

MDS600.18

Diode module

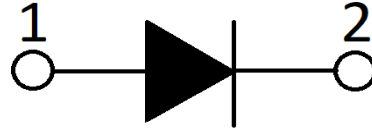
Features:

- International standard package
- Low forward voltage drop
- Isolation voltage 3000V ~
- Simple mounting



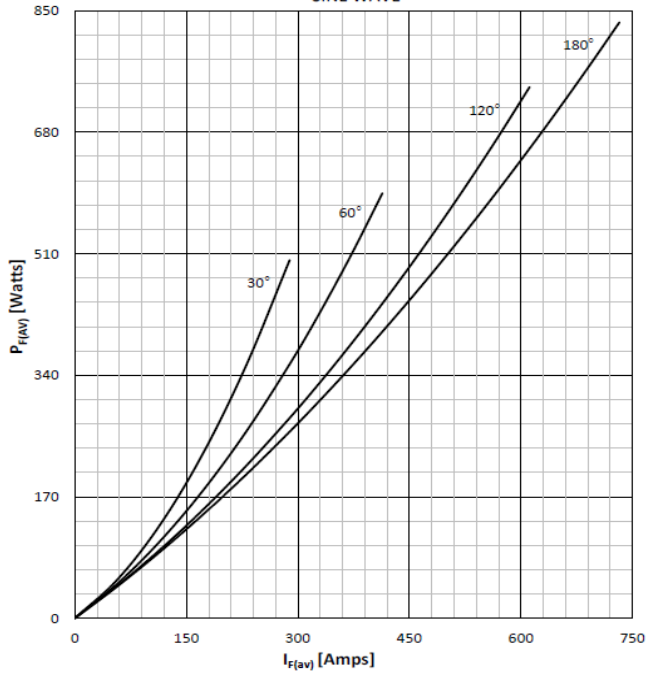
Typical applications:

- Various rectifier power
- AC/DC motor control
- Heater control
- Frequency converters

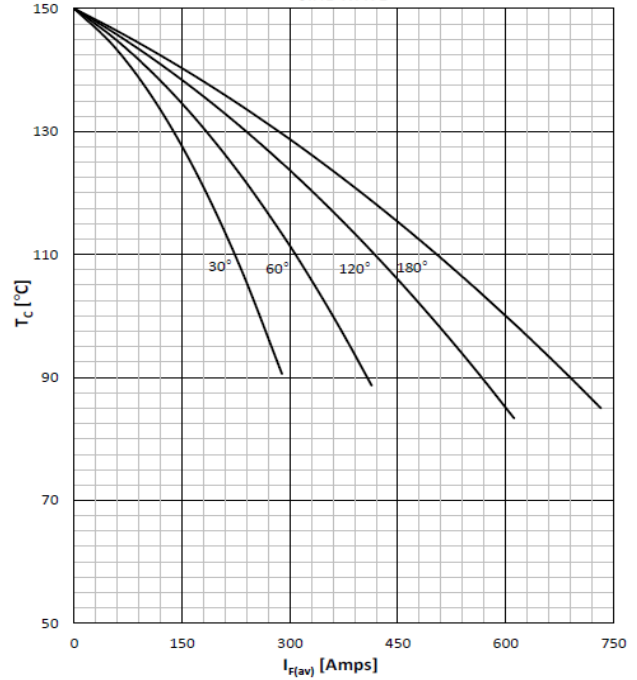


Symbol	Characteristics	Test Conditions	Value			Unit
			Min	Typ	Max	
$V_{RSM/DSM}$	Non-repetitive reverse/forward blocking voltage	$T_j = 150^{\circ}\text{C}$			1900	V
$V_{RRM/DRM}$	Repetitive reverse/forward blocking voltage	$T_j = 150^{\circ}\text{C}$			1800	V
$I_{F(AV)}$	Forward average current	180° half sine wave 50Hz $T_c = 100^{\circ}\text{C}$ (84°C)			600(735)	A
$I_{F(RMS)}$	Forward square root current	180° half sine wave 50Hz $T_c = 100^{\circ}\text{C}$			1150	A
I_{RRM} I_{DRM}	Repetitive peak current	at V_{DRM}/V_{RRM} $T_j = 150^{\circ}\text{C}$			40	mA
I_{FSM}	Forward surge current	10ms half sine wave, $T_j = 25^{\circ}\text{C}$			22000	A
$I^2 t$	$I^2 t$ for fusing coordination	Without reverse Voltage, $T_j = 25^{\circ}\text{C}$			2420000	A ² s
V_{FO}	Threshold voltage	$T_j = 150^{\circ}\text{C}$			0.75	V
r_T	Forward slope resistance	$T_j = 150^{\circ}\text{C}$			0.215	mΩ
V_{FM}	Peak forward voltage	$T_j = 25^{\circ}\text{C}$; $I_T = 2200\text{A}$			1.40	V
$R_{th(j-c)}$	Thermal resistance junction to case	Single side cooled per chip			0.078	°C/W
$R_{th(c-s)}$	Thermal resistance case to sink	Single side cooled per chip			0.02	°C/W
V_{ISO}	Isolation voltage	50Hz, RMS, $t = 1\text{min}$	3000			V
F_M	Mounting torque - copper plate (M5)		4.5		6.0	N·m
	Mounting torque - terminal (M10)		11.0		14.0	N·m
T_{stg}	Storage Temperature		-40		150	°C
T_j	Operating Temperature		-40		150	°C
W_t	Weight			900		g
Outline	B0					

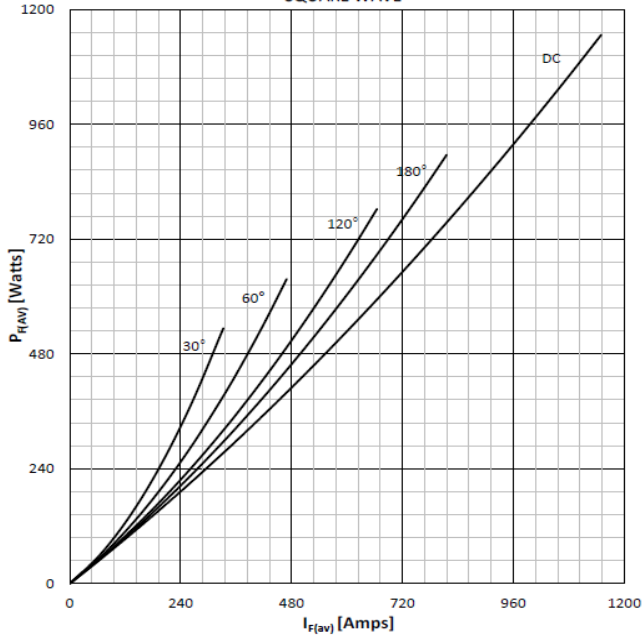
DISSIPATION CHARACTERISTICS
SINE WAVE



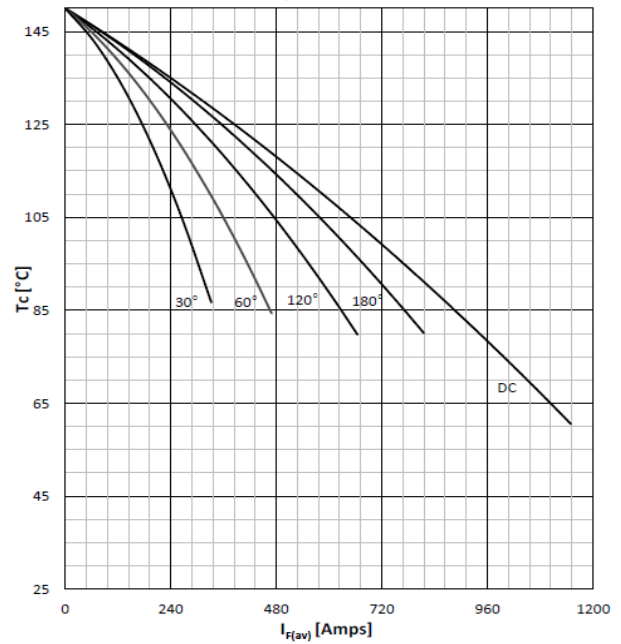
FORWARD CURRENT DERATING CURVE
SINE WAVE



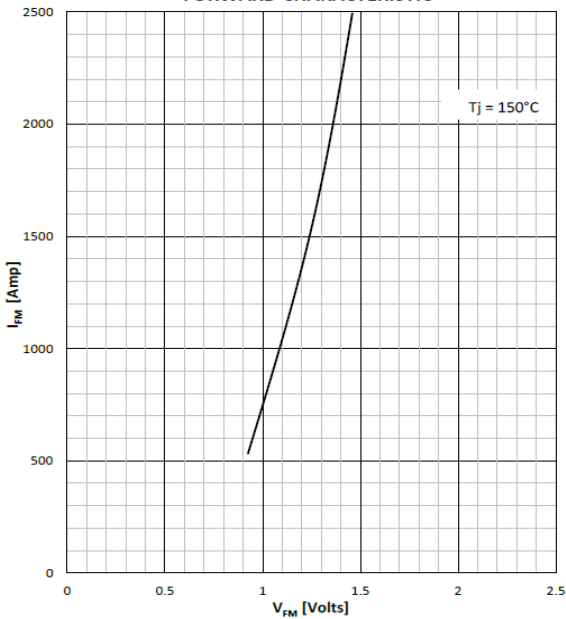
DISSIPATION CHARACTERISTICS
SQUARE WAVE



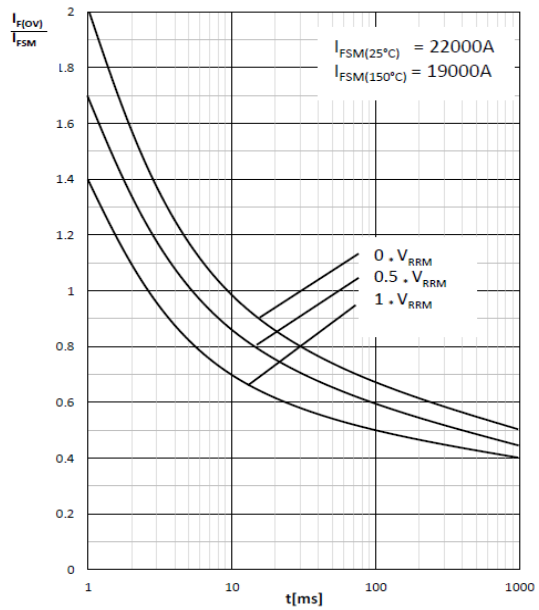
FORWARD CURRENT DERATING CURVE
SQUARE WAVE



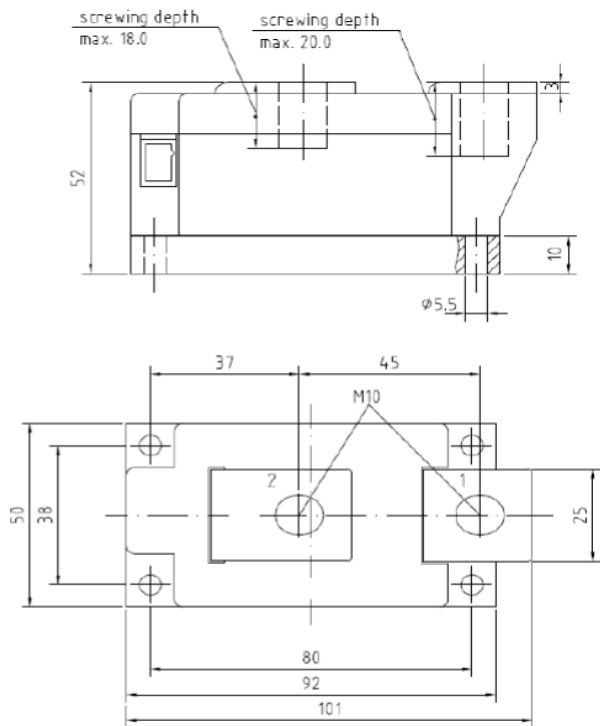
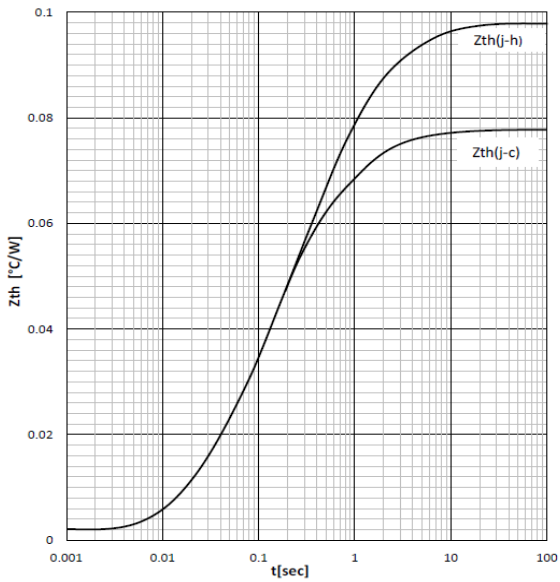
FORWARD CHARACTERISTIC



SURGE CHARACTERISTICS



TRANSIENT THERMAL IMPEDANCE



(dimensions in mm)

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