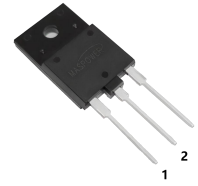


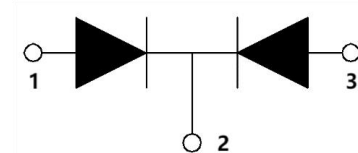
Features

- 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



1- Anode
3- Anode
2- Cathode
Back of Case - Cathode

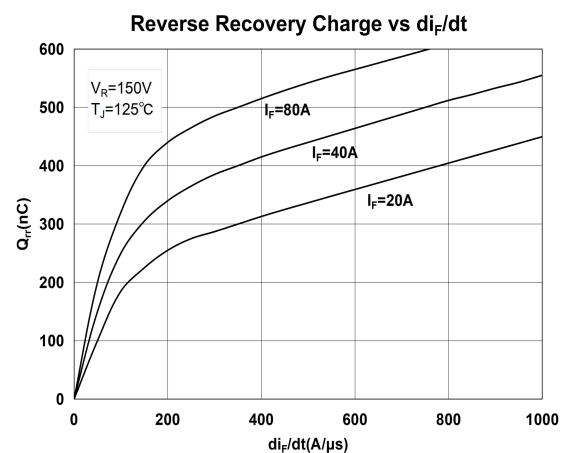
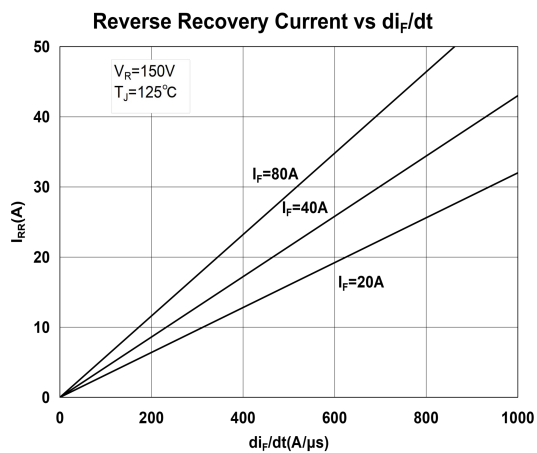
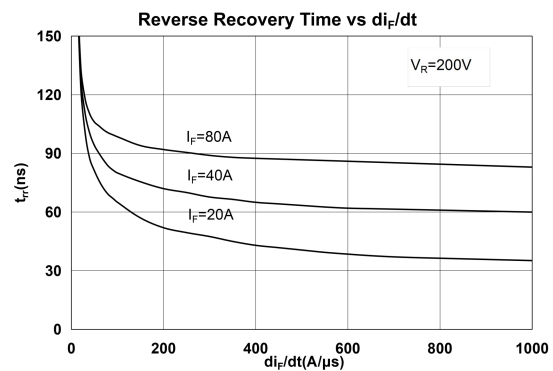
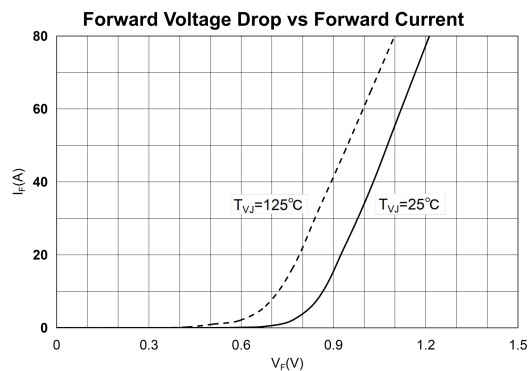
Absolute Maximum Ratings

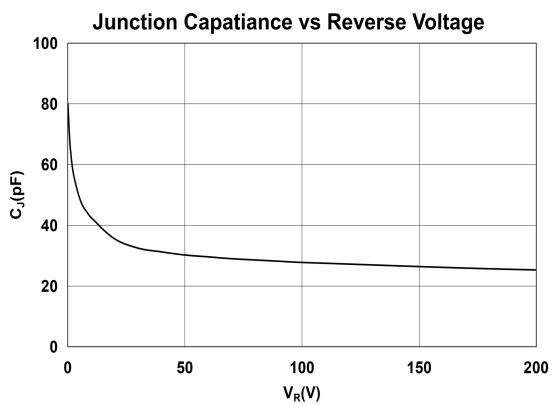
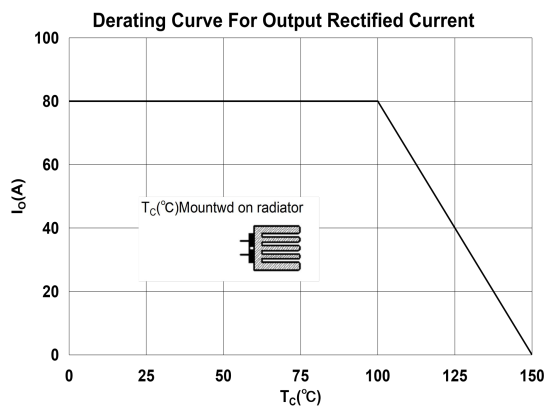
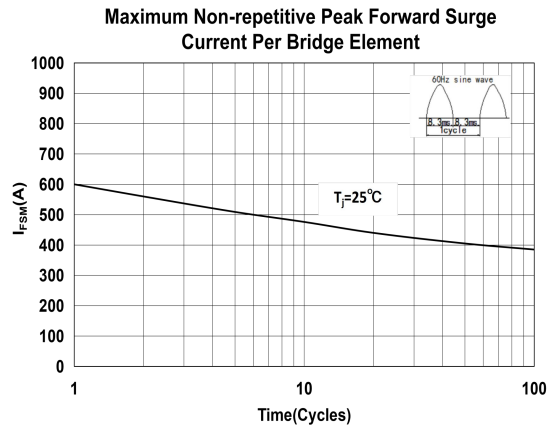
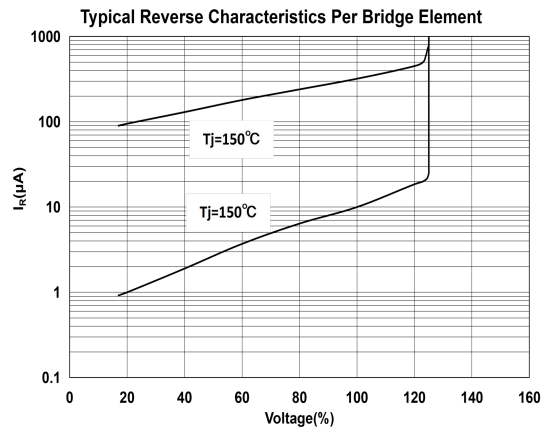
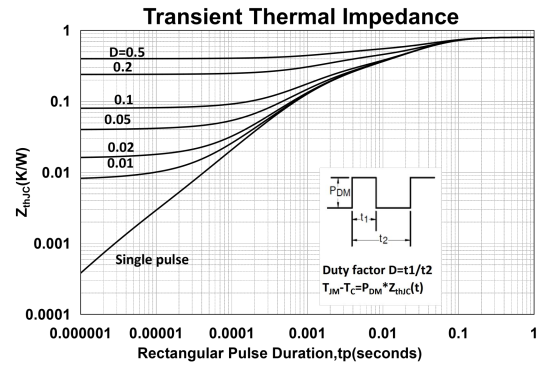
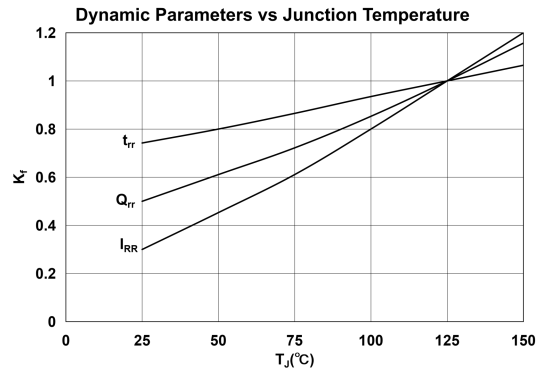
Parameter	Symbol	Test Conditions	Values	Unit
Maximum D.C. Reverse Voltage	V_R		300	V
Maximum Repetitive Reverse Voltage	V_{RRM}		300	
Average Forward Current	$I_{F(AV)}$	$T_C=110^{\circ}\text{C}$, Per Diode	40	A
		$T_C=110^{\circ}\text{C}$, Per Package	80	
RMS Forward Current	$I_{F(RMS)}$	$T_C=110^{\circ}\text{C}$, Per Diode	56	A
Non-Repetitive Surge Forward Current	I_{FSM}	$t=10\text{ms}$, $T_J=45^{\circ}\text{C}$, 50Hz, Sin	600	A
Power Dissipation	P_D	$T=25^{\circ}\text{C}$	156	W
Junction Temperature	T_J		-40~150	$^{\circ}\text{C}$
Storage Temperature Range	T_{STG}		-55~150	
Lead Temperature for 10 Sec	T_L		260	
Thermal Resistance	$R_{\theta JC}$	Junction-to-Case	0.8	$^{\circ}\text{C}/\text{W}$
Module-to-Sink	Torque	Recommended	1.1	N.m
Package Weigh	W_T		6.7	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
		$T_J=125^\circ\text{C}, V_R=V_{RRM}$	-	-	500	
Forward Voltage	V_F	$I_F=40\text{A}, T=25^\circ\text{C}$	-	1.05	1.4	V
		$I_F=40\text{A}, T=125^\circ\text{C}$	-	0.95	-	
Reverse Recovery Time	t_{rr}	$I_F=1\text{A}, V_R=30\text{V}, di_F/dt=-200\text{A}/\mu\text{s}$	-	25	-	ns
Reverse Recovery Time	t_{rr}	$I_F=40\text{A}, V_R=150\text{V}, di_F/dt=-200\text{A}/\mu\text{s}, T_J=25^\circ\text{C}$	-	40	-	ns
Max.Reverse Recovery Current	I_{RRM}		-	4.5	-	A
Reverse Recovery Time	t_{rr}	$I_F=40\text{A}, V_R=150\text{V}, di_F/dt=-200\text{A}/\mu\text{s}, T_J=125^\circ\text{C}$	-	71	-	ns
Reverse Recovery charge	Q_{rr}		-	342	-	nC
Max.Reverse Recovery Current	I_{RRM}		-	9	-	A

Typical Performance Curves





Technical drawing of the TO-3PF package showing front, side, and detail views with dimensions in mm.

Front View Dimensions:

- Overall width: 15.70 / 15.30
- Overall height: 24.70 / 24.30
- Mounting hole diameter: 3.80 / 3.40
- Mounting hole pitch: 10.20 / 9.80
- Flange thickness: 4.70 / 4.30
- Base thickness: 2.20 / 1.90
- Lead height: 5.20 / 4.80
- Lead width: 2.15 / 1.90 (3X)
- Lead pitch: 4.20 / 3.80
- Lead length: 5.55 / 5.35

Side View Dimensions:

- Overall height: 5.70 / 5.30
- Flange thickness: 3.20 / 2.80
- Base thickness: 3.70 / 3.30
- Lead height: 1.10 / 0.80
- Lead width: 2.20 / 1.80
- Lead length: 3.50 / 3.10

Detail View Dimensions:

- Lead width: 0.95 / 0.65 (3X)

Notes:

- NOTE 3: Dimension for lead width.

Seating Plane: Indicated by a horizontal line in the side view.

TO-3PF Unit:mm