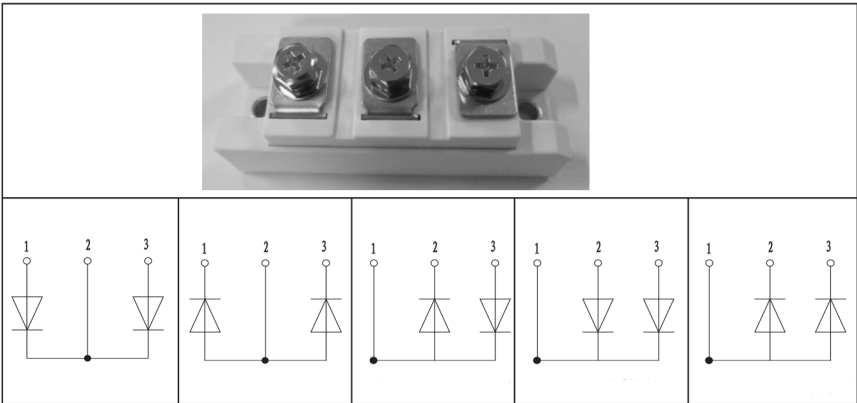


PRODUCT FEATURES

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

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℃ unless otherwise specied

Symbol	Parameter	Test Conditions	Values	Unit
V _R	Maximum D.C. Reverse Voltage		1200	V
V _{RRM}	Maximum Repetitive Reverse Voltage		1200	V
I _{F(AV)}	Average Forward Current	T _C =110℃, Per Diode	300	A
		T _C =120℃, 20KHz, Per Moudle	200	A
I _{F(RMS)}	RMS Forward Current	T _C =110℃, Per Diode	420	A
I _{FSM}	Non-Repetitive Surge	T _J =45℃, t=10ms, 50Hz, Sine	2700	A
	Forward Current	T _J =45℃, t=8.3ms, 60Hz, Sine	2850	A
I ² t	I ² t (For Fusing)	T _J =45℃, t=10ms, 50Hz, Sine	36450	A ² s
		T _J =45℃, t=8.3ms, 60Hz, Sine	40612	A ² s
P _D	Power Dissipation		893	W
T _J	Junction Temperature		-40 to +150	℃
T _{STG}	Storage Temperature Range		-40 to +125	℃
V _{isol}	Insulation Test Voltage	AC, t=1min	3000	V
Torque	Module-to-Sink	Recommended (M6)	3~5	N.M
Torque	Module E lectrodes	Recommended (M6)	3~5	N.M
R _{θJC}	Thermal Resistance	Junction-to-Case	0.14	℃ /W
Weight			160	g

ELECTRICAL CHARACTERISTICS

$T_C=25^{\circ}\text{C}$ unless otherwise specied

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I_{RM}	Reverse Leakage Current	$V_R=1200\text{V}$	--	--	2	mA
		$V_R=1200\text{V}, T_J=125^{\circ}\text{C}$	--	--	10	mA
V_F	Forward Voltage	$I_F=300\text{A}$	--	2.8	3.1	V
		$I_F=300\text{A}, T_J=125^{\circ}\text{C}$	--	2.1	2.4	V
t_{rr}	Reverse Recovery Time	$I_F=1\text{A}, V_R=30\text{V}, di_F/dt=-200\text{A}/\mu\text{s}$	--	65	--	ns
t_{rr}	Reverse Recovery Time	$V_R=600\text{V}, I_F=300\text{A}$ $di_F/dt=-200\text{A}/\mu\text{s}, T_J=25^{\circ}\text{C}$	--	135	--	ns
I_{RRM}	Max. Reverse Recovery Current		--	10	--	A
t_{rr}	Reverse Recovery Time	$V_R=600\text{V}, I_F=300\text{A}$ $di_F/dt=-200\text{A}/\mu\text{s}, T_J=125^{\circ}\text{C}$	--	385	--	ns
I_{RRM}	Max. Reverse Recovery Current		--	25	--	A

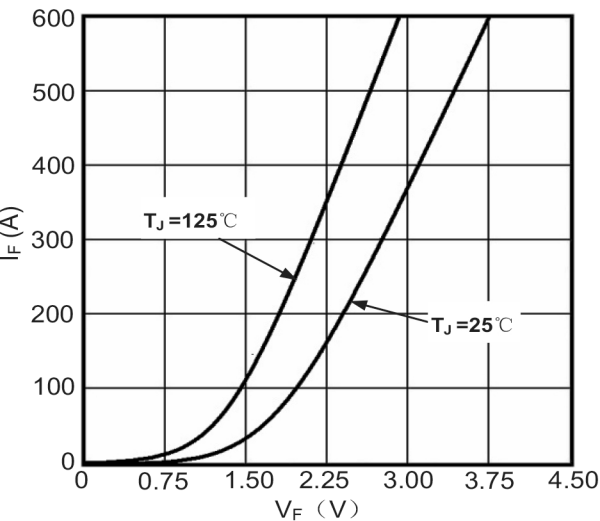


Figure1. Forward Voltage Drop vs Forward Current

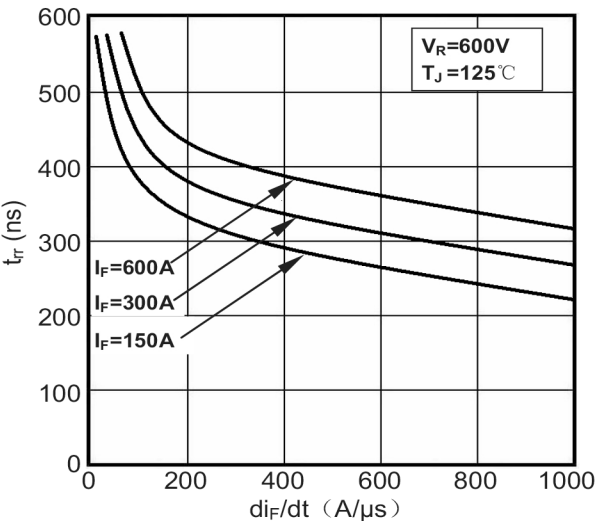


Figure2. Reverse Recovery Time vs di_F/dt

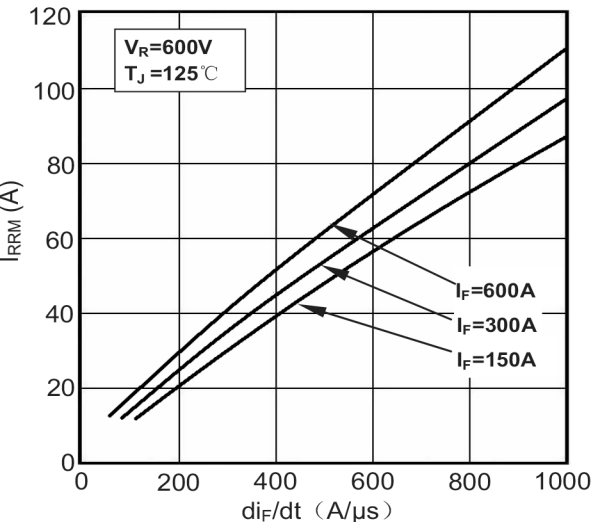


Figure3. Reverse Recovery Current vs di_F/dt

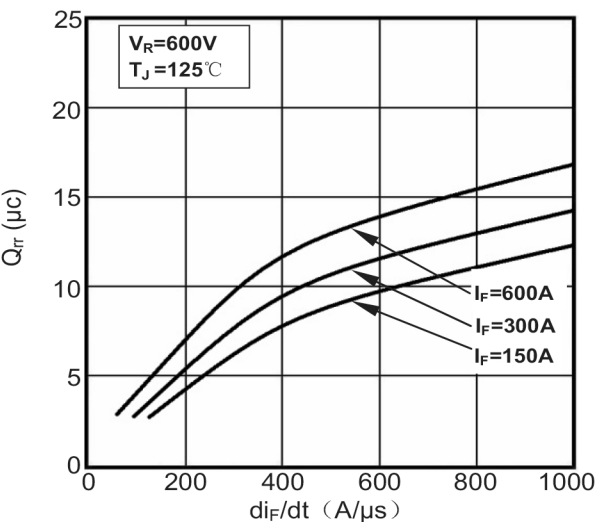


Figure4. Reverse Recovery Charge vs di_F/dt

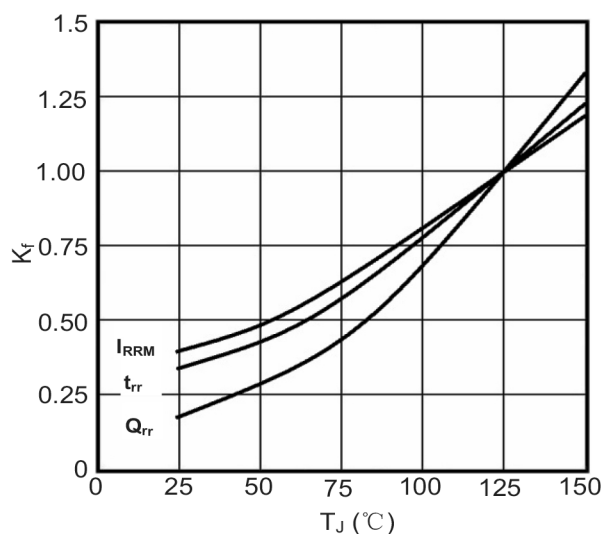


Figure5. Dynamic Parameters vs Junction Temperature

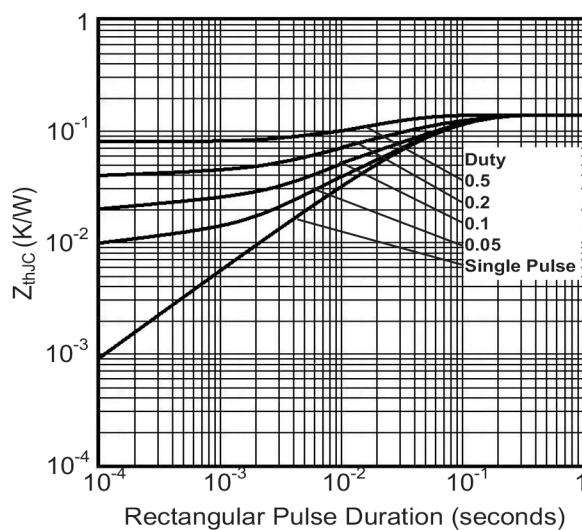
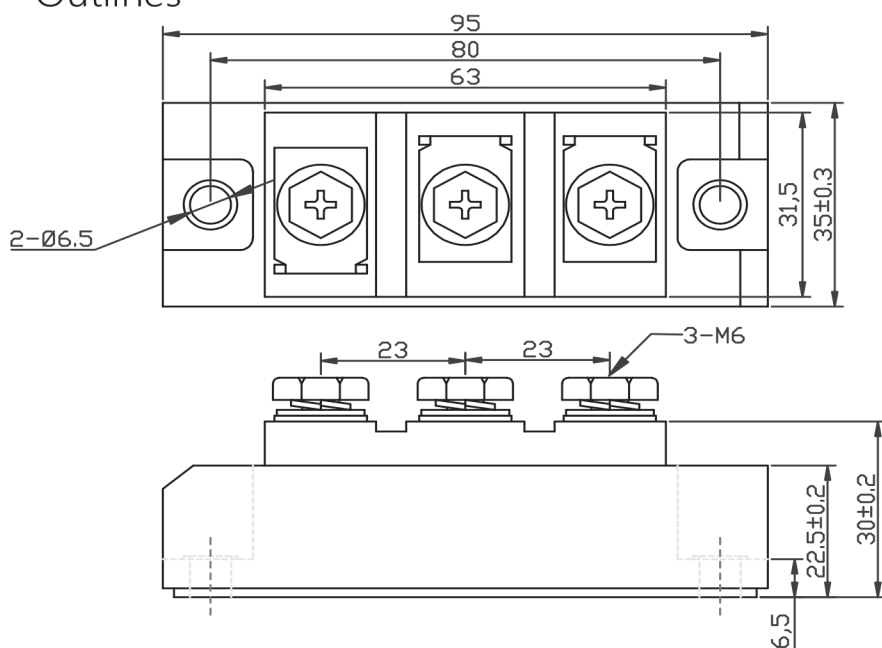


Figure6. Transient Thermal Impedance

Package Outlines



Unit:mm