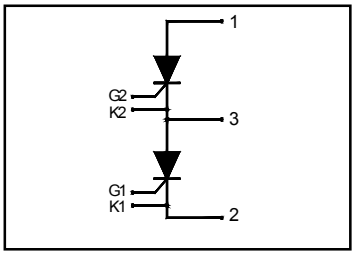
XI'AN IR-PERI Company

PRELIMINARY MTC400TG120/160

Thyristor Modules TG

Features

- International standard package
  With ALN ceramic base plate
- Planar passivated chips
- High surge capability



V_{RRM} =1200V- 1600V
I_{FAVM} =2x400A
I_{FRMS}=2x628A

Benefits

- DC motor control
- Simple AC motor controller
- Light, heat and temperature control

Voltage Ratings

Voltage Code	V_{RRM}(V) V_{DRM}(V)	V_{RSM}(V) V_{DSM}(V)	I_{RRM} T_J=25°C(mA) I_{DRM} T_J=25°C(mA)
120	1200	1300	1.0
140	1400	1500	1.0
160	1600	1700	1.0

Absolute Maximum Ratings

Symbol	Test Conditions		Max.	Units
I_{FRMS}	T_{VJM}=125°C		628	A
I_{FAVM}	T_C=70°C;180° sine		400	A
I_{FSM}	T_{VJ}=45°C; t=10ms (50 Hz),sine		7200	A
	V_R=0 t=8.3ms (60 Hz),sine		7920	A
	T_{VJ}=125°C; t=10ms (50 Hz),sine		6850	A
	V_R=0 t=8.3ms (60 Hz),sine		7540	A
I^2t	T_{VJ}=45°C; t=10ms (50 Hz),sine		259200	A^2s
	V_R=0 t=8.3ms (60 Hz),sine		313600	A^2s
	T_{VJ}=125°C; t=10ms (50 Hz),sine		234600	A^2s
	V_R=0 t=8.3ms (60 Hz),sine		284200	A^2s
di/dt	f=50Hz,t_P=200µs,V_D=1/2V_{DRM}	repetitive,I_T=1000A	100	A/µs
	I_G=1.5A,di_G/dt=1.0A/µs,T_{VJ}=T_{VJM}			
dv/dt	T_{VJ}=T_{VJM};V_D=2/3V_{DRM}	(linear voltage rise)	800	V/µs
V_{ISOL}	RMS Isolation Voltage, Any Terminal To Case, t=1 min		2500	V
T_{VJ}			-40 to +125	°C
T_{VJM}			125	
T_{STG}			-40 to +125	

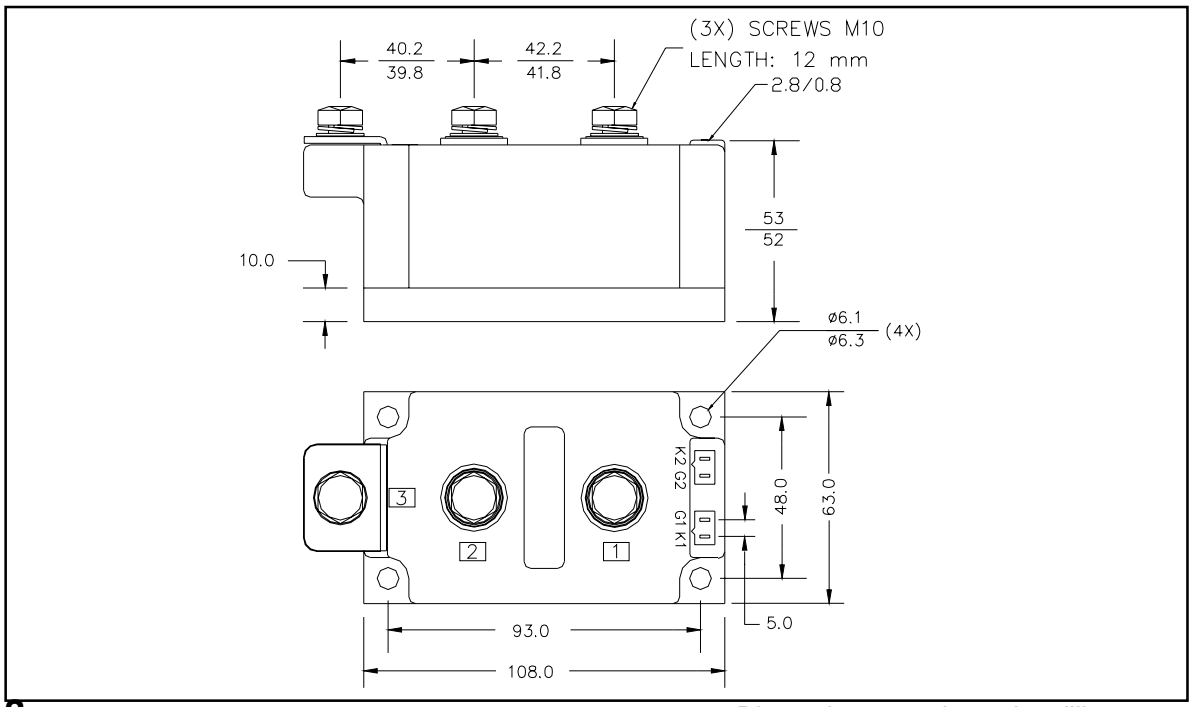
Termal / Mechanical Characteristics

	Parameter	Typ.	Max.	Units
$R_{\theta JC}$	cont. per thyristor / per module	-	0.110/ 0.055	°C/W
	Mouting Torque, Case-to-Heatsink	-	4.5	N.m
	Mouting Torque, Case-to-Terminal 1,2 & 3	-	8 - 11	N.m
	Weight of Module	1500	-	g

Electrical Characteristics (unless otherwise specified)

	Test Conditions	Min.	Typ.	Max.	Units
I_{RRM}, I_{DRM}	$T_{VJ}=T_{VJM}$;$V_R=V_{RRM}$;$V_D=V_{DRM}$	-	-	60	mA
V_{TM}	I_T=1500A; T_{VJ}=25°C	-	-	1.50	V
V_{TO}	For power-loss calculations only(T_{VJ}=125°C)	-	-	0.85	V
r_T		-	-	0.380	mΩ
V_{GT}	V_D=6V; T_{VJ}=25°C	-	-	2.5	V
I_{GT}	V_D=6V; T_{VJ}=25°C	-	-	200	mA
V_{GD}	$T_{VJ}=T_{VJM}$; V_D=2/3V_{DRM}	-	-	0.25	V
I_{GD}		-	-	10	mA
I_H	T_{VJ}=25°C; V_D=6V, I_A=1A	-	-	200	mA

Case Outline - TG2



Dimensions are shown in millimeters