中国中车 CRRC

Ver：2020A

TMDD 360-22

Diodes Modules

Key Parameters

V_{RRM}	1800-2200	V
$I_{F(AV)}$	360	A
I_{FSM}	11	kA
V_{FO}	0.82	V
r_T	0.433	mΩ

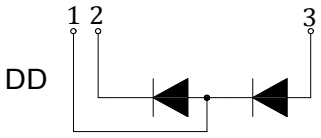
Applications

- Bridge Circuits
- Industry converter
- Battery Supplies

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

Voltage Ratings

Module Type	V_{RRM}(V)	Test Conditions
TMDD 360	1800 2000 2200	T_{vj} = 25， 150 °C I_{RRM} = 50 mA $V_R = V_{RRM}$ t_p = 10 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°,per diode/per module DC,per diode/per module	-	-	0.11 / 0.055 0.104 / 0.052	°C / W
R_{thCH}	Thermal resistance case to heatsink	Mounting surface smooth flat and greased per module	-	-	0.02	°C / W
T_{vj}	Maximum junction operating temperature range		-40	-	150	°C
T_{stg}	Storage temperature		-40	-	130	°C
F	Busbar to module M8	Mounting torque ± 10 %	-	9	-	N·m
	Module to heatsink M6		-	6	-	N·m
W	Weight		-	0.8	-	Kg

Current Ratings

Symb.	Parameter	Test Conditions	Min	Type	Max	Unit
$I_{F(AV)}$	Mean On-State Current	Half Sine Wave T_C=100°C	-	-	360	A
$I_{F(RMS)}$	RMS On-State Current	T_C =100°C	-	-	565	A
I_{FSM}	Surge (non-repetitive) On-State Current	10ms, Half Sine Wave, T_C =150℃, V_R = 0	-	-	11.0	kA
I^2t	Limiting load integral	Sine Wave, 10ms	-	-	60.5	10^4A^2s

Characteristics

Symb.	Parameter	Test Conditions	Min	Type	Max	Unit
V_{FM}	Peak on-state voltage	T_{vj}=25°C， I_{FM}= 1500 A	-	-	1.6	V
I_{RRM}	Forward leakage current	T_{vj}= 25 °C， 150 °C， 100%V_{RRM}	-	-	50	mA
V_{isol}	Isolation voltage	a.c.; 50 Hz; r.m.s. t=1min	-	-	3000	V
		a.c.; 50 Hz; r.m.s. t=1s	-	-	3600	V
V_{FO}	Threshold voltage	T_{vj}= 150 °C	-	-	0.82	V
r_T	Slope resistance	T_{vj}= 150 °C	-	-	0.433	mΩ
a	Vibration resisrance	*f* = 50 HZ	-	50	-	m/S^2

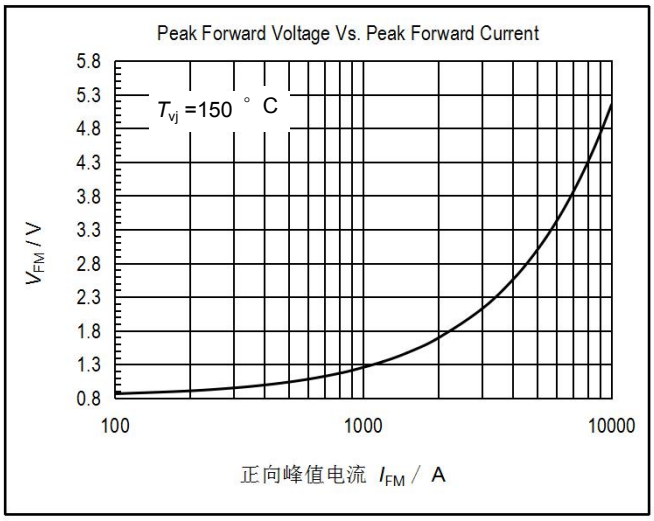


图1. 正向伏安特性曲线

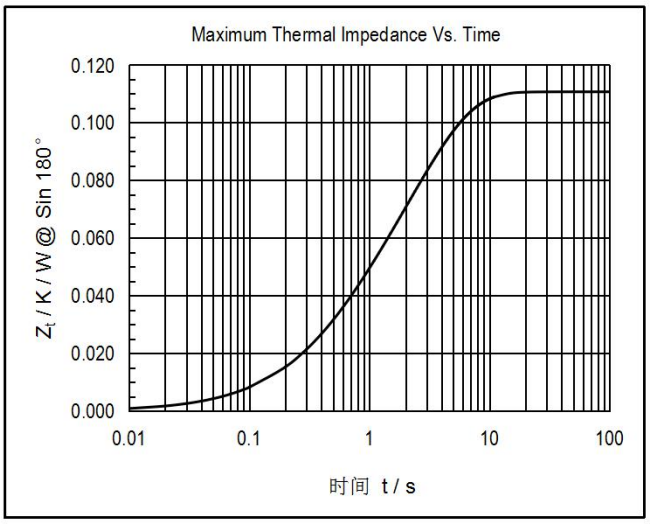


图2. 瞬态热阻抗曲线

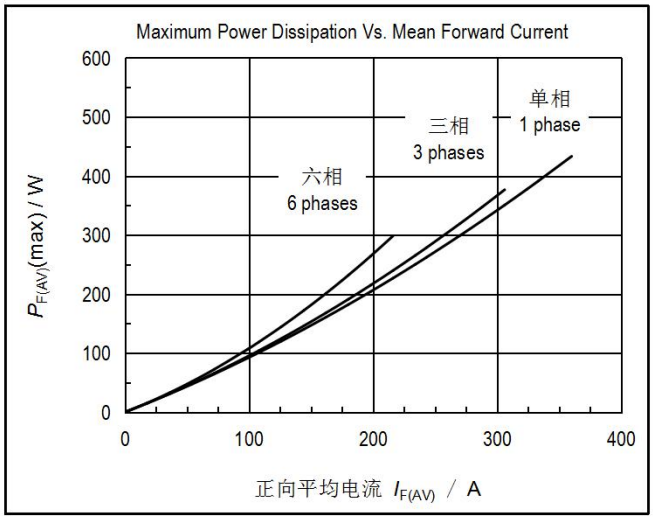


图3. 最大正向功耗与正向平均电流的关系曲线

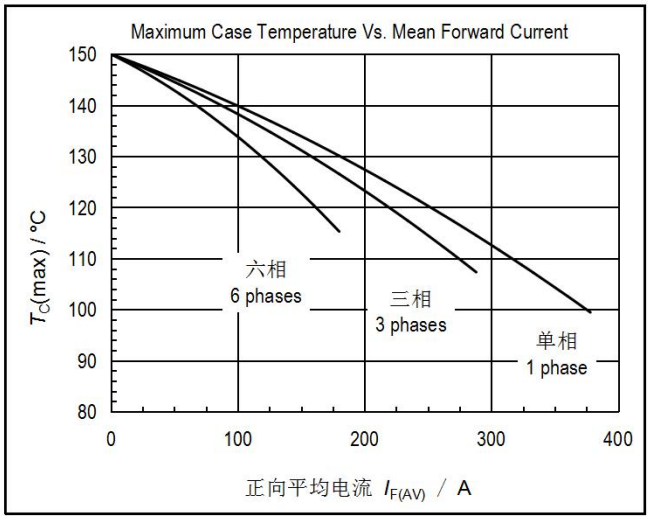


图4. 管壳温度与正向平均电流的关系曲线

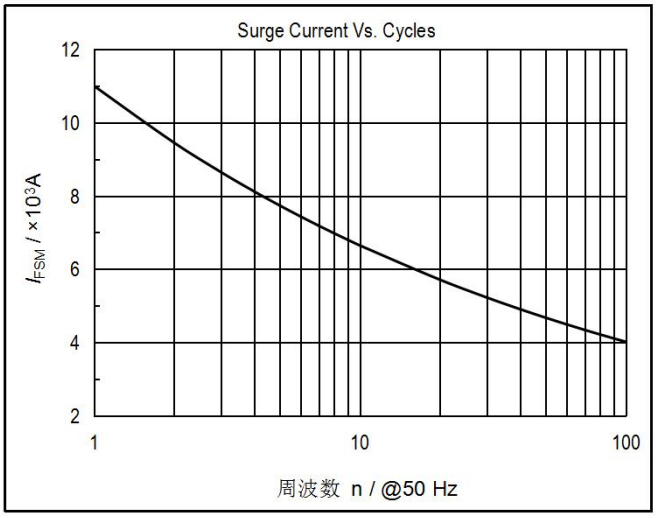


图5. 正向浪涌电流与周波数的关系曲线

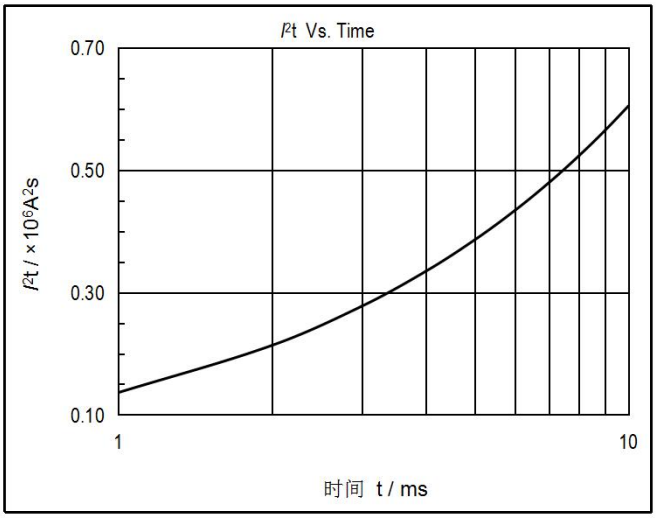


图6. I^2t 特 性 曲 线

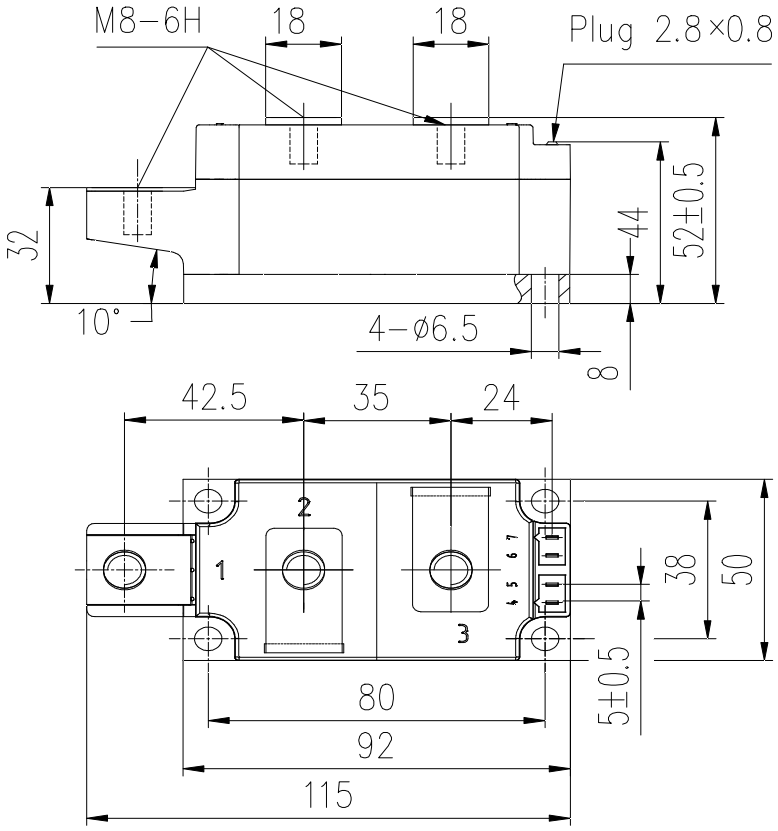


图7. 外形图

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