

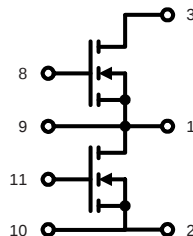
Dual Power MOSFET Module

VMM 1500-0075P

$V_{DSS} = 75 \text{ V}$
 $I_{D25} = 1500 \text{ A}$
 $R_{DS(on)} = 0.55 \text{ m}\Omega$

Phaseleg Configuration

Preliminary data



MOSFET T1 + T2

Symbol	Conditions	Maximum Ratings	
V_{DSS}	$T_{VJ} = 25^{\circ}\text{C}$ to 150°C	75	V
V_{GS}		± 20	V
I_{D25}	$T_C = 25^{\circ}\text{C}$ ①	1500	A
I_{D80}	$T_C = 80^{\circ}\text{C}$ ①	1200	A
I_{F25}	(diode) $T_C = 25^{\circ}\text{C}$ ①	1500	A
I_{F80}	(diode) $T_C = 80^{\circ}\text{C}$ ①	1100	A

Features

- Trench MOSFETs
 - low $R_{DS(on)}$
 - optimized intrinsic reverse diode
- package
 - low inductive current path
 - screw connection to high current main terminals
 - use of non interchangeable connectors for auxiliary terminals possible
 - Kelvin source terminals for easy drive
 - isolated DCB ceramic base plate

Symbol	Conditions	Characteristic Values (T _{VJ} = 25°C, unless otherwise specified)			
		min.	typ.	max.	
R _{DSon}	V _{GS} = 10 V; I _D = I _{D80}		0.55	0.8 mΩ	
V _{GStH}	V _{DS} = 20 V; I _D = 10 mA	2		4 V	
I _{DSS}	V _{DS} = V _{DSS} ; V _{GS} = 0 V; T _{VJ} = 25°C T _{VJ} = 125°C		1.5	0.15 mA mA	
I _{GSS}	V _{GS} = ±20 V; V _{DS} = 0 V			1.5 μA	
Q _g Q _{gs} Q _{gd}	} V _{GS} = 10 V; V _{DS} = 60 V; I _D = 500 A		2480	nC	
				330	nC
				940	nC
t _{d(on)} t _r t _{d(off)} t _f	} V _{GS} = 10 V; V _{DS} = 30 V; I _D = 250 A; R _G = 1 Ω		60	ns	
				170	ns
				320	ns
				200	ns
V _F	(diode) I _F = 750 A; V _{GS} = 0 V		1.2	1.6 V	
t _{rr}	(diode) I _F = 200 A; -di/dt = 1000 A/μs; V _{DS} = 30 V		90	ns	
R _{thJC} R _{thJS}	with heat transfer paste		0.12	0.06 K/W K/W	

① additional current limitation by external leads

IXYS reserves the right to change limits, test conditions and dimensions.

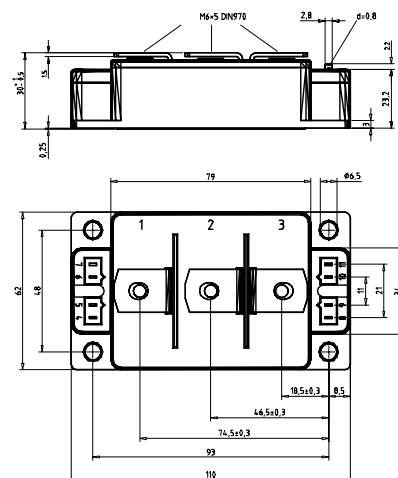
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Module

Symbol	Conditions	Maximum Ratings	
I_{RMS}	per main terminal	500	A
T_{VJ}		-40...+175	°C
T_{stg}		-40...+125	°C
V_{ISOL}	$I_{ISOL} \leq 1 \text{ mA}$; 50/60 Hz	3600	V~
M_d	Mounting torque (M6)	2.25 - 2.75	Nm
	Terminal connection torque (M6)	4.5 - 5.5	Nm

Symbol	Conditions	Characteristic Values		
		min.	typ.	max.
Weight			250	g

Dimensions in mm (1 mm = 0.0394")



Optional accessories for modules

keyed twin plugs
(UL758, style 1385, CSA class 5851,
guide 460-1-1)

- Type ZY180L with wire length 350mm
– for pins 4 (yellow wire) and 5 (red wire)
– for pins 11 (yellow wire) and 10 (red wire)
- Type ZY180R with wire length 350mm
– for pins 7 (yellow wire) and 6 (red wire)
– for pins 8 (yellow wire) and 9 (red wire)