

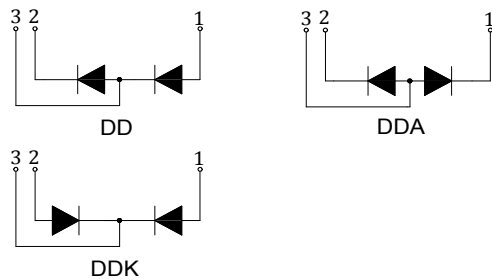
Key Parameters

V_{RRM}	2400-2800	V
$I_{F(AV)}$	1000	A
I_{FSM}	32	kA
V_{FO}	0.8	V
r_T	0.18	mΩ

Applications

- Various rectifiers
- DC supply for PWM inverter
- Industry converter

- 3000 V_{RMS} isolating voltage with baseplate
- High power capability
- Industrial standard package


Voltage Ratings

Module Type	$V_{RRM}(V)$	Test Conditions
TMDD 1000	2400 2600 2800	$T_{vj} = 25, 150\text{ }^{\circ}\text{C}$ $I_{RRM} = 80\text{ mA}$ $V_R = V_{RRM}$ $t_p = 10\text{ ms}$ $V_{RSM} = V_{RRM} + 100$


Thermal & Mechanical Data

Symb.	Parameter	Test Conditions	Min	Type	Max	Unit
R_{thJC}	Thermal Resistance junction to case	sine.180°, Whole Module sine.180° per chip	-	-	0.05 0.025	$^{\circ}\text{C} / \text{W}$
R_{thCH}	Thermal resistance case to heatsink	Whole Module per chip	-	-	0.016 0.008	$^{\circ}\text{C} / \text{W}$
T_{vj}	Maximum junction operating temperature range		-40	-	150	$^{\circ}\text{C}$
T_{stg}	Storage temperature		-40	-	70	$^{\circ}\text{C}$
F	Busbar to module M12 Module to heatsink M8	Mounting torque $\pm 10\%$	- -	18 9	- -	N·m N·m
W	Weight		-	4	-	kg

Current Ratings

Symb.	Parameter	Test Conditions	Min	Type	Max	Unit
$I_{F(AV)}$	Mean On-State Current	Half Sine Wave $T_C=85^{\circ}\text{C}$ Half Sine Wave $T_C=100^{\circ}\text{C}$	- -	- -	1033 850	A A
$I_{F(RMS)}$	RMS On-State Current	$T_C=85^{\circ}\text{C}$	-	-	1622	A
I_{FSM}	Surge On-State Current	10ms, Half Sine Wave, $T_{vj}=150^{\circ}\text{C}$, $V_R=0$	-	-	32.0	kA
I^2t	Limiting load integral	Sine Wave, 10ms	-	-	512	$10^4\text{A}^2\text{s}$

Characteristics

Symb.	Parameter	Test Conditions	Min	Type	Max	Unit
V_{FM}	Peak on-state voltage	$T_{vj} = 25\text{ }^{\circ}\text{C}$, $I_{TM} = 3100\text{ A}$	-	-	1.4	V
I_{RRM}	Reverse leakage current	$T_{vj} = 25\text{ }^{\circ}\text{C}$, $150\text{ }^{\circ}\text{C}$, V_{RRM}	-	-	80	mA
V_{isol}	Isolation voltage	a.c.; 50 Hz; r.m.s. $t=1\text{min}$	-	3000	-	V
		a.c.; 50 Hz; r.m.s. $t=1\text{S}$	-	3600	-	V
V_{FO}	Threshold voltage	$T_{vj} = 150\text{ }^{\circ}\text{C}$	-	-	0.80	V
r_T	Slope resistance	$T_{vj} = 150\text{ }^{\circ}\text{C}$	-	-	0.18	m Ω
Q_{rr}	Slope resistance	$T_{vj} = 150\text{ }^{\circ}\text{C}$	-	4000	-	μC

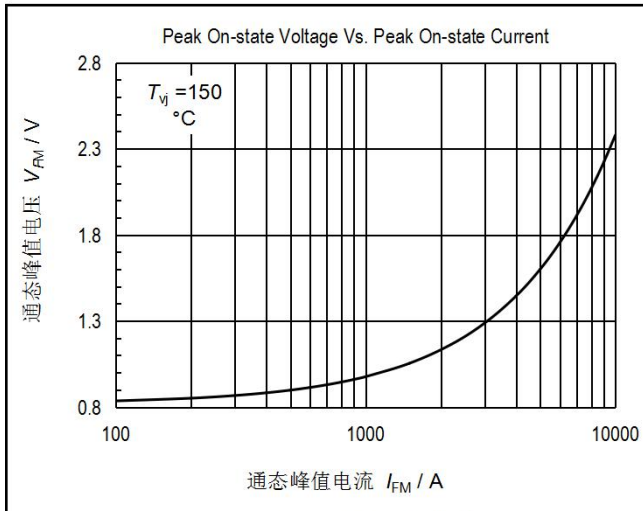


图1. 通态伏安特性曲线

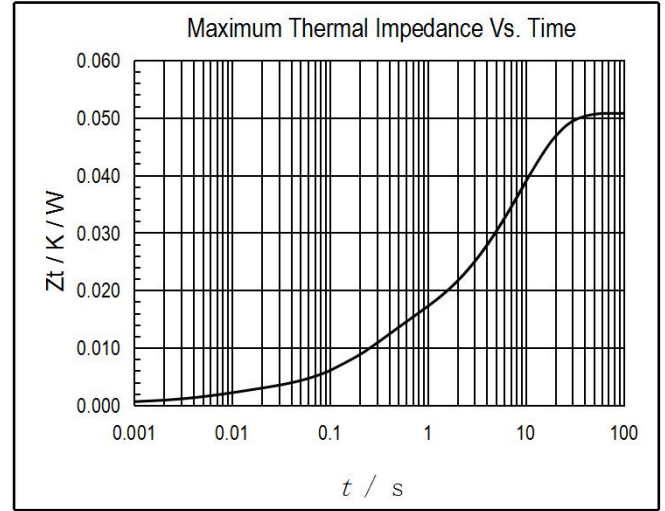


图2. 瞬态热阻抗曲线

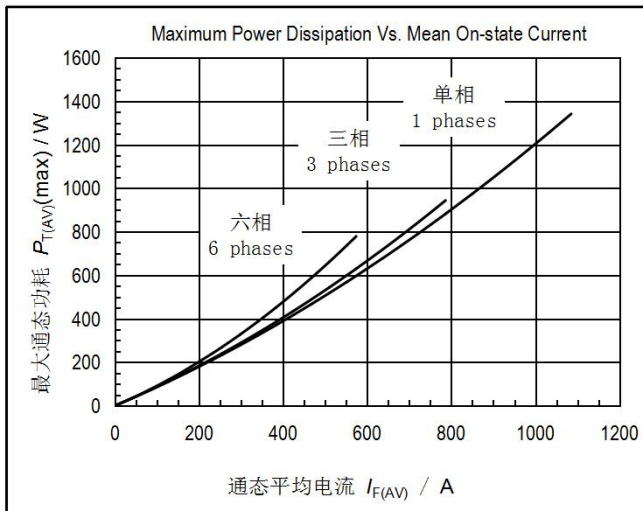


图3. 最大功耗与通态平均电流的关系曲线

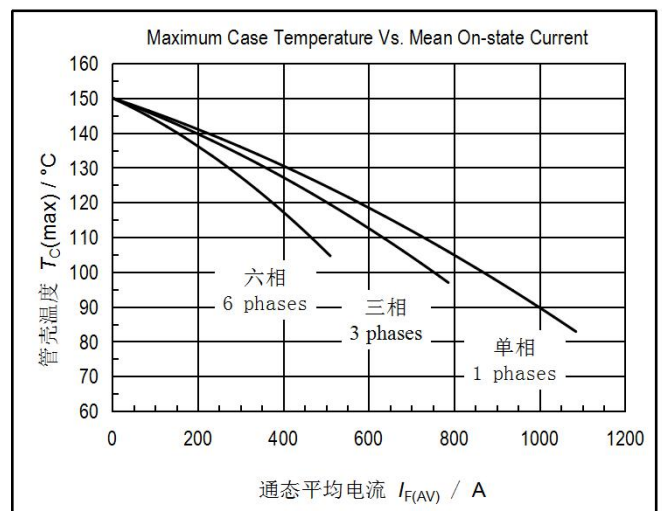


图4. 管壳温度与通态平均电流的关系曲线

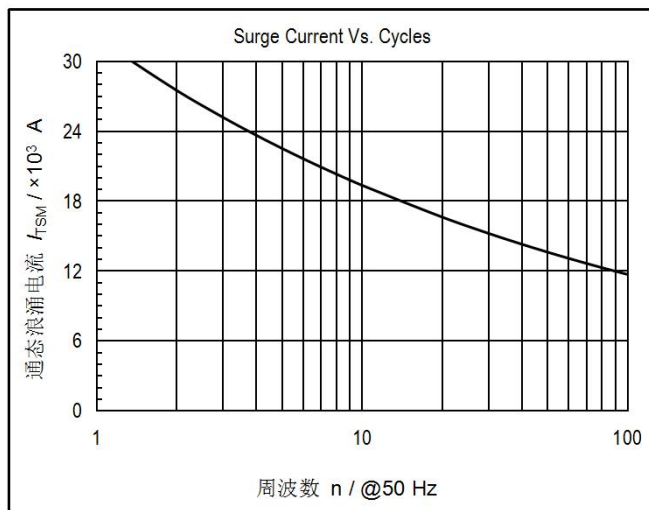


图5. 通态浪涌电流与周波数的关系曲线

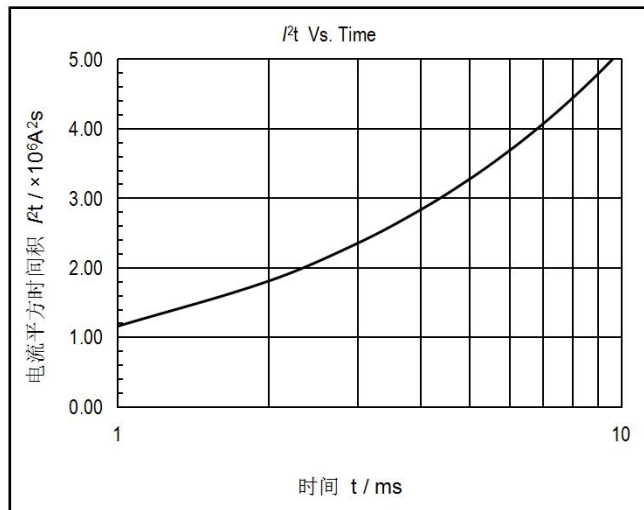


图6. I^2t 特性曲线

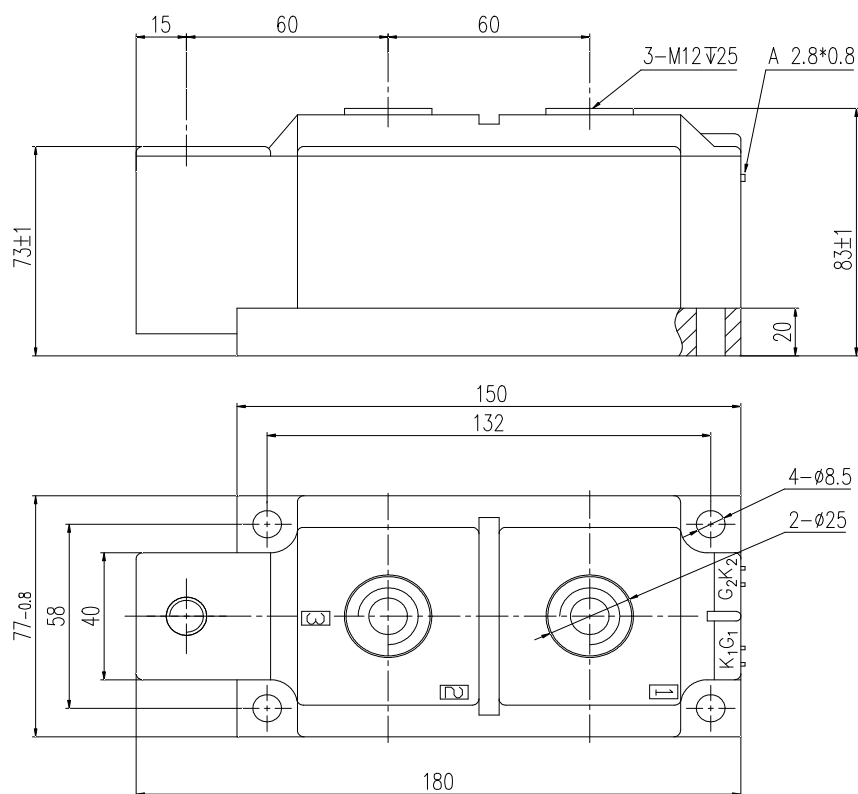


图7. 外形图

株洲中车时代半导体有限公司

Zhuzhou CRRC Times Semiconductor Co., LTD

地 址	Address	湖南省株洲市田心工业园
邮 编	Zipcode	412001
电 话	Telephone	0731 - 28498268, 28498124
传 真	Fax	0731 - 28498851, 28498494
电子邮箱	Email	sbu@crzczic.cc
网 址	Web Site	www.sbu.crrczic.cc