

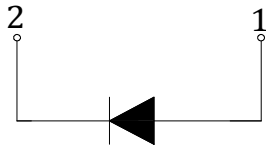
Key Parameters

V_{RRM}	3600-4400	V
$I_{F(AV)}$	430	A
I_{FSM}	12	kA
V_{FO}	0.94	V
r_T	0.53	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
TMDO 430	4400	$T_{vj} = 25, 150\text{ }^{\circ}\text{C}$ $I_{RRM} = 60\text{ mA}$ $V_R = V_{RRM}$ $t_p = 10\text{ ms}$ $V_{RSM} = V_{RRM} + 100$


Thermal & Mechanical Data

Symb.	Parameter	Test Conditions	Min	Type	Max	Unit
R_{thJC}	Thermal Resistance Junction to Case	sine.180°,per module DC operation ,per per module	-	-	0.077 0.075	$^{\circ}\text{C} / \text{W}$
R_{thCH}	Thermal resistance case to heatsink	Mounting surface smooth flat and greased	-	-	0.02	$^{\circ}\text{C} / \text{W}$
T_{vj}	Maximum junction operating temperature range		-40	-	125	$^{\circ}\text{C}$
T_{stg}	Storage temperature		-40	-	125	$^{\circ}\text{C}$
F	Busbar to module M10 Module to heatsink M6	Mounting torque $\pm 10\%$	- -	12 5	- -	N·m N·m
W	Weight		-	900	-	g

Current Ratings

Symb.	Parameter	Test Conditions	Min	Type	Max	Unit
$I_{F(AV)}$	Mean On-State Current	Half Sine Wave $T_C=100^{\circ}\text{C}$	-	-	430	A
$I_{F(RMS)}$	RMS On-State Current	$T_C=100^{\circ}\text{C}$	-	-	675	A
I_{FSM}	Surge (non-repetitive) On-State Current	10ms, Half Sine Wave, $T_C=150^{\circ}\text{C}$, $V_R = 0$	-	-	12.0	kA
I^2t	Limiting load integral	Sine Wave, 10ms	-	-	72	$10^4\text{A}^2\text{s}$

Characteristics

Symb.	Parameter	Test Conditions	Min	Type	Max	Unit
V_{FM}	Peak on-state voltage	$T_{vj}=150\text{ }^{\circ}\text{C}$, $I_{TM}=1200\text{ A}$	-	-	1.73	V
I_{RRM}	Forward leakage current	$T_{vj}=25\text{ }^{\circ}\text{C}$, $150\text{ }^{\circ}\text{C}$, $100\%V_{RRM}$	-	-	60	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	$T_{vj}=150\text{ }^{\circ}\text{C}$	-	-	0.94	V
r_T	Slope resistance	$T_{vj}=150\text{ }^{\circ}\text{C}$	-	-	0.53	m Ω
Q_{rr}	Reverse recover charge	$T_{vj}=150\text{ }^{\circ}\text{C}$	-	3000	-	μC
a	Vibration resistance	$f=50\text{ HZ}$	-	50	-	m/S ²

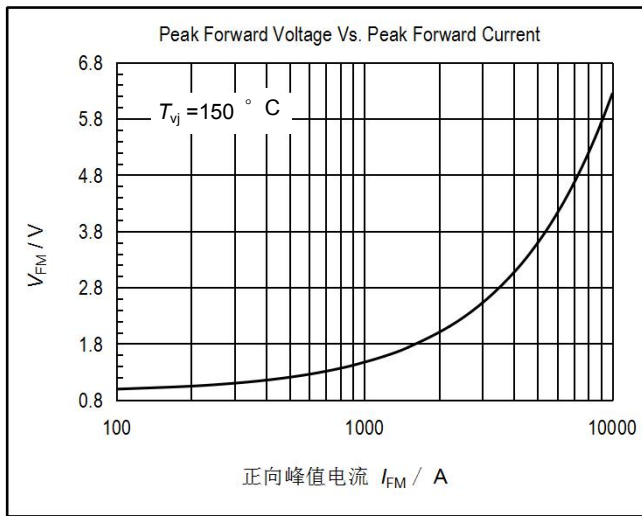


图1. 正向伏安特性曲线

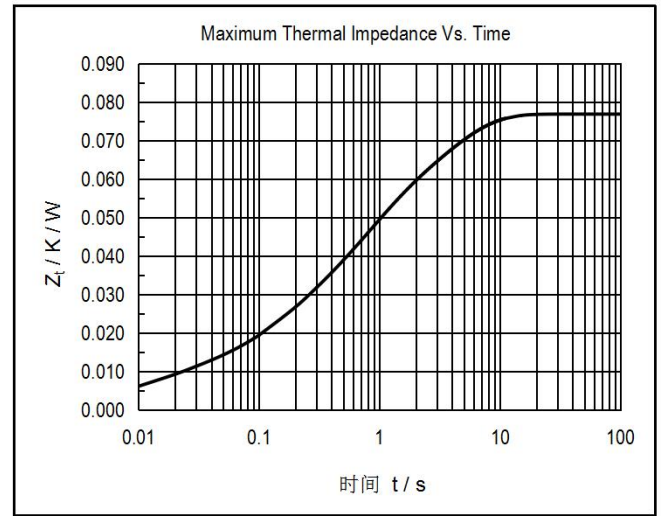


图2. 瞬态热阻抗曲线

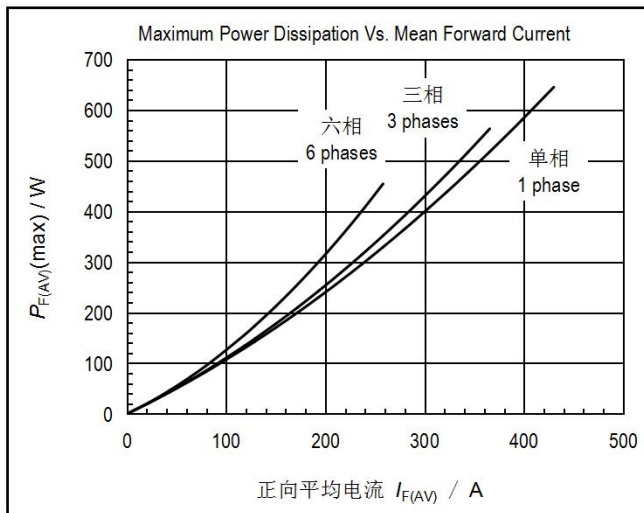


图3. 最大正向功耗与正向平均电流的关系曲线

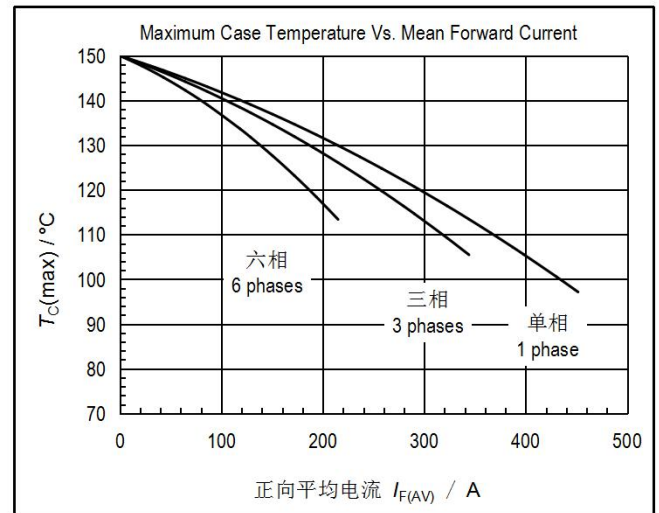


图4. 管壳温度与正向平均电流的关系曲线

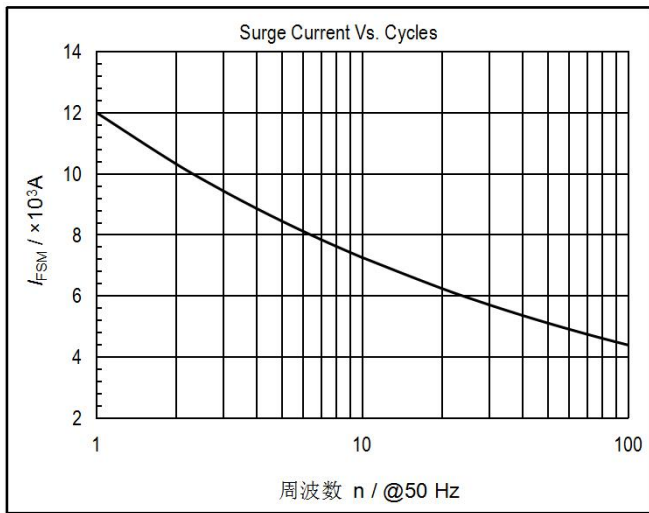


图5. 正向浪涌电流与周波数的关系曲线

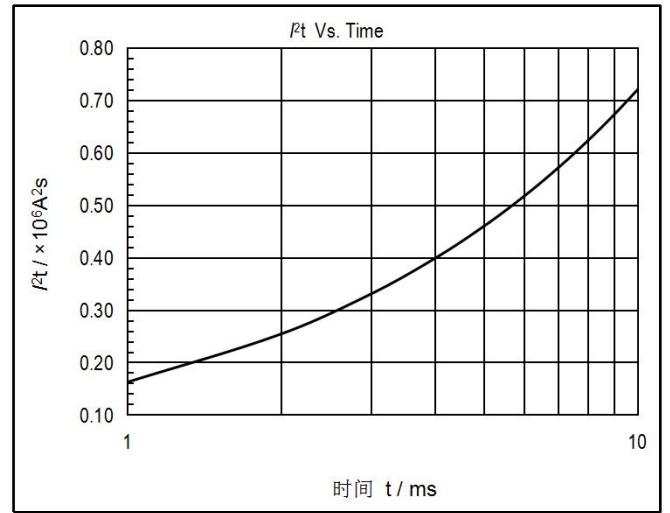


图6. I^2t 特性曲线

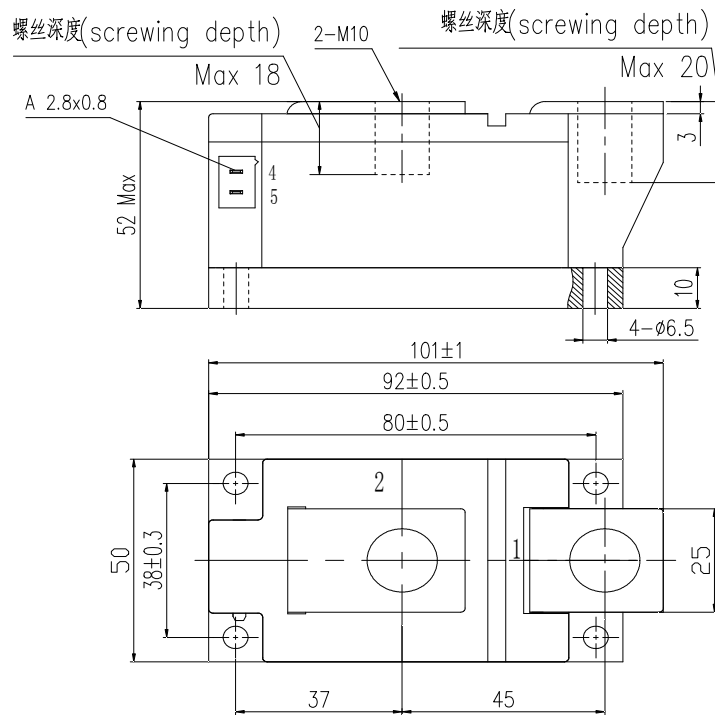


图7. 外形图(outline)

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