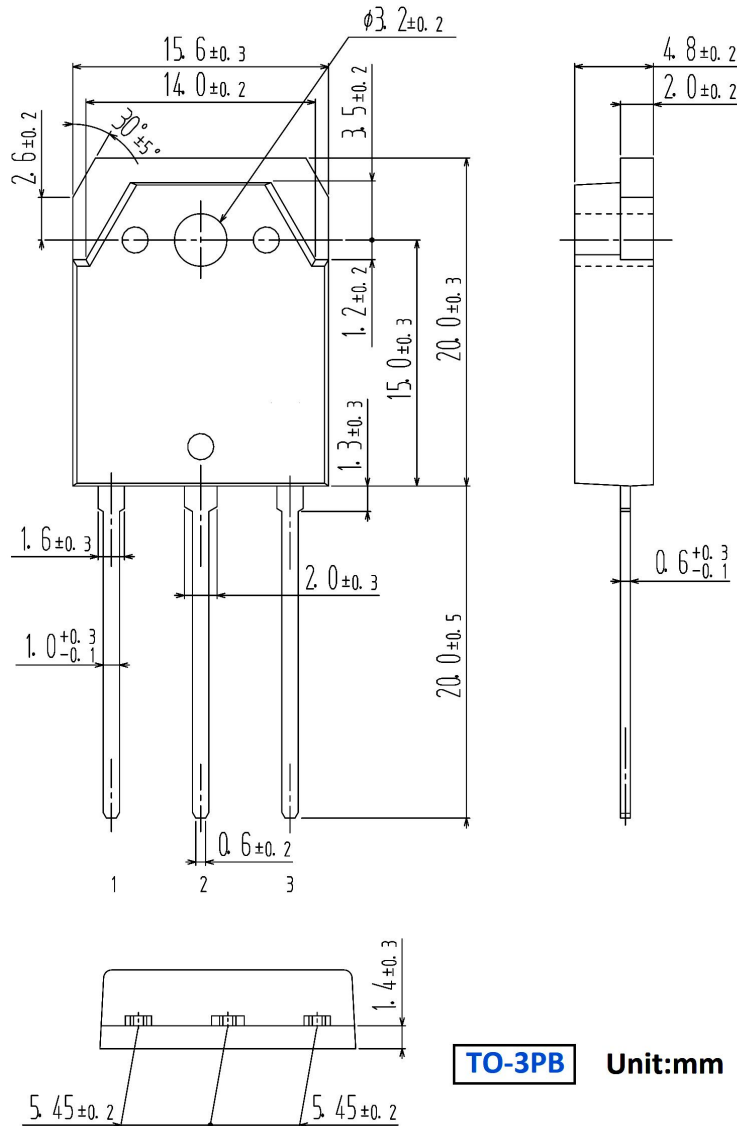
Dynamic Parameters vs Junction Temperature



Transient Thermal Impedance



Package outline dimension



TO-3PB

Unit:mm