

Key Parameters

V_{RRM}	3000~3600	V
$I_{F(AV)}$	630	A
I_{FSM}	13	kA
V_{FO}	0.88	V
r_F	0.46	mΩ

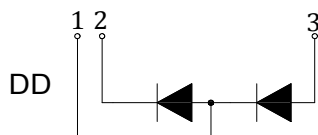
Applications

- Bridge Circuits
- Industry converter
- Battery Supplies

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

Voltage Ratings

Device Type	V_{RRM} (V)	Test Conditions
TMDD 630		$T_{vj} = 25, 150\text{ }^{\circ}\text{C}$ $I_{RRM} = 150\text{mA}$
	3000	$V_R = V_{RRM}$ $t_p = 10\text{ ms}$
	3400	
	3600	$V_{RSM} = V_{RRM} + 100$


Thermal & Mechanical Data

Symb.	Parameter	Test Conditions	Min	Type	Max	Unit
R_{thJC}	Thermal Resistance junction to case	sine.180°,per diode/per module DC,per diode/per module	-	-	0.065 / 0.0325 0.062 / 0.031	K / W
R_{thCH}	Thermal resistance case to heatsink	Mounting surface smooth flat and greased	-	-	0.02	K / W
T_{vj}	Maximum junction operating temperature range□		-40	-	150	$^{\circ}\text{C}$
T_{stg}	Storage temperature		-40	-	130	$^{\circ}\text{C}$
F	Busbar to module M10	Mounting torque $\pm 10\%$	-	12	-	N·m
	Module to heatsink M6		-	6	-	N·m
W	Weight		-	1.5	-	kg

Current Ratings

Symb.	Parameter	Test Conditions	Min	Type	Max	Unit
$I_{F(AV)}$	Mean On-State Current	Half Sine Wave $T_C=85^{\circ}\text{C}$	-	-	627	A
		Half Sine Wave $T_C=100^{\circ}\text{C}$	-	-	518	A
$I_{F(RMS)}$	RMS On-State Current	$T_C=100^{\circ}\text{C}$	-	-	984	A
I_{FSM}	Surge On-State Current	10ms, Half Sine Wave, $T_{vj}=150^{\circ}\text{C}$, $V_R=0$	-	-	13	kA
I^2t	Limiting load integral	Sine Wave, 10ms	-	-	84.5	$10^4\text{A}^2\text{s}$

Characteristics

Symb.	Parameter	Test Conditions	Min	Type	Max	Unit
V_{FM}	Peak on-state voltage	$T_{vj} = 25\text{ }^{\circ}\text{C}$, $I_{FM} = 800\text{ A}$ $T_{vj} = 150\text{ }^{\circ}\text{C}$, $I_{FM} = 2000\text{ A}$	-	-	1.3 1.85	V V
I_{RRM}	Reverse leakage current	$T_{vj} = 150\text{ }^{\circ}\text{C}$, $V_{RRM} = 3600\text{V}$	-	-	150	mA
V_{isol}	Isolation voltage	a.c.50 Hz; r.m.s. $t=1\text{min}$ a.c.50 Hz; r.m.s. $t=1\text{s}$	-	3000 3600	-	V
V_{FO}	Threshold voltage	$T_{vj} = 150\text{ }^{\circ}\text{C}$	-	-	0.88	V
r_F	Slope resistance	$T_{vj} = 150\text{ }^{\circ}\text{C}$	-	-	0.46	m Ω

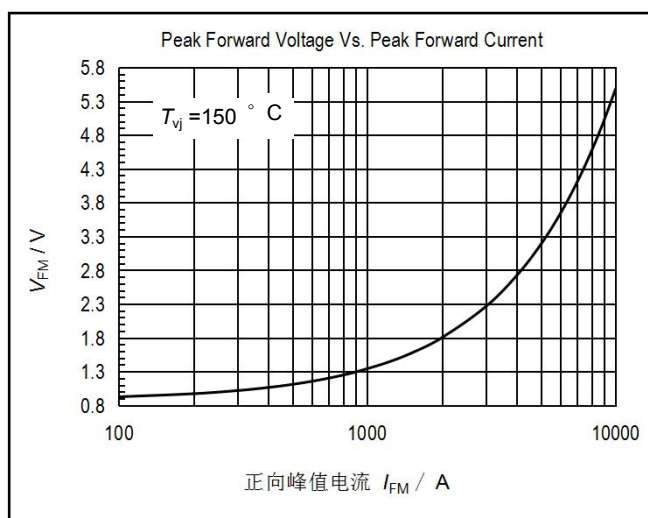


图1. 正向伏安特性曲线

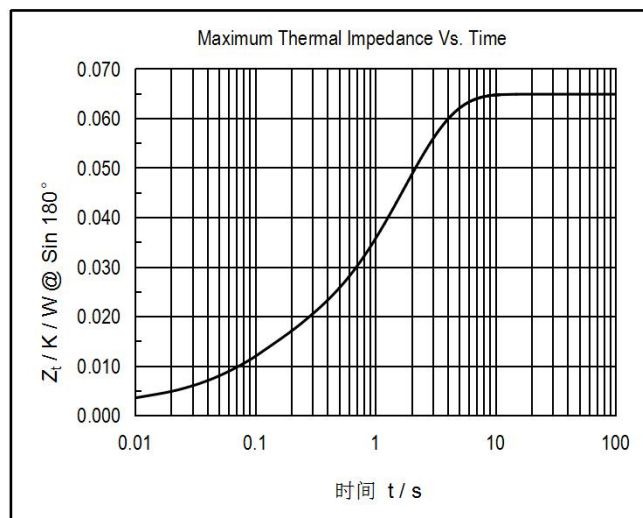


图2. 瞬态热阻抗曲线

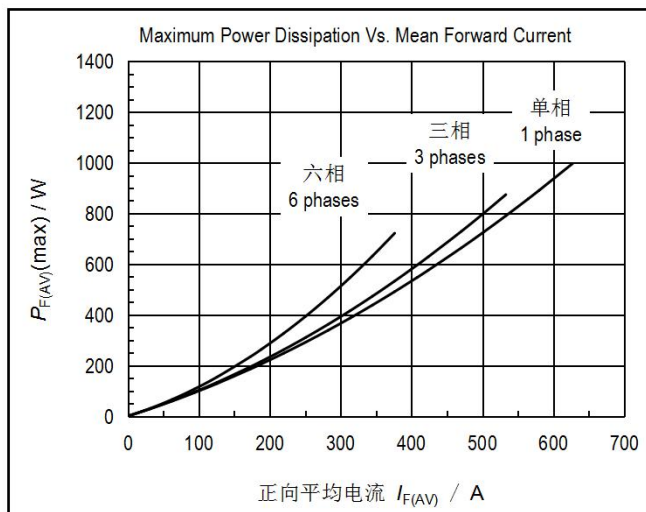


图3. 最大正向功耗与正向平均电流的关系曲线

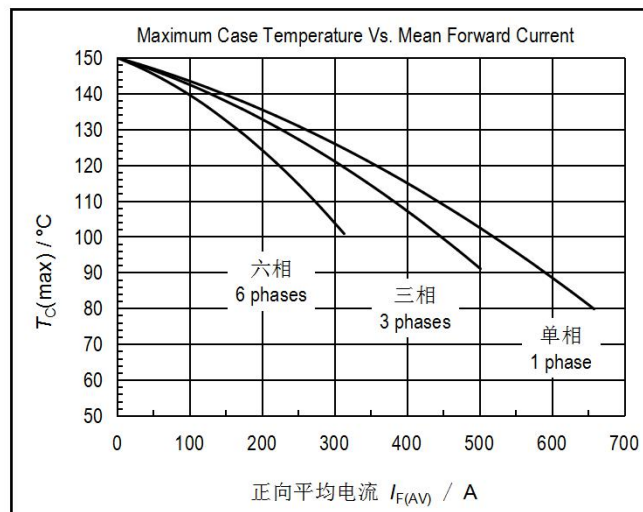


图4. 管壳温度与正向平均电流的关系曲线

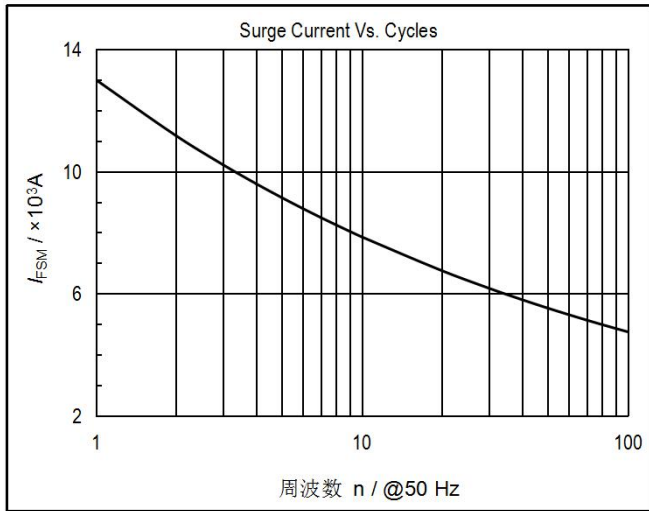


图5. 正向浪涌电流与周波数的关系曲线

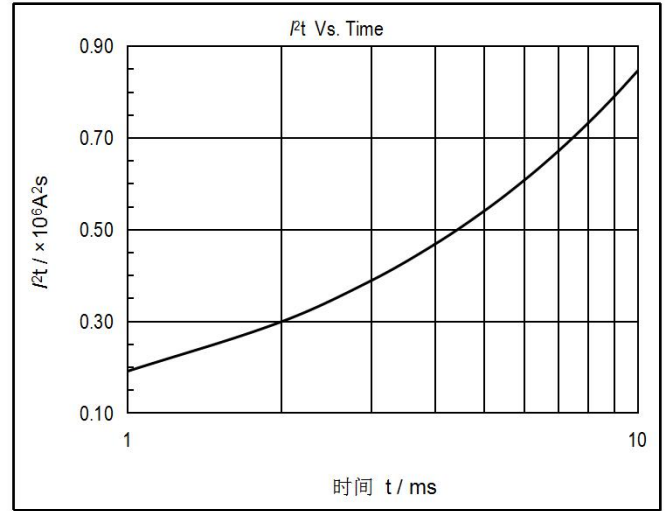


图6. I^2t 特性曲线

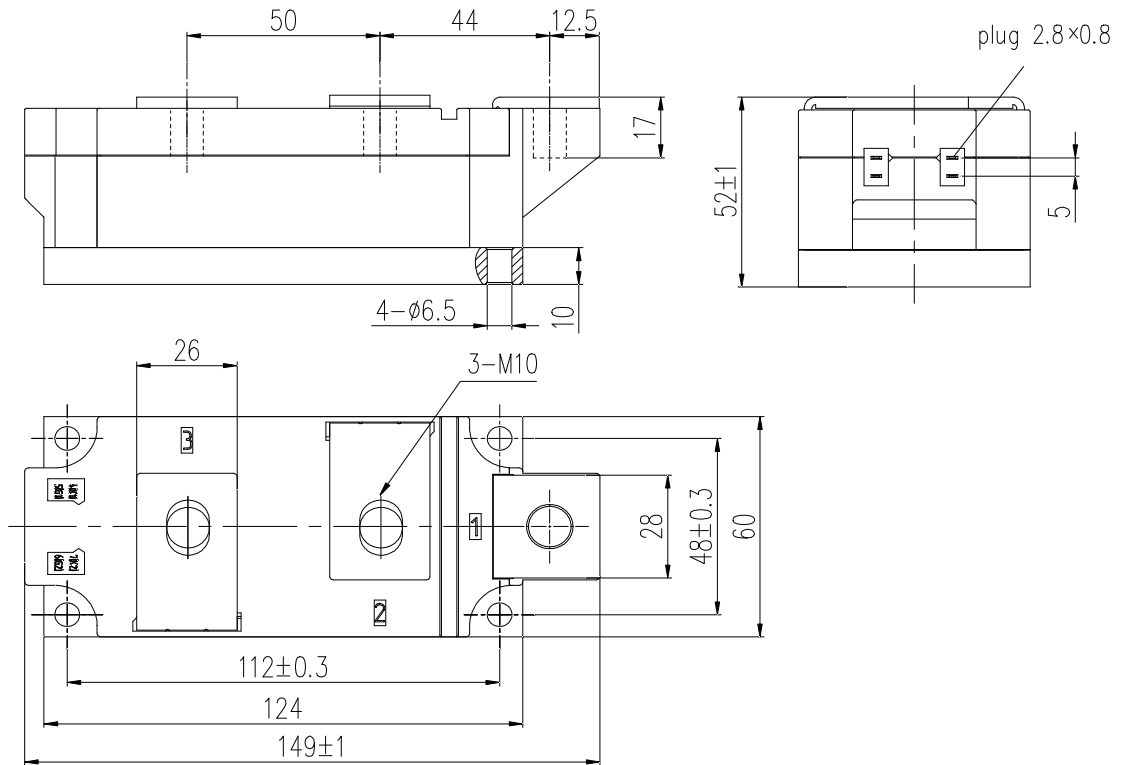


图7. 外形图

株洲中车时代半导体有限公司

ZHUZHOU CRRC TIMES SEMICONDUCTOR Co., LTD.

Address Tianxin, ZhuZhou City, Hunan Province, China

Zipcode 412001

Telephone 0731 - 28498268, 28498124

Fax 0731 - 28498851, 28498494

Email sbu@crrezic.cc

Web Site www.sbu.crrezic.cc