

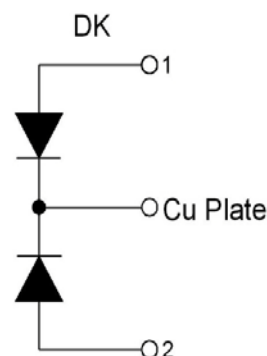
PRODUCT FEATURES

- Ultrafast Recovery Time
- Low Recovery Loss
- Low Forward Voltage
- Low Leakage Current
- Low Inductance Package



APPLICATIONS

- Inversion Welder
- Uninterruptible Power Supply
- Plating Power Supply
- Ultrasonic Cleaner and Welder
- Converter & Chopper
- PFC



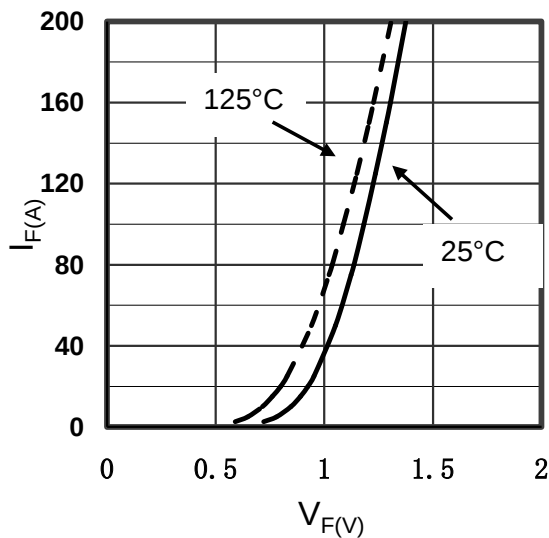
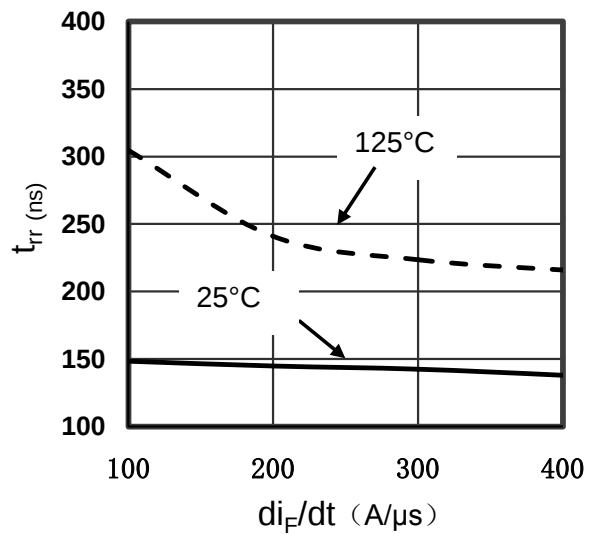
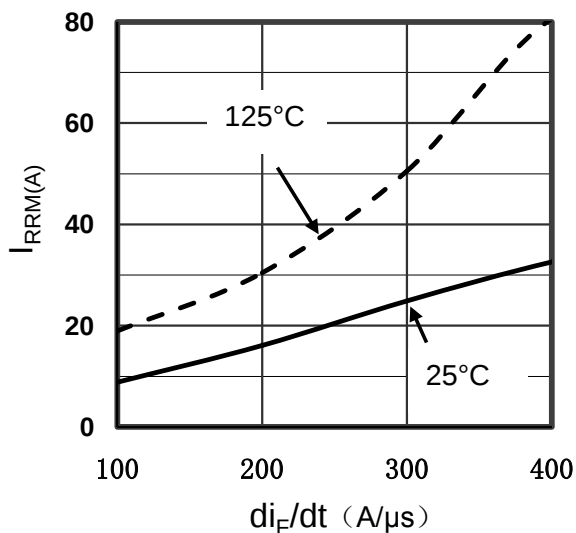
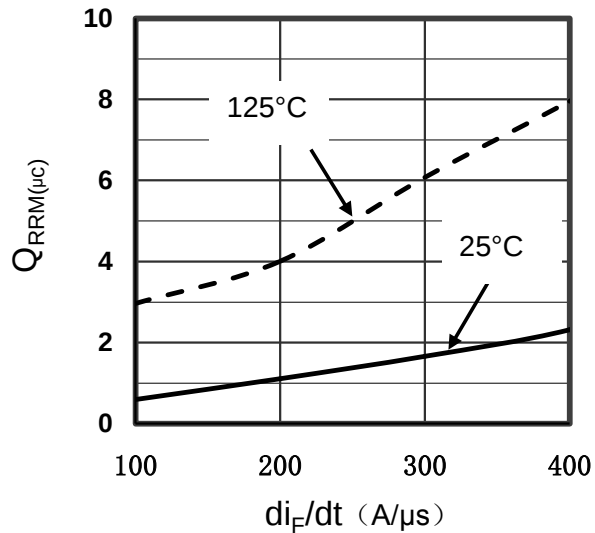
ABSOLUTE MAXIMUM RATINGS

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

Symbol	Parameter/Test Conditions		Values	t
V_R	Maximum D.C. Reverse Voltage		600	V
V_{RRM}	Maximum Repetitive Reverse Voltage			
$I_{F(AV)}$	Average Forward Current	TC=100°C, Per Diode	100	A
		TC=100°C, Per Moudle	200	
$I_{F(RMS)}$	RMS Forward Current	TC=100°C, Per Diode	140	
I_{FSM}	Non-Repetitive Surge Forward Current	1/2 Cycle, 50Hz, Sine	1000	
		1/2 Cycle, 60Hz, Sine	1100	
I_2t	For Fusing	$T_J=45^\circ\text{C}$, t=10ms, 50Hz, Sine	5000	A^2S
		$T_J=45^\circ\text{C}$, t=10ms, 60Hz, Sine	5000	
P_D	Power Dissipation		500	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
$R_{\theta JC}$	Junction-to-Case Thermal Resistance		0.25	$^\circ\text{C/W}$
Weight			70	g

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

Symbol	Parameter/Test Conditions		Min.	Typ.	Max.	t
I_{RM}	Maximum Reverse Leakage Current	$V_R = 600\text{V}$			0.5	mA
		$V_R = 600\text{V}, T_J = 125^\circ\text{C}$			1	
V_F	Forward Voltage	$I_F = 100\text{A}$	1.0	1.2	1.5	V
		$I_F = 100\text{A}, T_J = 125^\circ\text{C}$		1.1		
t_{rr}	Reverse Recovery Time ($I_F = 1\text{A}, di_F/dt = -200\text{A}/\mu\text{s}, V_R = 30\text{V}$)			55		ns
t_{rr}	Reverse Recovery Time	$I_F = 100\text{A}, V_R = 300\text{V}, di_F/dt = -200\text{A}/\mu\text{s}$		130		ns
I_{RRM}	Maximum Reverse Recovery Current			11		A
t_{rr}	Reverse Recovery Time	$I_F = 100\text{A}, V_R = 300\text{V}, di_F/dt = -200\text{A}/\mu\text{s}, T_J = 125^\circ\text{C}$		230		ns
I_{RRM}	Maximum Reverse Recovery Current			29		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

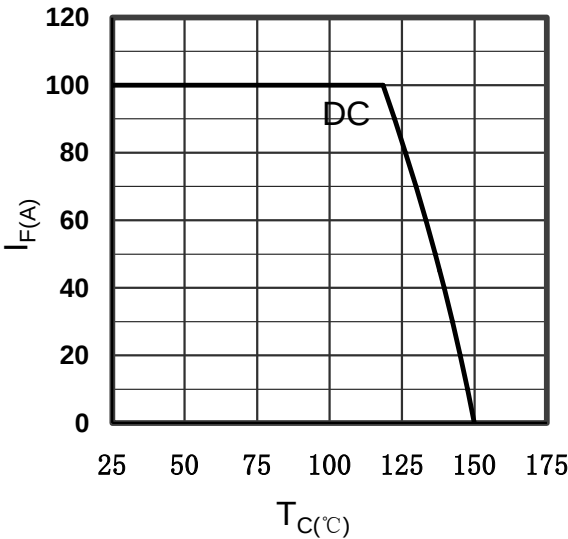


Figure5.Forward current vs.Case temperature

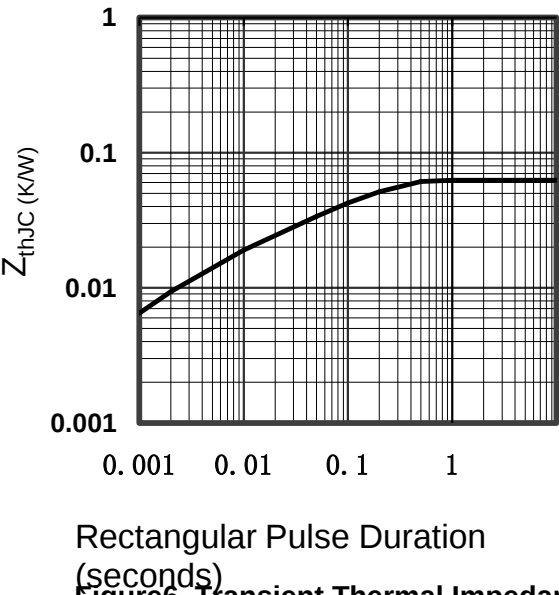


Figure6. Transient Thermal Impedance

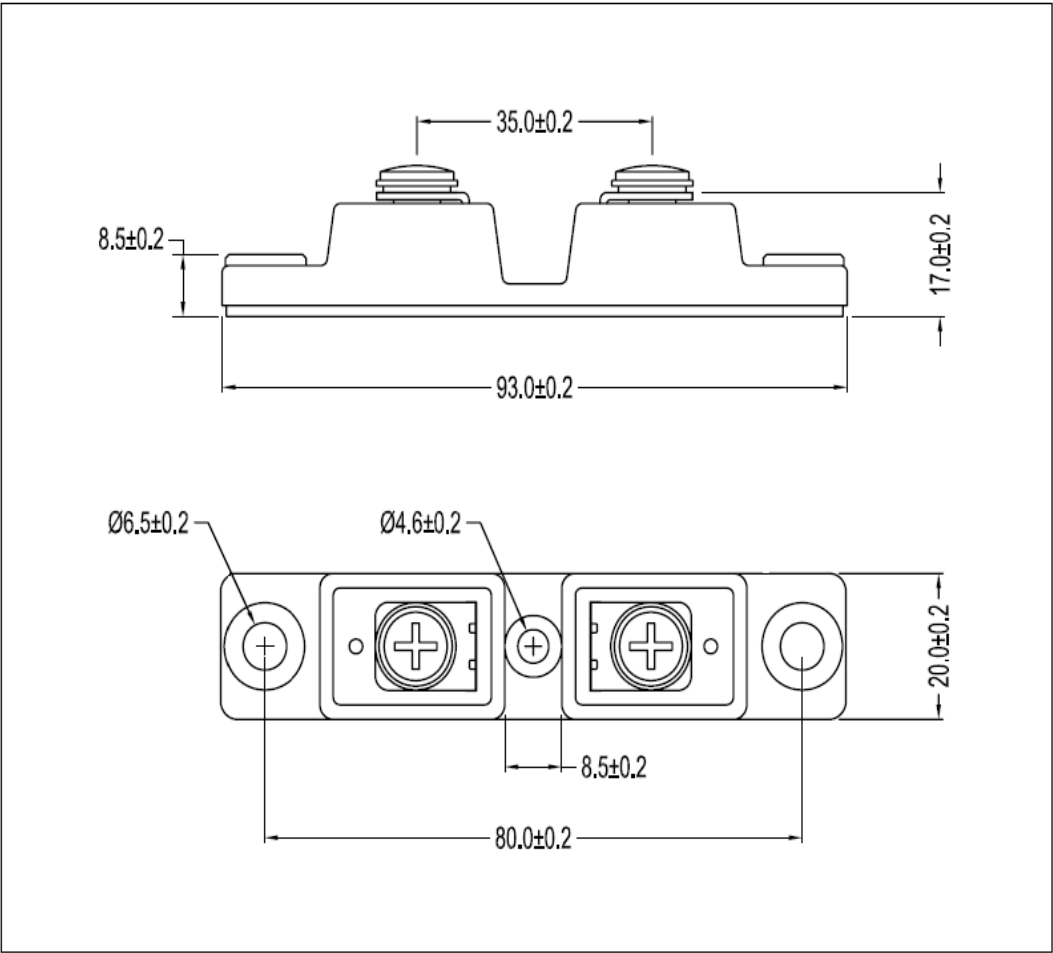


Figure7. Package Outline