

MRS250.16-413F3D

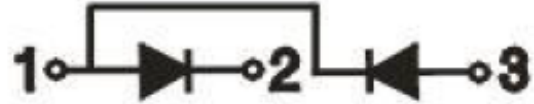
Diodes module

Features:

- Isolated mounting base 2500V~
- Pressure contact technology with increased power cycling capability
- Space and weight savings
- UL recognized, file no. E312789

Typical applications:

- AC/DC motor drives
- Various rectifiers
- DC supply for PWM inverter



Symbol	Characteristics	Test Conditions	Value			Unit
			Min	Typ	Max	
$V_{RSM/DSM}$	Non-repetitive reverse/forward blocking voltage	$T_j = 150^\circ\text{C}$			1700	V
$V_{RRM/DRM}$	Repetitive reverse/forward blocking voltage	$T_j = 150^\circ\text{C}$			1600	V
$I_{F(AV)}$	Forward average current	180° half sine wave 50Hz $T_c = 100^\circ\text{C}$			250	A
$I_{F(RMS)}$	Forward square root current	180° half sine wave 50Hz $T_c = 100^\circ\text{C}$			393	A
I_{RRM} I_{DRM}	Repetitive peak current	at V_{DRM}/V_{RRM} $T_j = 150^\circ\text{C}$			20	mA
I_{FSM}	Forward surge current	10ms half sine wave $V_R = 60\% V_{RRM}$ $T_j = 150^\circ\text{C}$			9.50	kA
$I^2 t$	$I^2 t$ for fusing coordination				451	kA^2s
V_{FO}	Threshold voltage	$T_j = 150^\circ\text{C}$			0.75	V
r_F	Forward slope resistance	$T_j = 150^\circ\text{C}$			0.76	$\text{m}\Omega$
V_{FM}	Peak forward voltage	$T = 25^\circ\text{C}$; $I_T = 750\text{A}$			1.43	V
$R_{th(j-c)}$	Thermal resistance junction to case	Single side cooled per chip			0.140	$^\circ\text{C}/\text{W}$
$R_{th(c-s)}$	Thermal resistance case to sink	Single side cooled per chip			0.040	$^\circ\text{C}/\text{W}$
V_{ISO}	Isolation voltage	50Hz, RMS, $t = 1\text{min}$, $I_{ISO} : 1\text{mA (MAX)}$	2500			V
F_M	Mounting torque - copper plate (M6)			6.0		N·m
	Mounting torque - terminal (M8)			12.0		N·m
T_{stg}	Storage Temperature		-40		150	$^\circ\text{C}$
T_j	Operating Temperature		-40		150	$^\circ\text{C}$
W_t	Weight			860		g
Outline	413F3D					

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Peak forward Voltage Vs. Peak forward Current

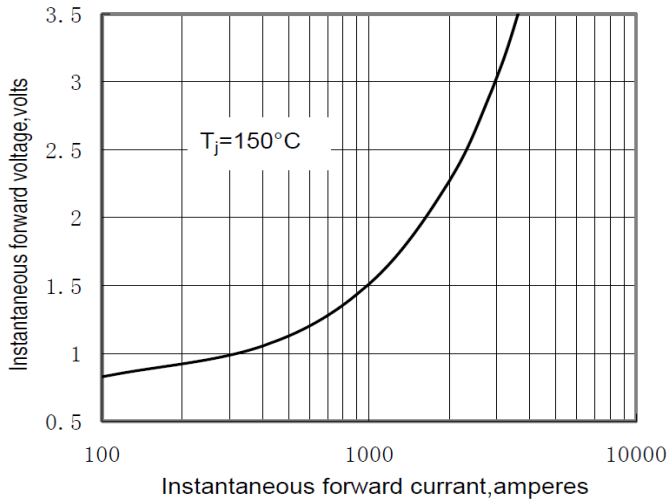


Fig.1

Max. junction To case Thermal Impedance Vs. Time

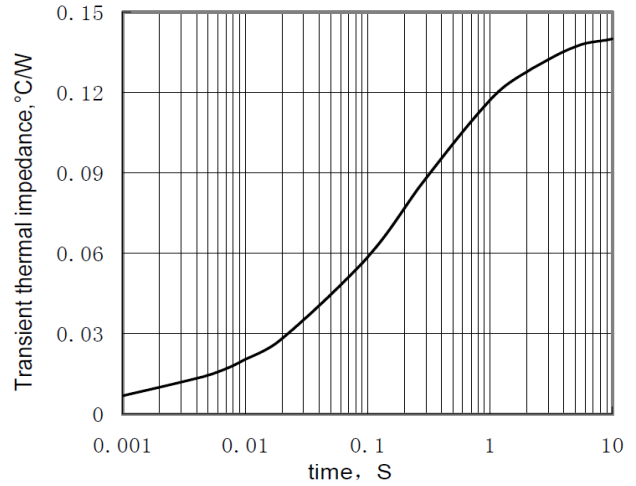


Fig.2

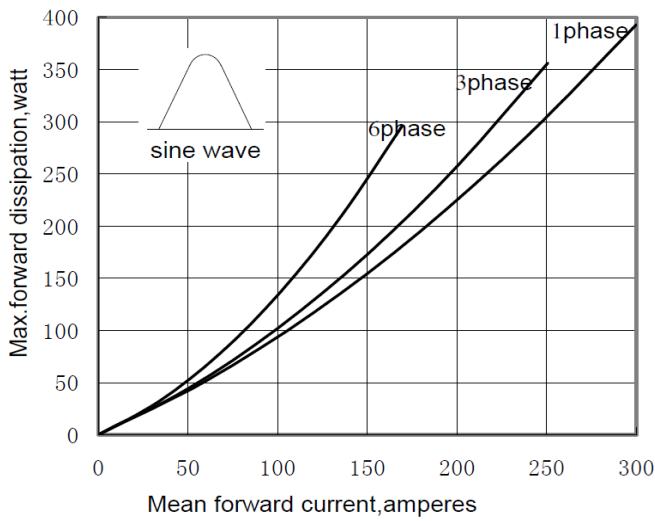


Fig.3

Max. case Temperature Vs. Mean forward Current

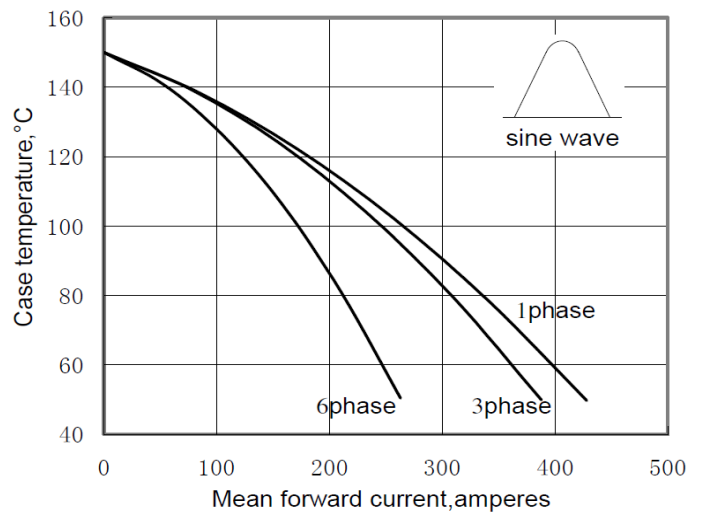


Fig.4

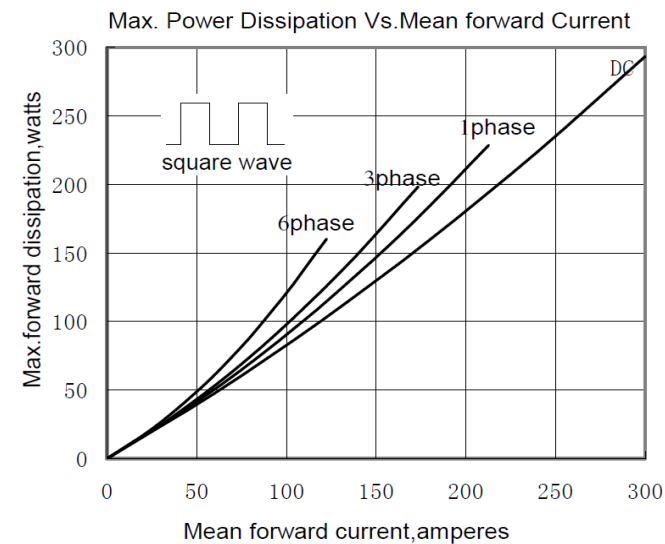


Fig.5

Max. case Temperature Vs. Mean forward Current

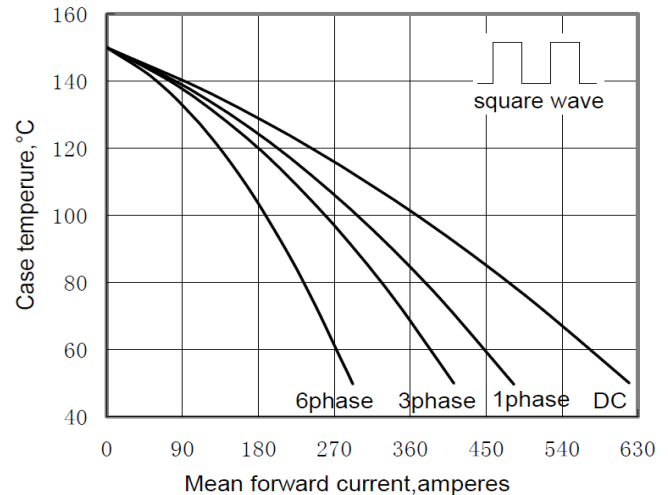


Fig.6

MRS250.16-413F3D

Surge Current Vs.Cycles

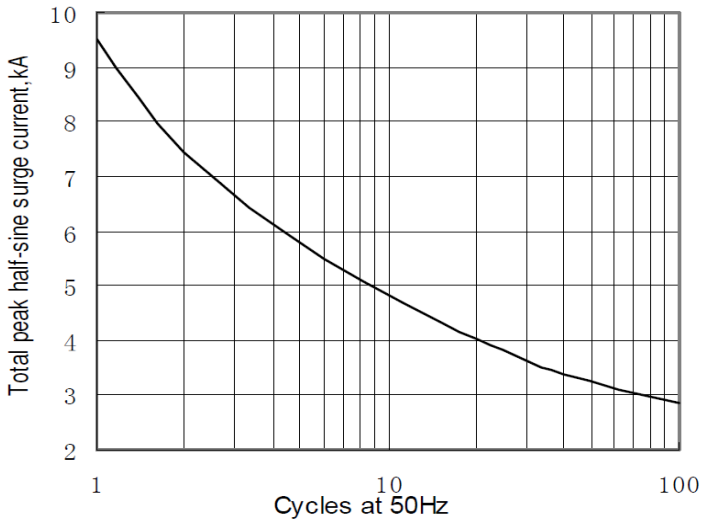


Fig.7

I²t Vs.Time

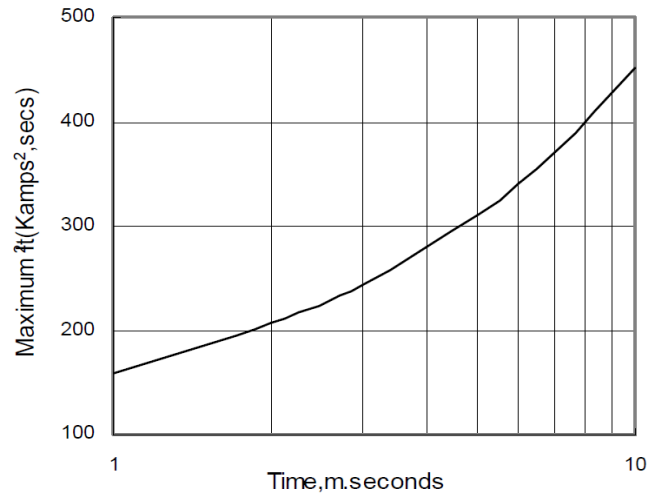
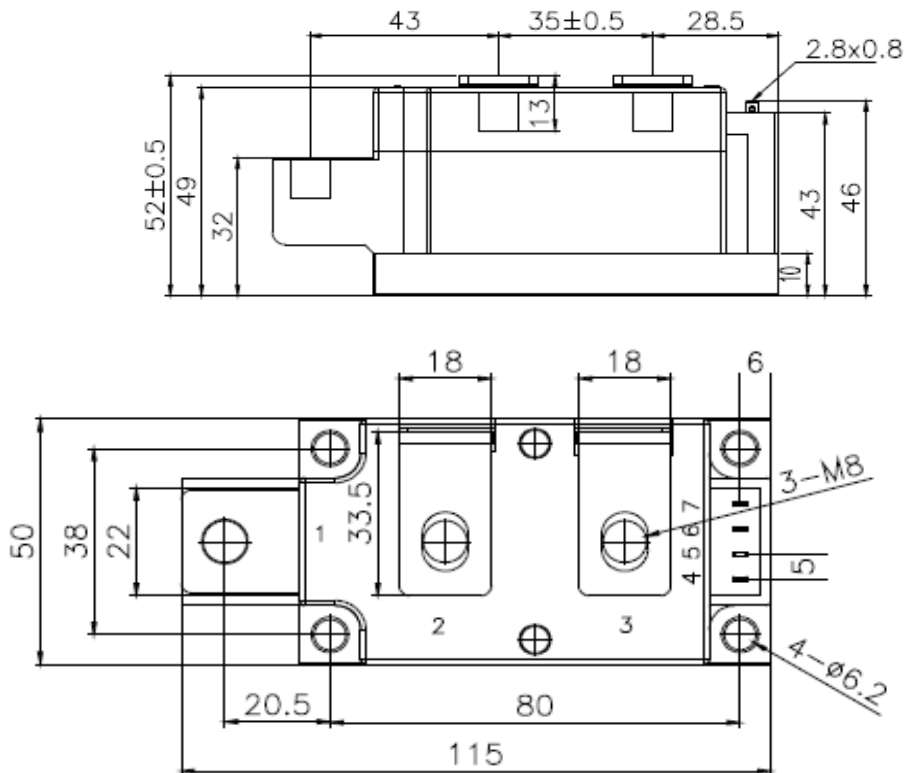


Fig.8

Outline:



(dimensions in mm)

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