



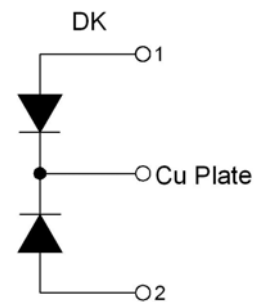
PRODUCT FEATURES

- 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

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

Symbol	Parameter	Test Conditions	Values	Unit
V_R	Maximum D.C. Reverse Voltage		100	V
V_{RRM}	Maximum Repetitive Reverse Voltage		100	V
$I_{F(AV)}$	Average Forward Current	$T_C=110^{\circ}\text{C}$, Per Diode	200	A
		$T_C=110^{\circ}\text{C}$, Per Moudle	400	A
$I_{F(RMS)}$	RMS Forward Current	$T_C=110^{\circ}\text{C}$, Per Diode	280	A
I_{FSM}	Non-Repetitive Surge Forward Current	1/2 Cycle , 50Hz, Sine	1500	A
		1/2 Cycle , 60Hz, Sine	1600	A
I^2t	I^2t (For Fusing)	$T_J=45^{\circ}\text{C}$, t=10ms, 50Hz, Sine	11250	A^2s
		$T_J=45^{\circ}\text{C}$, t=8.3ms, 60Hz, Sine	10620	A^2s
P_D	Power Dissipation		830	W
T_J	Junction Temperature		-40 to +150	$^{\circ}\text{C}$
T_{STG}	Storage Temperature Range		-40 to +125	$^{\circ}\text{C}$
Torque	Module-to-Sink	Recommended (M6)	3~4.7	N·m
Torque	Module Electrodes	Recommended (M6)	3~4.7	N·m
$R_{\theta JC}$	Thermal Resistance	Junction-to-Case	0.15	K/W
Weight			70	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	$V_R=100\text{V}$	--	--	1	mA
		$V_R=100\text{V}, T_J=125^{\circ}\text{C}$	--	--	10	mA
V_F	Forward Voltage	$I_F=200\text{A}$	--	0.90	1.10	V
		$I_F=200\text{A}, T_J=125^{\circ}\text{C}$	--	0.80	--	V
t_{rr}	Reverse Recovery Time	$I_F=1\text{A}, V_R=30\text{V}, di_F/dt=-200\text{A}/\mu\text{s}$	--	54	--	ns
t_{rr}	Reverse Recovery Time	$V_R=50\text{V}, I_F=200\text{A}$ $di_F/dt=-200\text{A}/\mu\text{s}, T_J=25^{\circ}\text{C}$	--	60	--	ns
I_{RRM}	Max. Reverse Recovery Current		--	6	--	A
t_{rr}	Reverse Recovery Time	$V_R=50\text{V}, I_F=200\text{A}$ $di_F/dt=-200\text{A}/\mu\text{s}, T_J=125^{\circ}\text{C}$	--	70	--	ns
I_{RRM}	Max. Reverse Recovery Current		--	7	--	A
S				1		

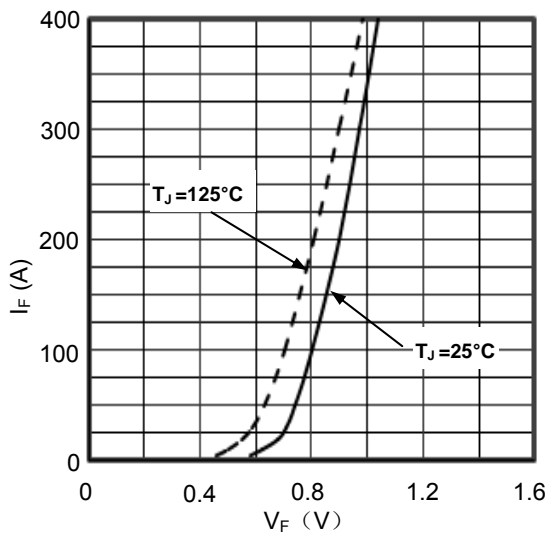


Figure1. Forward Voltage Drop vs Forward Current

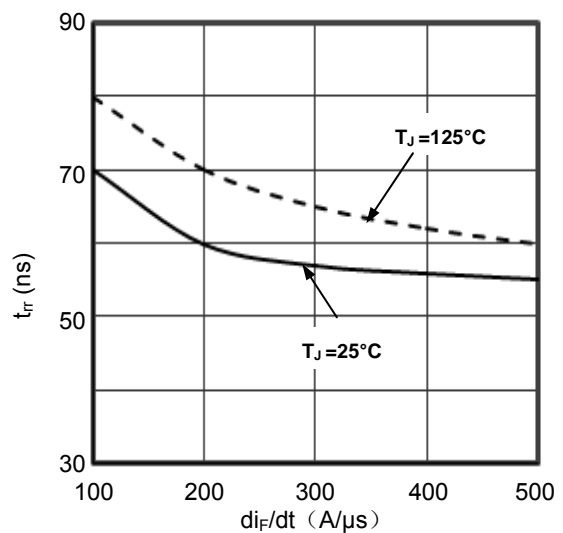


Figure2. Reverse Recovery Time vs di_F/dt

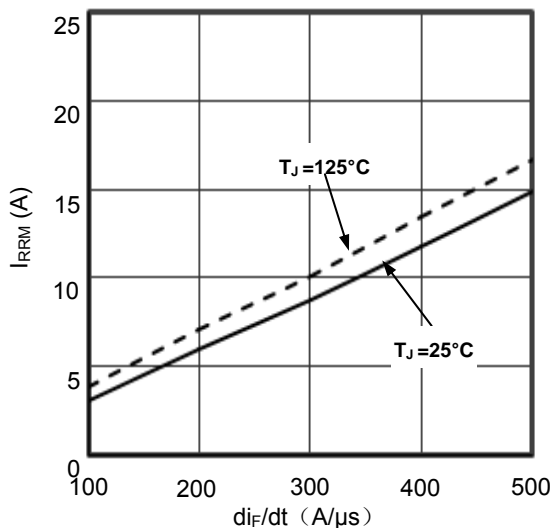


Figure3. Reverse Recovery Current vs di_F/dt

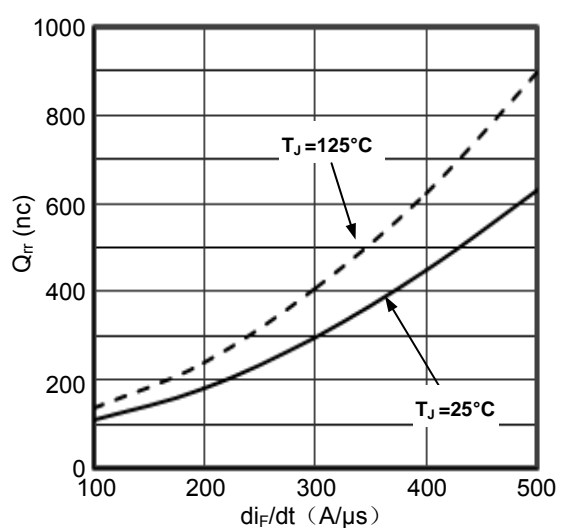


Figure4. Reverse Recovery Charge vs di_F/dt

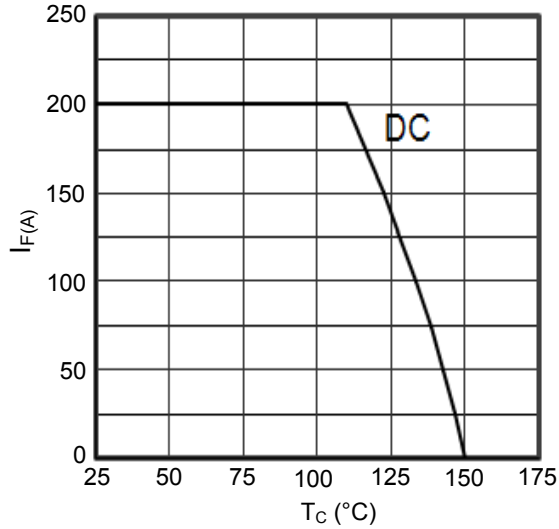


Figure5. Forward current vs. Case temperature

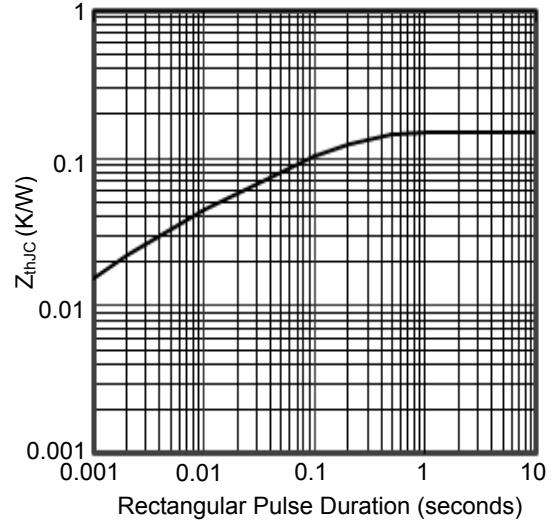
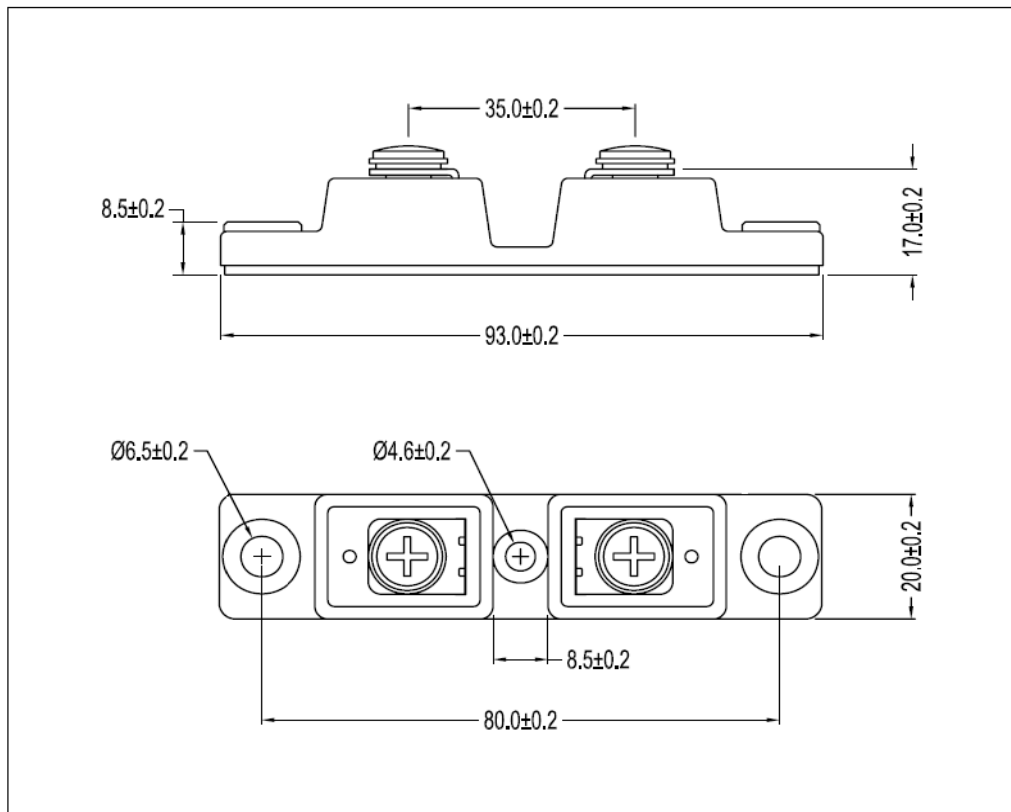


Figure6. Transient Thermal Impedance



Dimensions (mm)
Figure7. Package Outline