



No.1878B

DTM6-N

Silicon Planar Type

6A Bidirectional Thyristor

Features

- Insulation type
- Peak OFF-state voltage : 200 to 600V
- RMS ON-state current : 6A
- TO-220 package

Absolute Maximum Ratings at Ta = 25°C

		DTM6C-N	DTM6E-N	DTM6G-N	unit
Repetitive Peak OFF-State Voltage	V_{DRM}	200	400	600	V
RMS ON-State Current	$I_{T(RMS)}$	Tc = 70°C, single-phase full-wave			6 A
Surge ON-State Current	I_{TSM}	Peak 1 cycle, 50Hz			60 A
Amperes Squared-Seconds	$\int i^2 T dt$	1ms ≤ t ≤ 10ms			18 A ² s
Peak Gate Power Dissipation	P_{GM}	f ≥ 50Hz, duty ≤ 10%			5 W
Average Gate Power Dissipation	$P_{G(AV)}$				0.5 W
Peak Gate Current	I_{GM}	f ≥ 50Hz, duty ≤ 10%			±2 A
Peak Gate Voltage	V_{GM}	f ≥ 50Hz, duty ≤ 10%			±10 V
Junction Temperature	Tj				125 °C
Storage Temperature	Tstg				-40 to +125 °C
Weight					2.1 g

Electrical Characteristics at Ta = 25°C

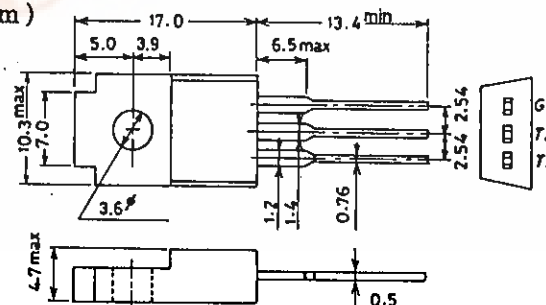
			min	typ	max	unit
Repetitive Peak OFF-State Current	I_{DRM}	Tj = 125°C, V _D = V _{DRM}			2	mA
Peak ON-State Voltage	V_{TM}	I _{TM} = 9A			1.5	V
Critical Rate of Rise of OFF-State Voltage	(dv/dt) _C	[Tj = 125°C, V _D = 200V (C), 400V (E to G)]	10			V/μs
Holding Current	I_H	R _L = 100Ω			50	mA
Gate Trigger Current※ (I)	I_{GT}	V _D = 12V, R _L = 20Ω			30	mA
(II)	I_{GT}	V _D = 12V, R _L = 20Ω			30	mA
(III)	I_{GT}	V _D = 12V, R _L = 20Ω			50	mA
(IV)	I_{GT}	V _D = 12V, R _L = 20Ω			30	mA
Gate Trigger Voltage※ (I)	V_{GT}	V _D = 12V, R _L = 20Ω			2	V
(II)	V_{GT}	V _D = 12V, R _L = 20Ω			2	V
(III)	V_{GT}	V _D = 12V, R _L = 20Ω			2	V
(IV)	V_{GT}	V _D = 12V, R _L = 20Ω			2	V
Gate Nontrigger Voltage	V_{GD}	Tc = 125°C, V _D = V _{DRM}	0.2			V
Thermal Resistance	R _{th(j-c)}	Between junction and case, AC			3.8	°C/W

※ : The gate trigger mode is shown below.

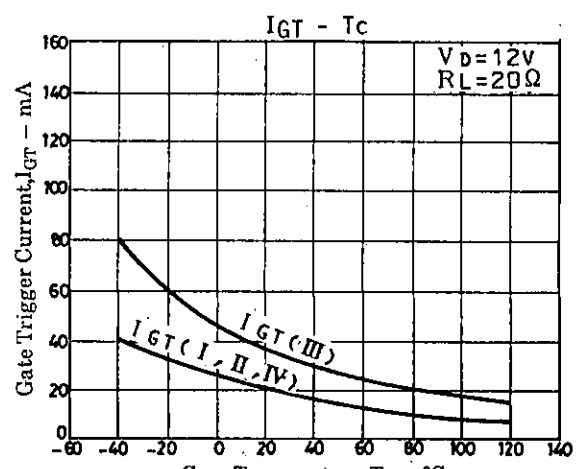
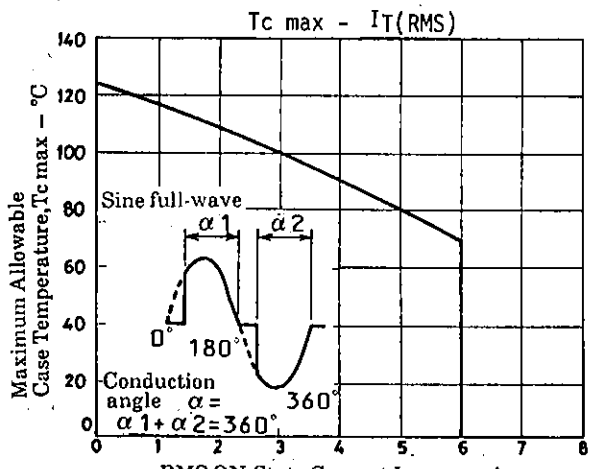
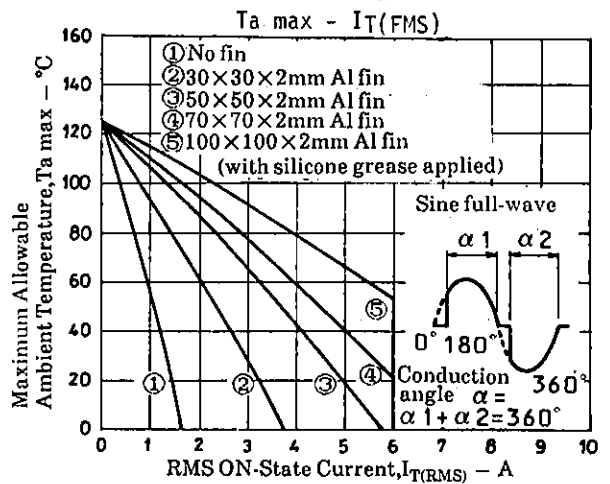
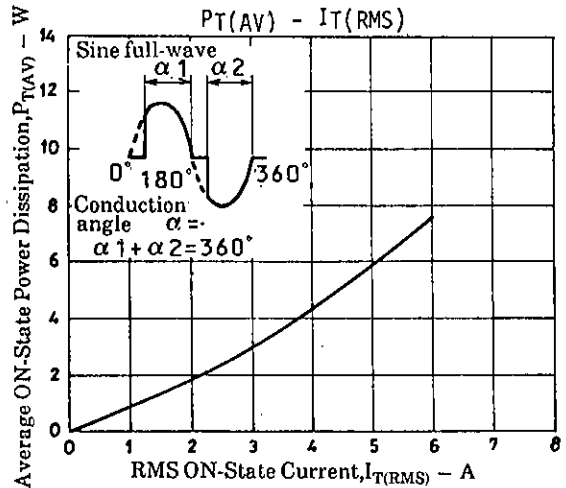
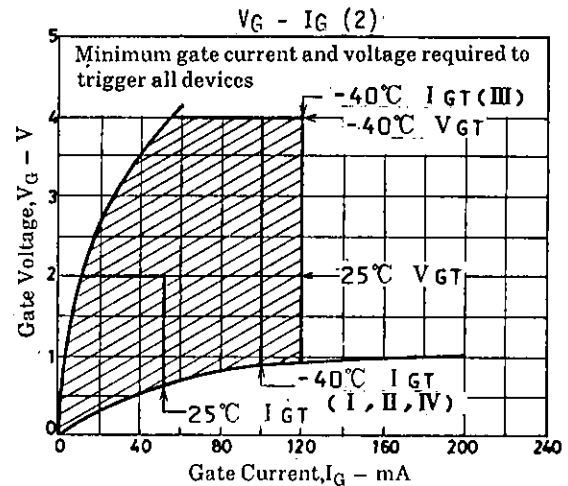
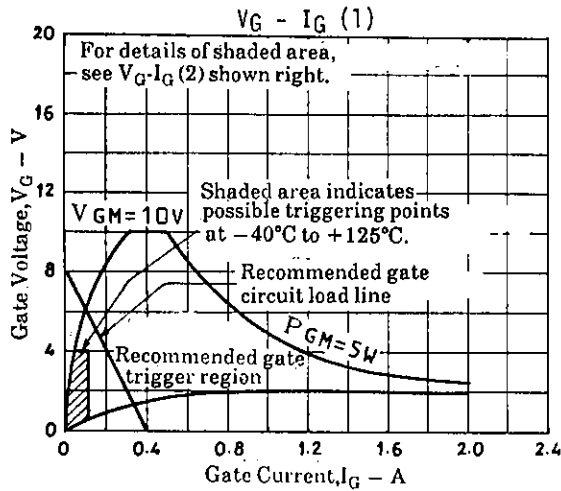
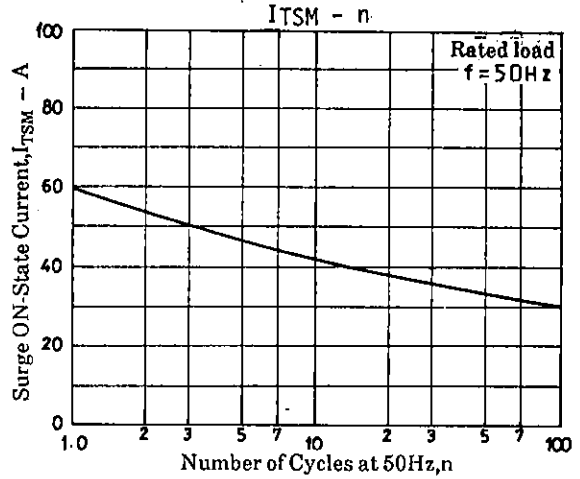
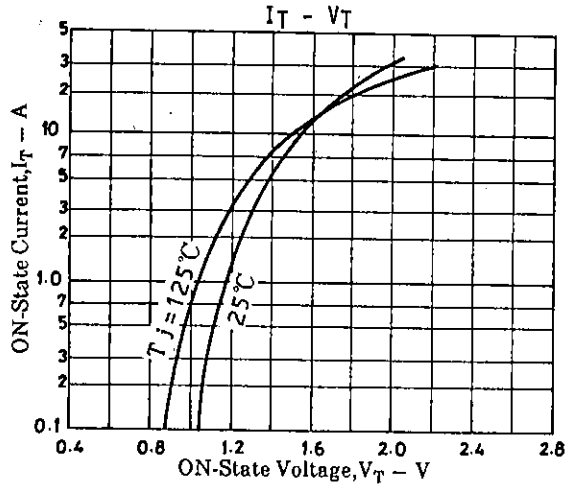
Trigger mode	T2	T1	G
I	+	-	+
II	+	-	-
III	-	+	+
IV	-	+	-

Package Dimensions 1144

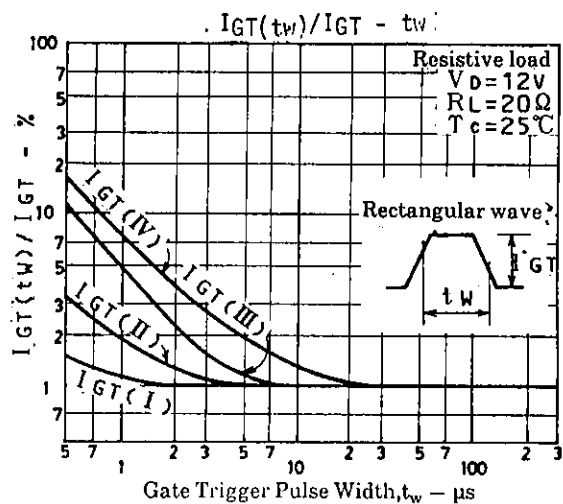
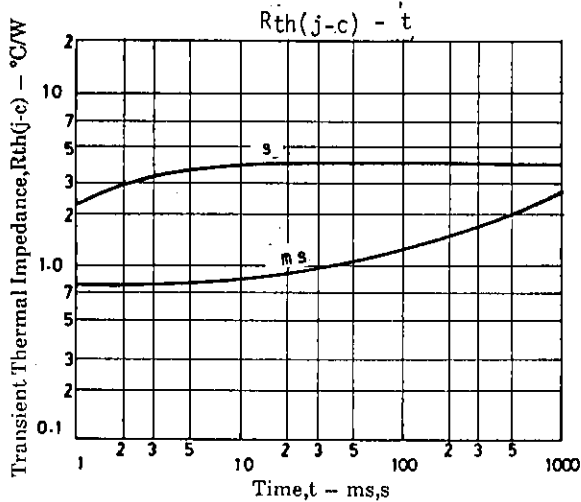
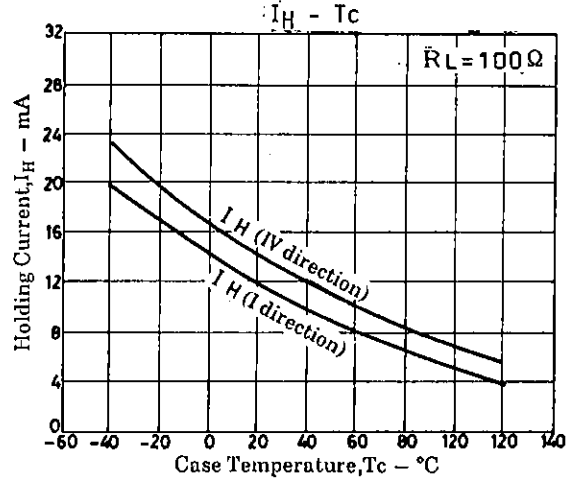
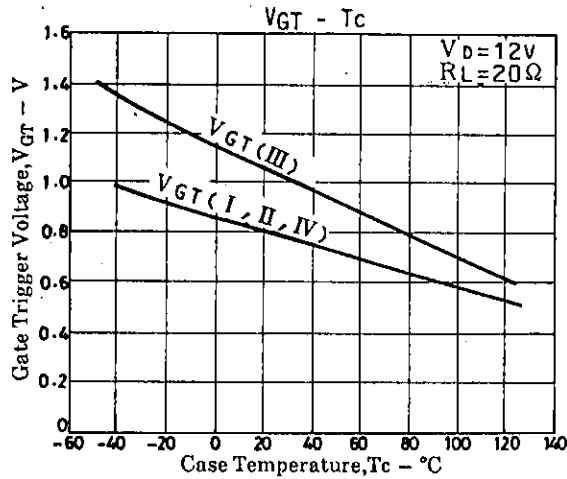
(unit: mm)



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