

MRT135.16

Thyristors module

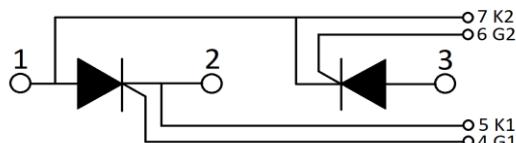
Features:

- International standard package
- High surge capability
- Glass passivated chip
- Simple mounting
- UL recognized, file no. E312789

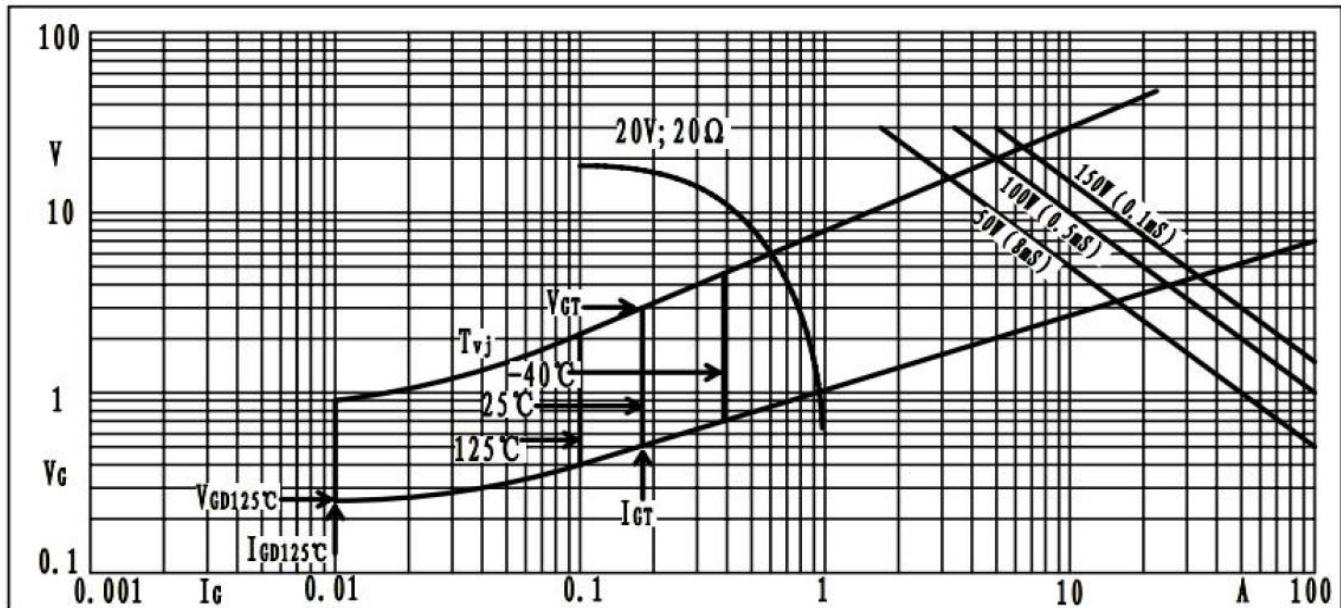
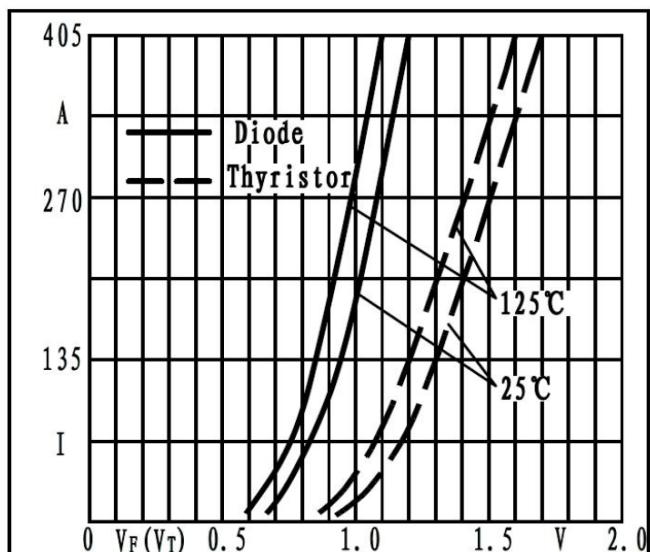
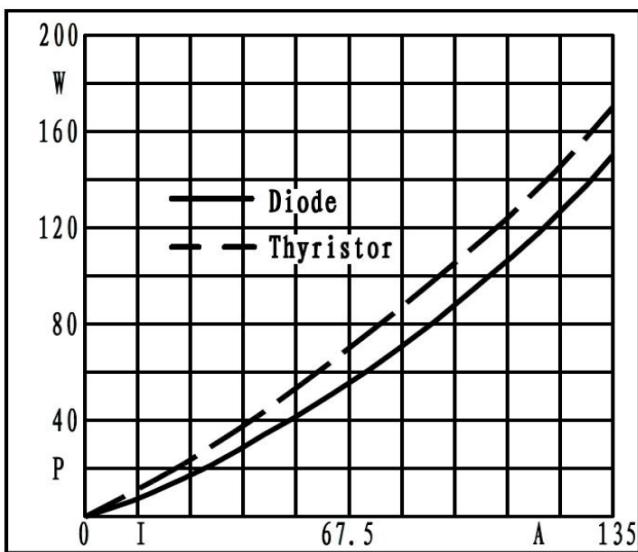


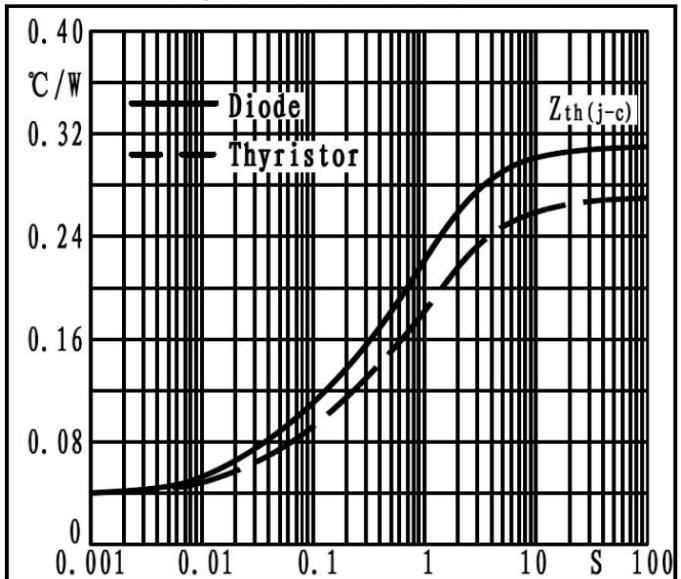
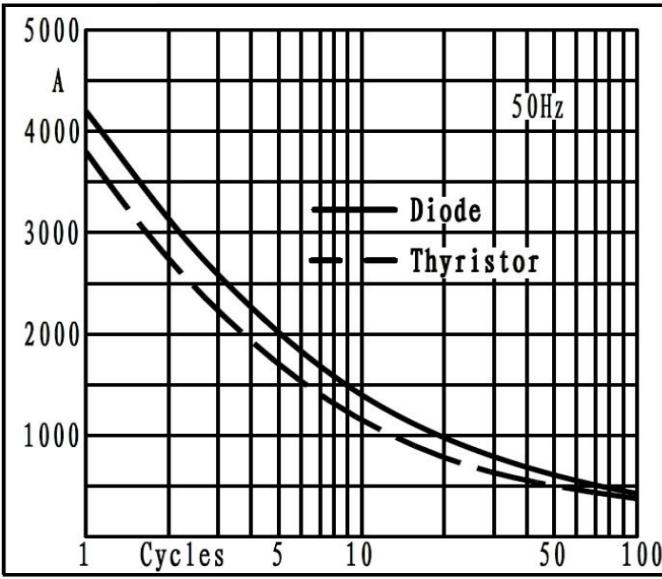
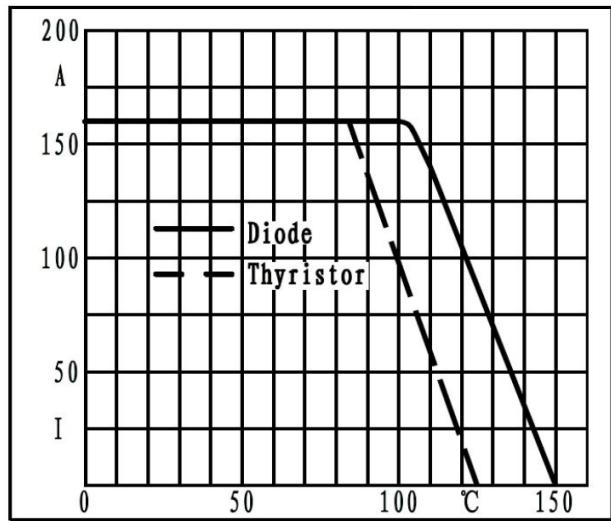
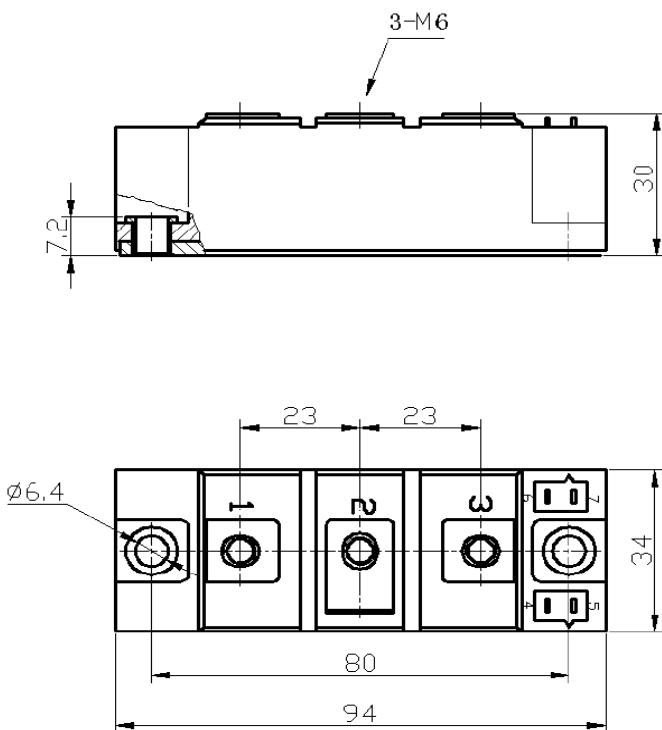
Typical applications:

- Power converters
- Lighting control
- AC/DC motor control and drives
- Heat and temperature control



Symbol	Characteristics	Test Conditions	Value			Unit
			Min	Typ	Max	
$V_{RSM/DSM}$	Non-repetitive reverse/forward blocking voltage	$T_j = 25^\circ C$			1700	V
$V_{RRM/DRM}$	Repetitive reverse/forward blocking voltage	$T_j = 25^\circ C$			1600	V
$I_{T(AV)}$	Mean on-state current	180° half sine wave 50Hz			135	A
$I_{T(RMS)}$	RMS on-state current	$T_c = 85^\circ C$			212	A
I_{RRM} I_{DRM}	Repetitive peak current	at V_{DRM}/V_{RRM} $T_j = 125^\circ C$			25	mA
I_{TSM}	Surge non repetitive current	10ms half sine wave $T_j = 45^\circ C$			3800	A
I^2t	I^2t for fusing coordination	10ms half sine wave $V_R = 60\% V_{RRM}$ $T_j = 45^\circ C$			88200	A ² s
V_{TO}	Threshold voltage	$T_j = 125^\circ C$			0.80	V
r_T	On-state slope resistance	$T_j = 125^\circ C$			1.60	mΩ
V_{TM}	Peak on-state voltage	$T_j=25^\circ C ; I_T=405A$			1.70	V
dv/dt	Critical rate of rise of off-state voltage	$V_{DM} = 67\% V_{DRM}, T_j = 125^\circ C$, linear voltage rise			500	V/μs
di/dt	Critical rate of rise of off-state current	$T_j = 125^\circ C$, Gate source 1,5A, $T_r < 0,5\mu s$ Repetitive			150	A/μs
I_{GT}	Gate trigger current		20		150	mA
V_{GT}	Gate trigger voltage	$V_D = 6V, T_j = 25^\circ C$	0.70		1.80	V
I_H	Holding current		20		150	mA
V_{GD}	Non-trigger gate voltage	$V_{DM} = 67\% V_{DRM}, T_j = 125^\circ C$			0.25	V
$R_{th(j-c)}$	Thermal resistance junction to case	Single side cooled per chip			0.27	°C/W
$R_{th(c-s)}$	Thermal resistance case to sink	Single side cooled per chip			0.10	°C/W
V_{ISO}	Isolation voltage	50Hz, RMS, t = 1min, $I_{ISO} : 1mA (MAX)$		2500		V
F_M	Mounting torque - copper plate (M6)		4		6	N·m
	Mounting torque - terminal (M6)		4		6	N·m
T_{stg}	Storage Temperature		-40		125	°C
T_j	Operating Temperature		-40		125	°C
W_t	Weight			220		g
Outline	M42					


Fig1. Gate trigger characteristics

Fig2. Forward characteristics

Fig3. Power dissipation

MRT135.16

Fig4. Transient thermal impedance

Fig5. Max non-repetitive forward surge current

Fig6. Forward current derating curve

(dimensions in mm)
S.C.O.M.E.S. Srl

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