

MDS535.40

Diode module

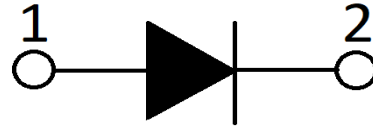
Features:

- International standard package
- Low forward voltage drop
- Simple mounting



Typical applications:

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

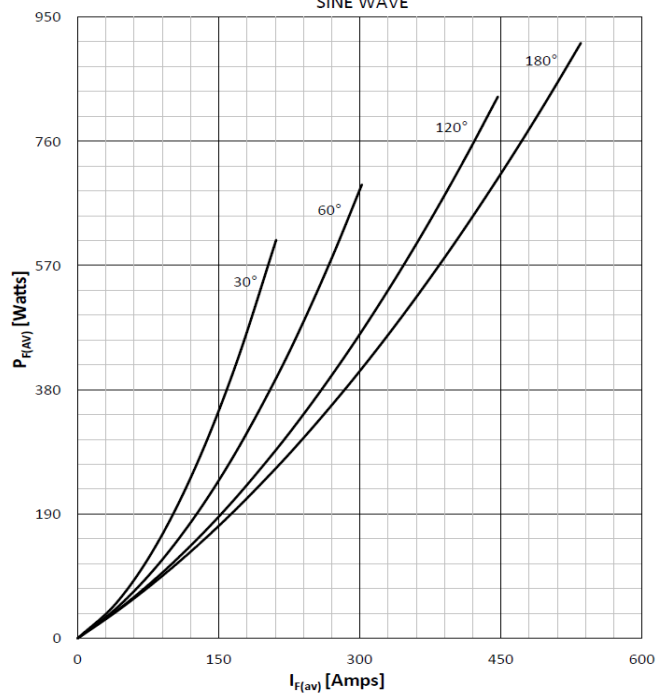


Symbol	Characteristics	Test Conditions	Value			Unit
			Min	Typ	Max	
$V_{RSM/DSM}$	Non-repetitive reverse/forward blocking voltage	$T_j = 150^{\circ}\text{C}$			4100	V
$V_{RRM/DRM}$	Repetitive reverse/forward blocking voltage	$T_j = 150^{\circ}\text{C}$			4000	V
$I_{F(AV)}$	Forward average current	180° half sine wave 50Hz $T_c = 100^{\circ}\text{C}$			535	A
$I_{F(RMS)}$	Forward square root current	180° half sine wave 50Hz $T_c = 100^{\circ}\text{C}$			840	A
I_{RRM}	Repetitive peak current	at V_{DRM}/V_{RRM} $T_j = 150^{\circ}\text{C}$			50	mA
I_{FSM}	Forward surge current	10ms half sine wave, $T_j = 25^{\circ}\text{C}$			15000	A
		10ms half sine wave, $T_j = 150^{\circ}\text{C}$			13000	A
$I^2 t$	$I^2 t$ for fusing coordination	Without reverse Voltage, $T_j = 25^{\circ}\text{C}$			1125000	A^2s
		Without reverse Voltage, $T_j = 150^{\circ}\text{C}$			845000	A^2s
V_{FO}	Threshold voltage	$T_j = 150^{\circ}\text{C}$			0.93	V
r_F	Forward slope resistance	$T_j = 150^{\circ}\text{C}$			0.585	mΩ
V_{FM}	Peak forward voltage	$T_j = 25^{\circ}\text{C}$; $I_F = 1570\text{A}$			1.70	V
$R_{th(j-c)}$	Thermal resistance junction to case	Single side cooled per module			0.055	$^{\circ}\text{C/W}$
$R_{th(c-s)}$	Thermal resistance case to sink	Single side cooled per module			0.010	$^{\circ}\text{C/W}$
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	$^{\circ}\text{C}$
T_j	Operating Temperature		-40		150	$^{\circ}\text{C}$
W_t	Weight			700		g
Outline	B0					



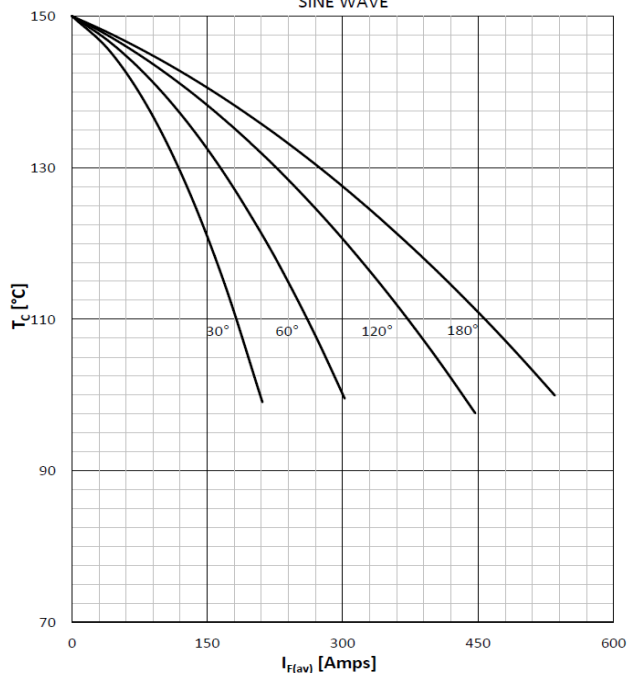
DISSIPATION CHARACTERISTICS

SINE WAVE



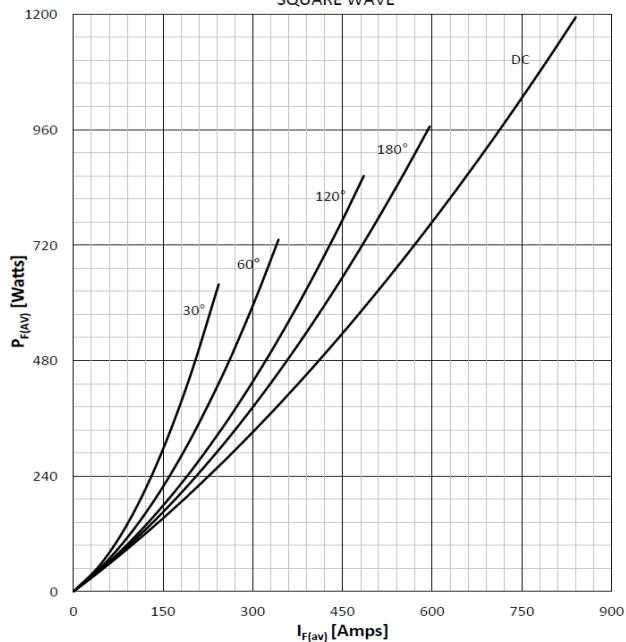
FORWARD CURRENT DERATING CURVE

SINE WAVE



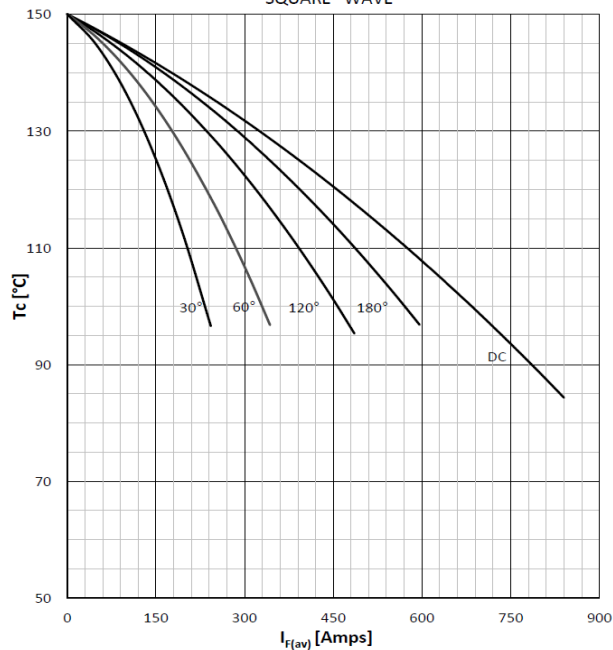
DISSIPATION CHARACTERISTICS

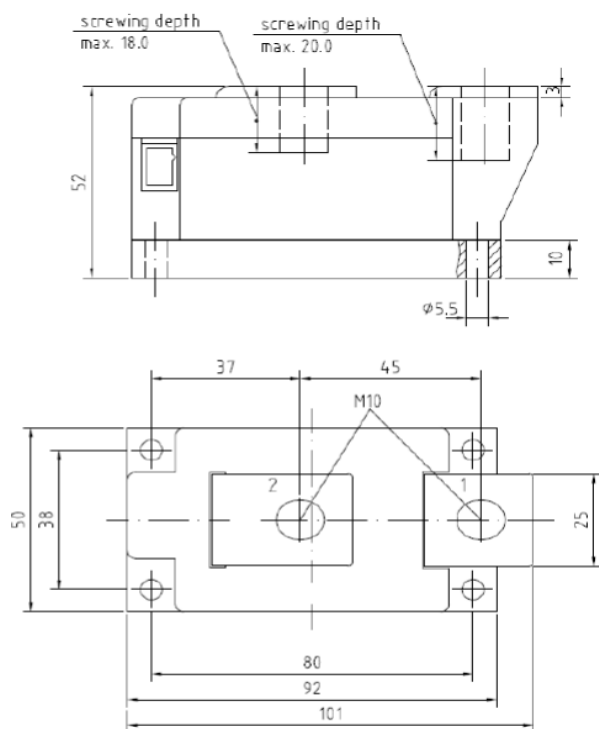
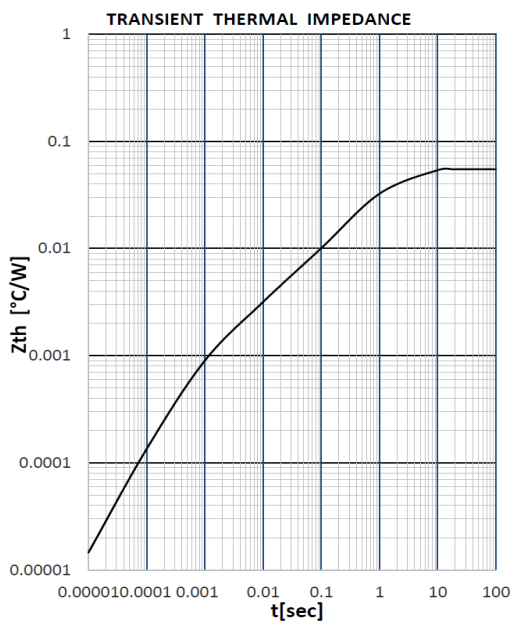
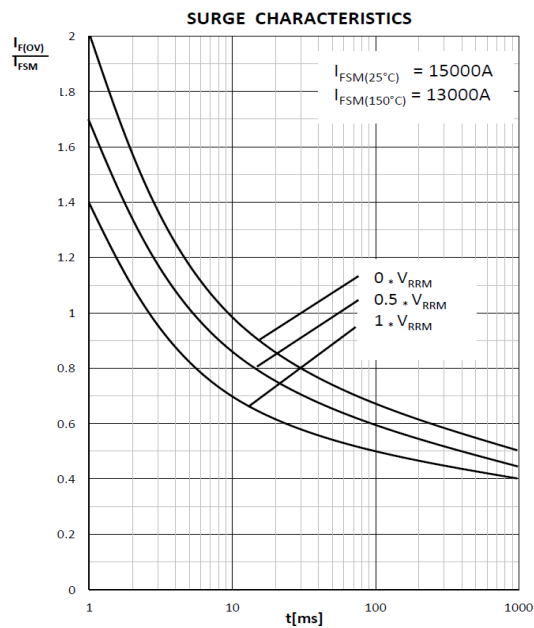
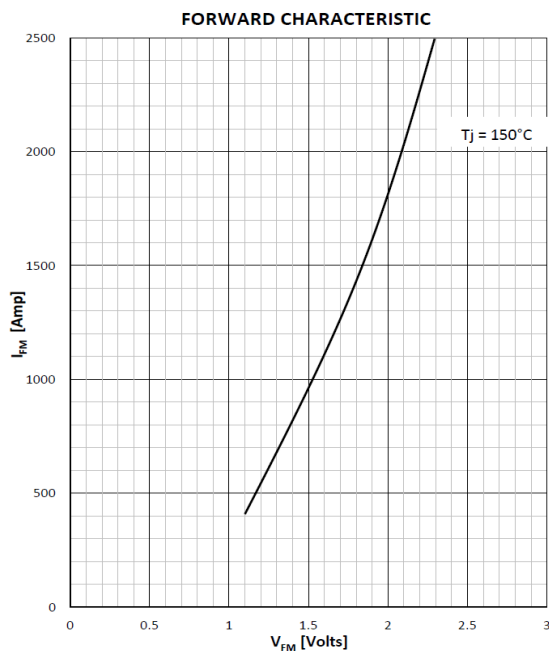
SQUARE WAVE



FORWARD CURRENT DERATING CURVE

SQUARE WAVE





(dimensions in mm)

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