

ELECTRICAL PARAMETERS**Voltage ratings**

Voltage class	U_{RRM}	U_{RSM}	I_{RRM}
	V	V	mA
04	400	500	20
06	600	700	
08	800	900	
10	1000	1100	
12	1200	1300	
14	1400	1500	
16	1600	1700	

du/dt group codes

Group code	du/dt
	V/ μ s
0	no specified value
5	320
6	500
7	1000

Electrical properties

Parameter	Unit	Test conditions	Value
Average on-state current	$I_{T(AV)}$	A	170
Case temperature	T_c	°C	85
RMS on-state current	$I_{T(RMS)}$	A	267
Surge current	I_{TSM}	A	$T_j=125^\circ\text{C}$, $U_R=0,8U_{RRM}$, $t_p=10\text{ms}$
I^2t – value	I^2t	kA^2s	125
On-state voltage max.	U_{TM}	V	$T_j=25^\circ\text{C}$, $I_{TM}=625\text{A}$
Threshold voltage	$U_{T(T0)}$	V	0,83
Slope resistance	r_T	$\text{m}\Omega$	1,035
Latching current	I_l	mA	$T_j=25^\circ\text{C}$, $U_D=12\text{V}$
Holding current	I_H	mA	$T_j=25^\circ\text{C}$, $U_D=12\text{V}$
Circuit commutated turn-off time (typical)	t_q	μs	$T_j=125^\circ\text{C}$, $I_{TM}=150\text{A}$, $di_R/dt=12,5\text{A}/\mu\text{s}$, $du/dt=20\text{V}/\mu\text{s}$, $U_D=0,67U_{DRM}$, $U_{RM}=100\text{V}$
Turn-On time (typical)	t_{gt}	μs	$I_{TM}=100\text{A}$, $U_{DM}=100\text{V}$
Rate of rise of on-state current-repetitive	di/dt	$\text{A}/\mu\text{s}$	$T_j=125^\circ\text{C}$, $I_{TM}=3I_{T(AV)}$, $U_D=0,67U_{DRM}$, $f=50\text{Hz}$, $I_{GM}=1\text{A}$, $di_G/dt=1\text{A}/\mu\text{s}$
Critical rate of raise of off-state voltage	du/dt	$\text{V}/\mu\text{s}$	$T_j=125^\circ\text{C}$, $U_D=0,67U_{DRM}$
Gate current to trigger	I_{GT}	mA	$T_j=25^\circ\text{C}$, $U_D=12\text{V}$
Gate voltage to trigger	U_{GT}	V	$T_j=25^\circ\text{C}$, $U_D=12\text{V}$
RMS isolation voltage	U_{isol}	V	1s, circuit to base, all terminals shorted

Thermal properties

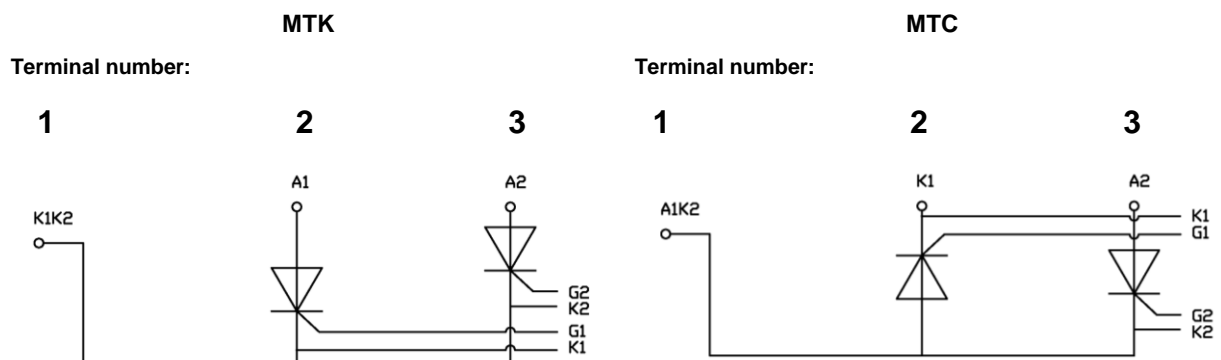
Parameter	Unit	Test conditions	Value
Thermal resistance, junction to case per thyristor/module	R_{thJC}	°C/W	DC
Thermal resistance, case to heatsink per thyristor/module	R_{thCh}	°C/W	0,17/0,085
Operating junction temperature	$T_{jmin} \dots T_{jmax}$	°C	0,1/0,05
			-40...+125

Storage temperature	T _{stg}	°C		-40...+125
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Mechanical properties

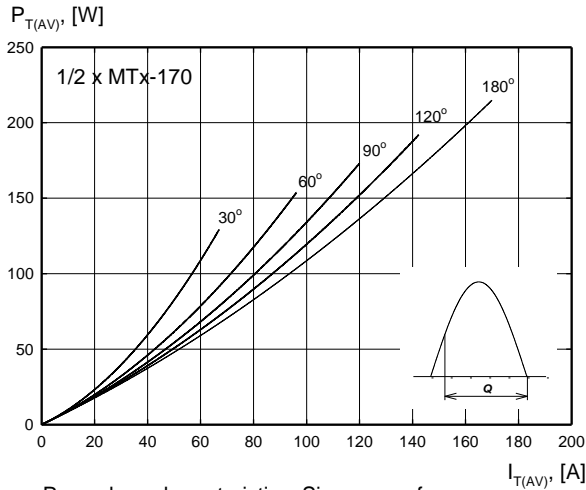
Parameter		Unit	Value
Mounting torque (M6)	M1	Nm	6,00 ±15%
Terminal connection torque (M6)	M2	Nm	6,00 ±15%
Weight	M	g	360

Cofigurations

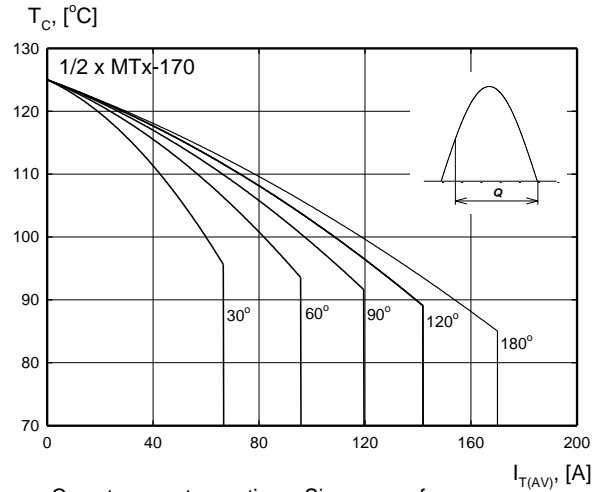


Do not scale.

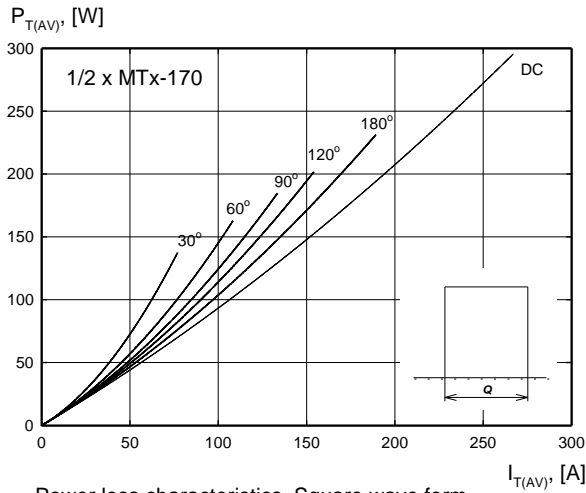
CHARACTERISTICS



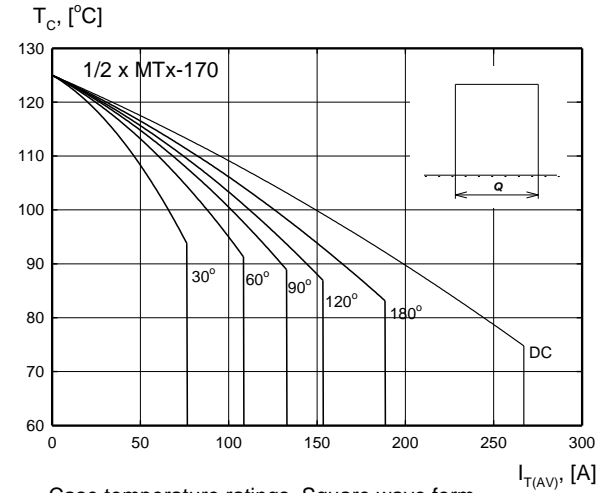
Power loss characteristics. Sinus wave form.



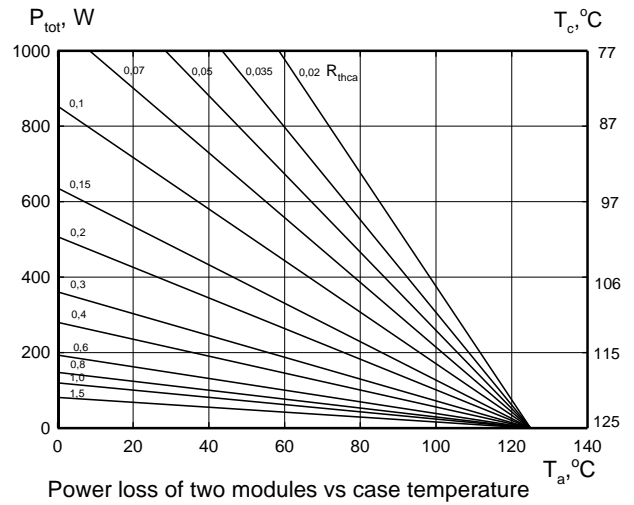
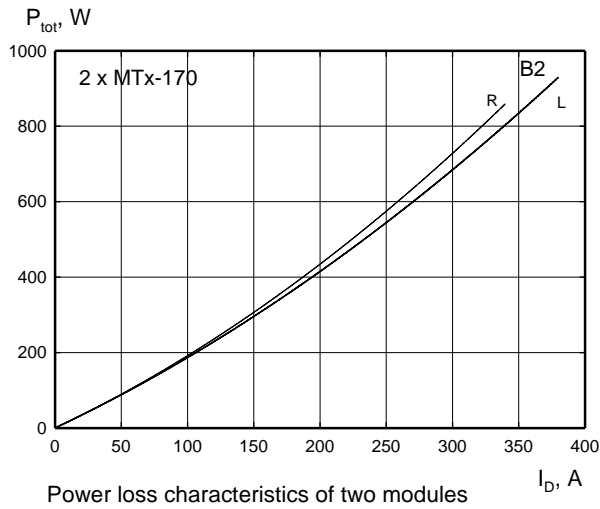
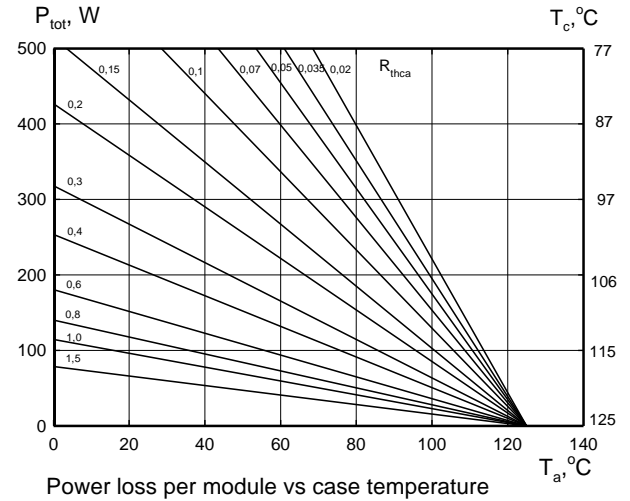
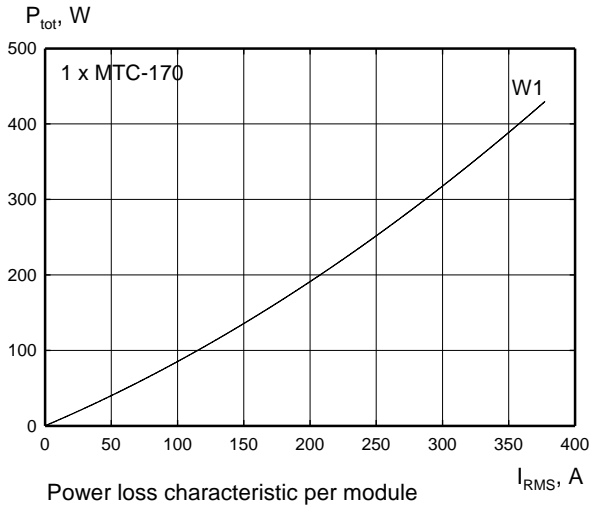
Case temperature ratings. Sinus wave form.

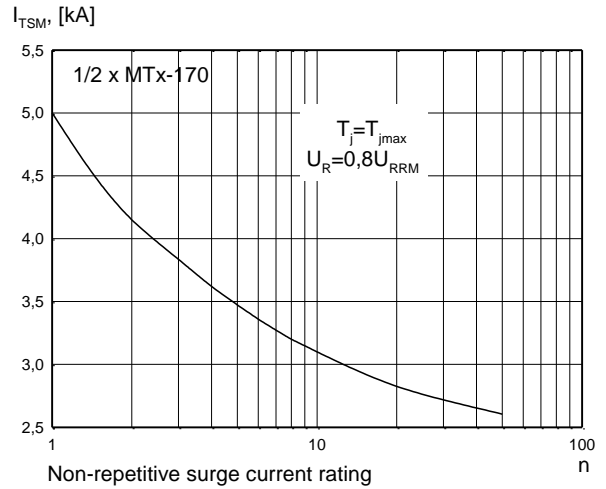
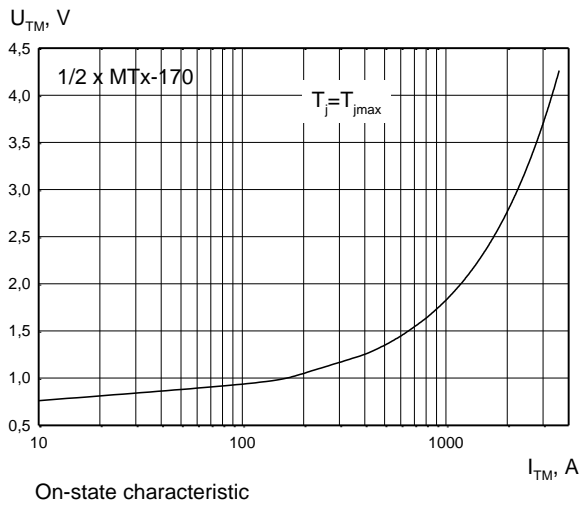
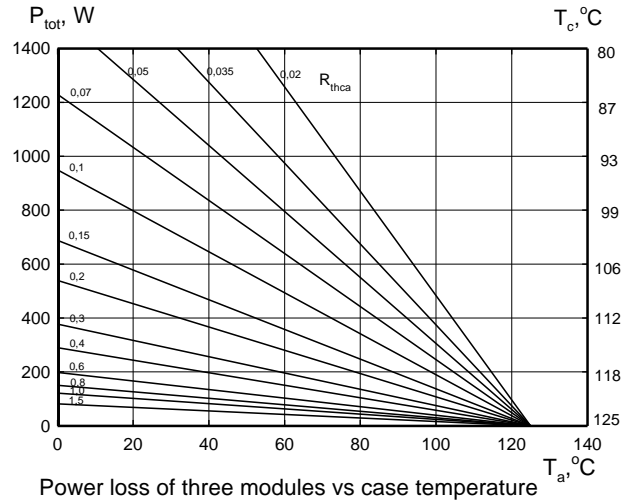
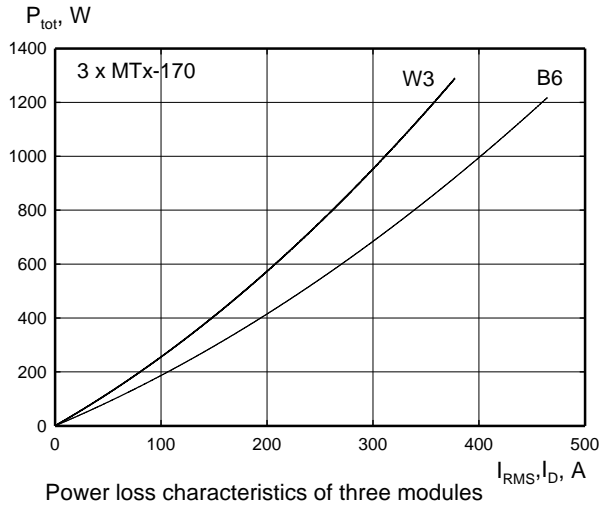


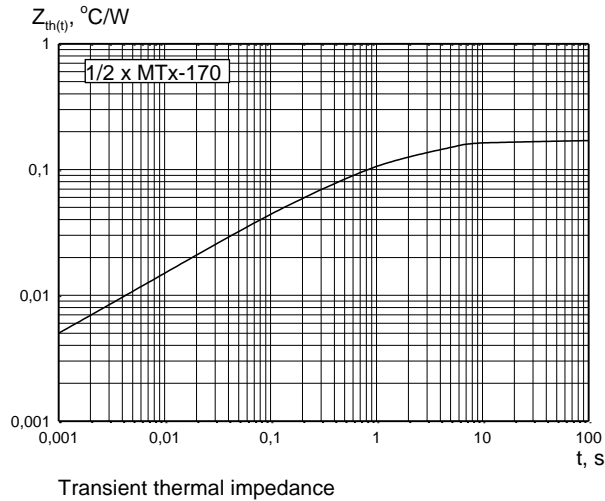
Power loss characteristics. Square wave form.



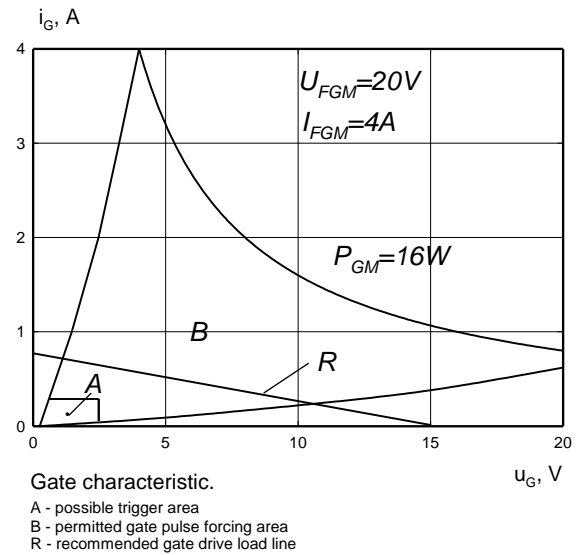
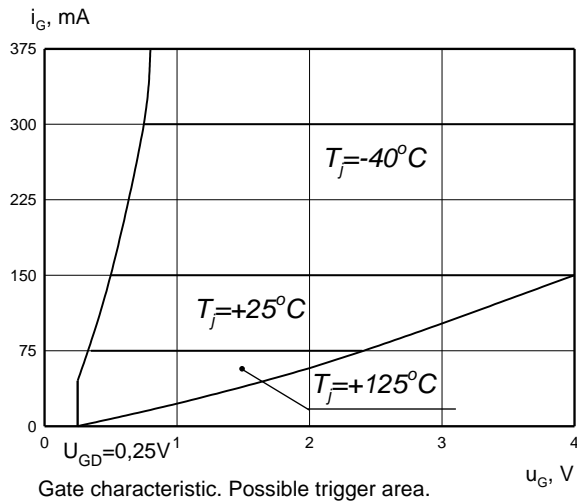
Case temperature ratings. Square wave form.







Gate characteristics



HEATSINKS

KUBARA LAMINA SA has its own proprietary range of extruded aluminium heatsinks designed to optimise the performance of our semiconductors with natural and forced air flow.

POWER ASSEMBLY CAPABILITY

KUBARA LAMINA SA provides a support for those customers requiring more than a basic semiconductor and offers precisely assembled Power Blocks according to factory or customer standards.