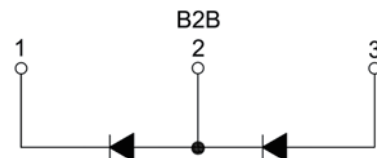


Features

- Ultrafast Reverse Recovery Time
- Soft Reverse Recovery Characteristics
- Low Reverse Recovery Loss
- Low Forward Voltage
- High Surge Current Capability
- Low Leakage Current

Typical Applications

- Inversion Welder
- Uninterruptible Power Supply(UPS)
- Plating Power Supply
- Ultrasonic Cleaner and Welder
- Converter & Chopper
- Power Factor Correction (PFC) Circuit



Absolute Maximum Ratings (T_c=25°C Unless Otherwise Specified)

Symbol	Parameter	Test Conditions	Values	Unit
V _R	Maximum D.C. Reverse Voltage		1700	V
V _{RRM}	Maximum Repetitive Reverse Voltage		1700	V
I _{F(AV)}	Average Forward Current	T _c =75°C, Per Diode	400	A
		T _c =75°C,20KHz,Per Diode	300	A
I _{F(RMS)}	RMS Forward Current	T _c =75°C,Per Diode	550	A
I _{FSM}	Non-Repetitive Surge Forward Current	t=10ms,50Hz,Sine	2800	A
		t=8.3ms,60Hz,Sine	3100	A
I ² t	I ² t (For Fusing)	t=10ms,50Hz, Sine	39200	A ² s
		t=8.3ms,60Hz, Sine	39900	A ² s
P _D	Power Dissipation		1040	W
T _J	Junction Temperature		-40 to +150	°C
T _{STG}	Storage Temperature Range		-40 to +125	°C
V _{isol}	Insulation Test Voltage	AC, t=1min	3000	V
Torque	Module-to-Sink	Recommended(M6)	3~5	N • m
Torque	Module Electrodes	Recommended(M6)	3~5	N • m
R _{θJC}	Thermal Resistance	Junction-to-Case	0.1	°CW
Weight			300	g

Electrical Characteristics ($T_c=25^\circ\text{C}$ Unless Otherwise Specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I_{RM}	Reverse Leakage Current	$V_R=1700V$	--	--	5	mA
		$V_R=1700V, T_J=125^\circ\text{C}$	--	--	20	mA
V_F	Forward Voltage	$I_F=400A$	--	1.8	2.25	V
		$I_F=400A, T_J=125^\circ\text{C}$	--	1.95	--	V
t_{rr}	Reverse Recovery Time	$I_F=1A, V_R=30V, di_F/dt=-200A/\mu s$	--	140	--	ns
t_{rr}	Reverse Recovery Time	$V_R=850V, I_F=400A$ $di_F/dt=-200A/\mu s, T_J=25^\circ\text{C}$	--	1.1	--	μs
I_{RRM}	Max. Reverse Recovery Current		--	64	--	A
t_{rr}	Reverse Recovery Time	$V_R=850V, I_F=400A$ $di_F/dt=-200A/\mu s, T_J=125^\circ\text{C}$	--	2.1	--	μs
I_{RRM}	Max. Reverse Recovery Current		--	80	--	A
t_{rr}	Reverse Recovery Time	$V_R=850V, I_F=400A$ $di_F/dt=-1000A/\mu s, T_J=125^\circ\text{C}$	--	1.2	--	μs
I_{RRM}	Max. Reverse Recovery Current		--	280	--	A

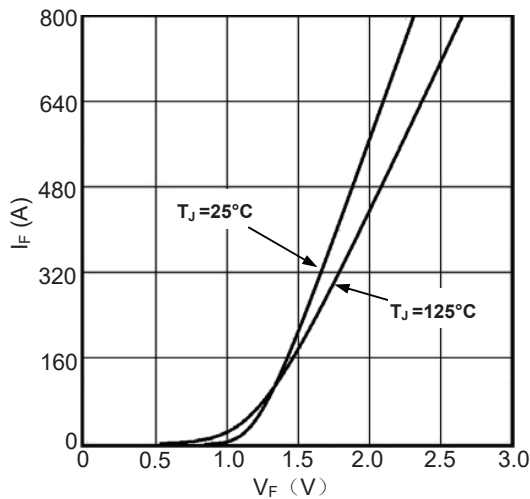


Figure1. Forward Voltage Drop vs Forward Current

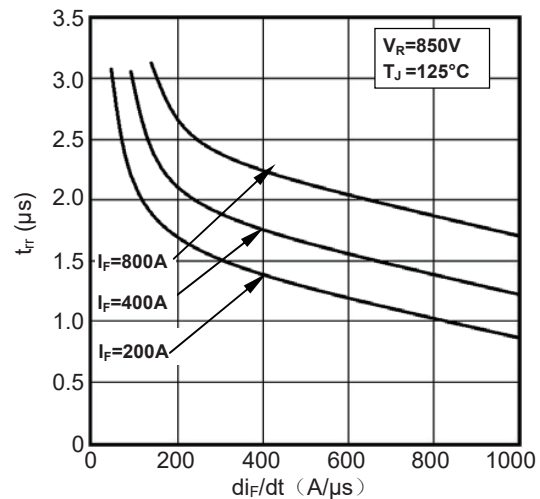


Figure2. Reverse Recovery Time vs di_F/dt

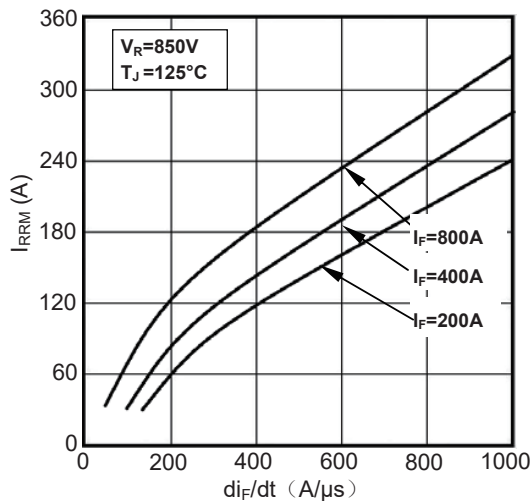


Figure3. Reverse Recovery Current vs di_F/dt

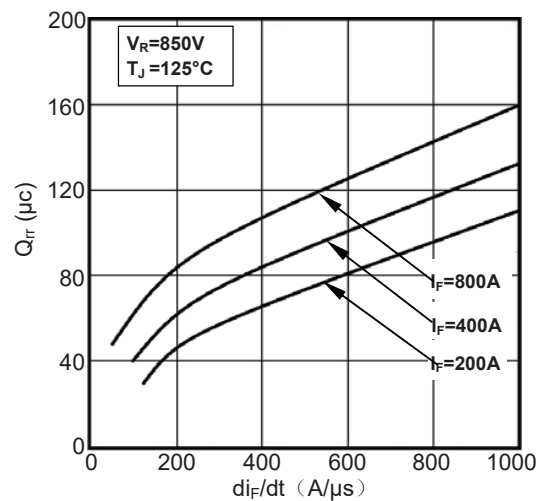


Figure4. Reverse Recovery Charge vs di_F/dt

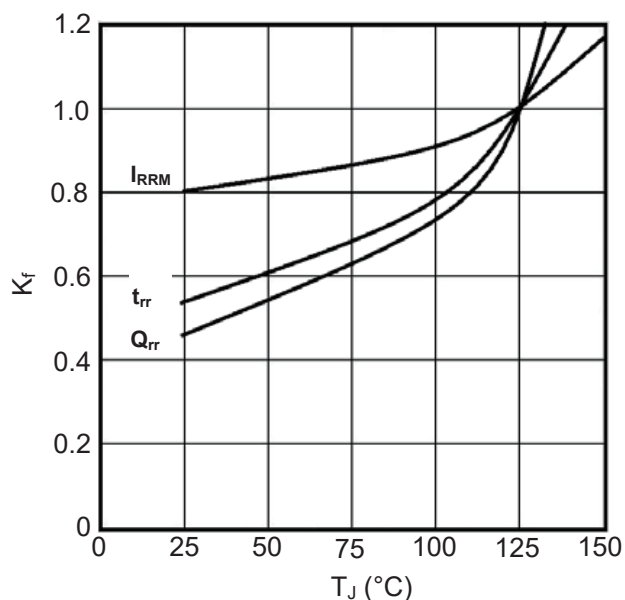


Figure5. Dynamic Parameters vs Junction Temperature

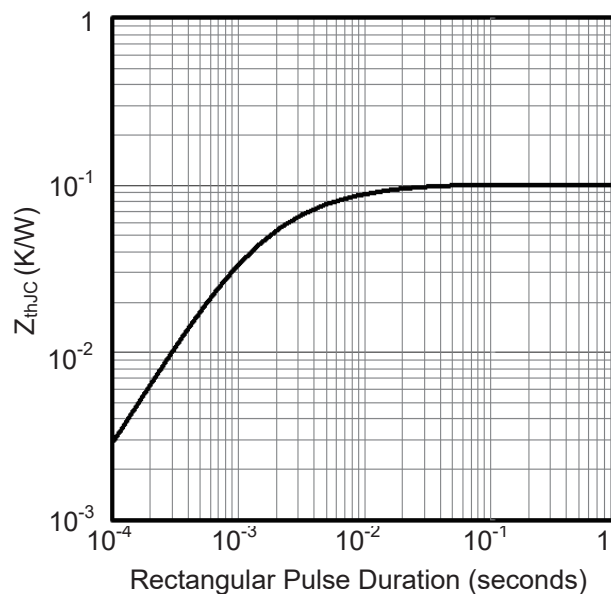
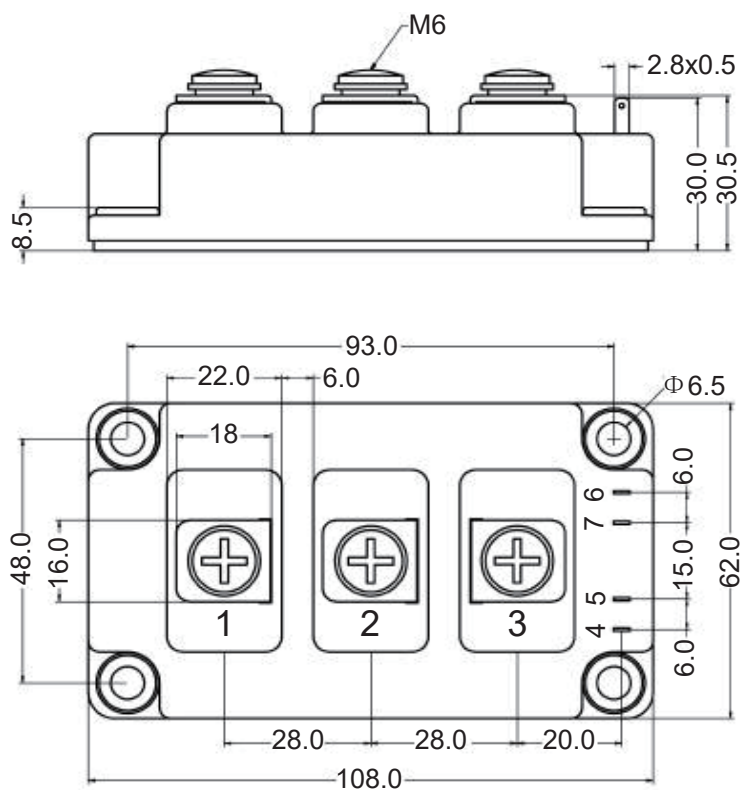


Figure6. Transient Thermal Impedance

Dimensions in (mm)



Dimensions (mm)

Figure7. Package Outline