

**SANYO**

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 <sub>DRM</sub>		200	400	600	V
RMS ON-State Current	I <sub>T(RMS)</sub>	Tc=70°C, single-phase full-wave	→	→	6	A
Surge ON-State Current	I <sub>TSM</sub>	Peak 1 cycle, 50Hz	→	→	60	A
Amperes Squared-Seconds	∫i <sup>2</sup> T·dt	1ms ≤ t ≤ 10ms	→	→	18	A <sup>2</sup> s
Peak Gate Power Dissipation	P <sub>GM</sub>	f ≥ 50Hz, duty ≤ 10%	→	→	5	W
Average Gate Power Dissipation	P <sub>G(AV)</sub>		→	→	0.5	W
Peak Gate Current	I <sub>GM</sub>	f ≥ 50Hz, duty ≤ 10%	→	→	±2	A
Peak Gate Voltage	V <sub>GM</sub>	f ≥ 50Hz, duty ≤ 10%	→	→	±10	V
Junction Temperature	T <sub>j</sub>		→	→	125	°C
Storage Temperature	T <sub>stg</sub>		→	→	-40 to +125	°C
Weight			→	→	2.1	g

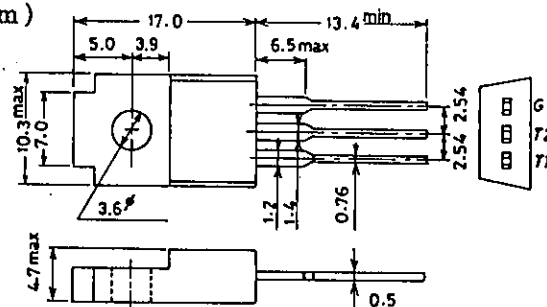
Electrical Characteristics at Ta=25°C			min	typ	max	unit
Repetitive Peak OFF-State Current	I <sub>DRM</sub>	T <sub>j</sub> = 125°C, V <sub>D</sub> = V <sub>DRM</sub>			2	mA
Peak ON-State Voltage	V <sub>TM</sub>	I <sub>TM</sub> = 9A			1.5	V
Critical Rate of Rise of OFF-State Voltage	(dv/dt) <sub>C</sub>	T <sub>j</sub> = 125°C, V <sub>D</sub> = 200V (C), 400V (E to G)		10		V/μs
Holding Current	I <sub>H</sub>	R <sub>L</sub> = 100Ω			50	mA
Gate Trigger Current* (I)	(I) I <sub>GT</sub>	V <sub>D</sub> = 12V, R <sub>L</sub> = 20Ω			30	mA
	(II) I <sub>GT</sub>	V <sub>D</sub> = 12V, R <sub>L</sub> = 20Ω			30	mA
	(III) I <sub>GT</sub>	V <sub>D</sub> = 12V, R <sub>L</sub> = 20Ω			50	mA
	(IV) I <sub>GT</sub>	V <sub>D</sub> = 12V, R <sub>L</sub> = 20Ω			30	mA
Gate Trigger Voltage* (V)	(I) V <sub>GT</sub>	V <sub>D</sub> = 12V, R <sub>L</sub> = 20Ω			2	V
	(II) V <sub>GT</sub>	V <sub>D</sub> = 12V, R <sub>L</sub> = 20Ω			2	V
	(III) V <sub>GT</sub>	V <sub>D</sub> = 12V, R <sub>L</sub> = 20Ω			2	V
	(IV) V <sub>GT</sub>	V <sub>D</sub> = 12V, R <sub>L</sub> = 20Ω			2	V
Gate Nontrigger Voltage	V <sub>GD</sub>	Tc = 125°C, V <sub>D</sub> = V <sub>DRM</sub>	0.2			V
Thermal Resistance	R <sub>th(j-c)</sub>	Between junction and case, AC			3.8	°C/W

\* : The gate trigger mode is shown below.

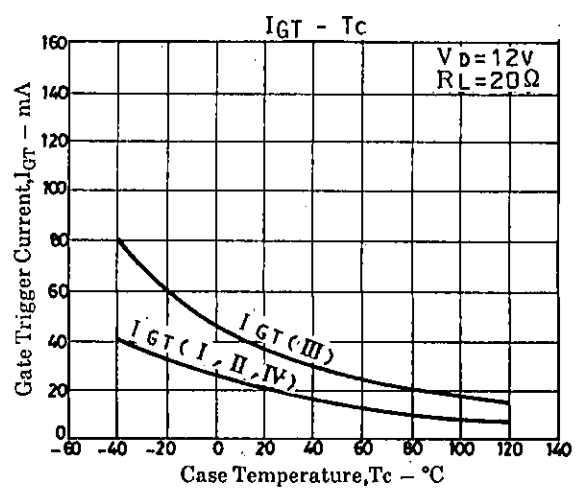
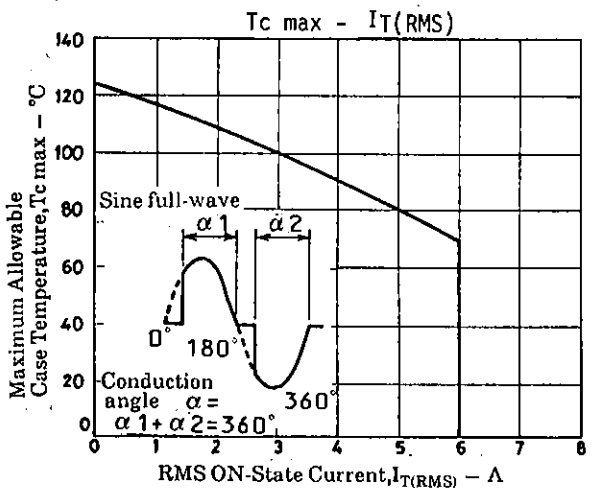
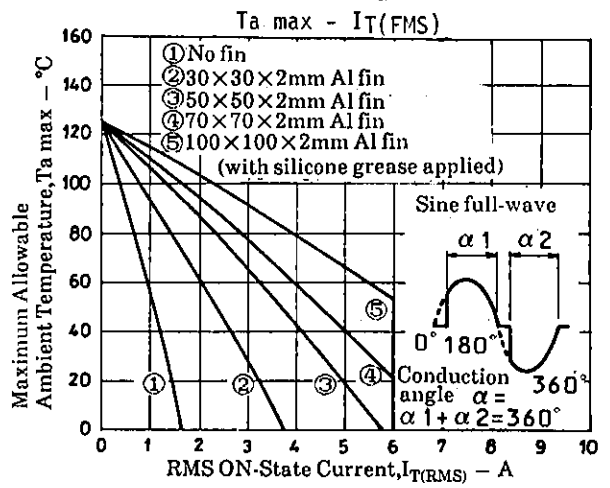
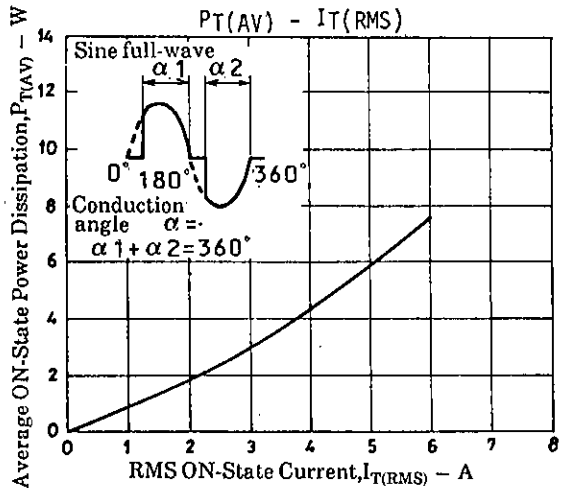
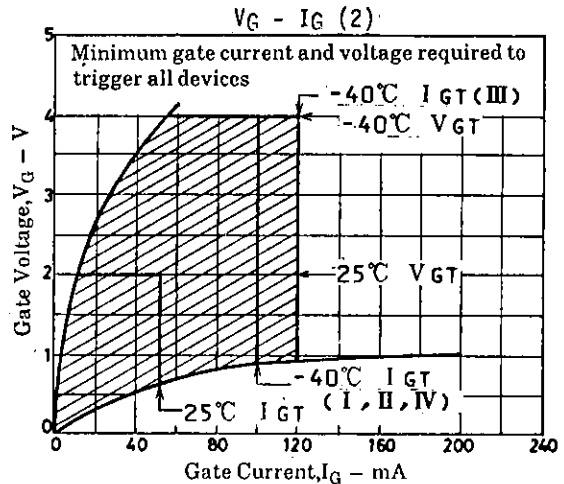
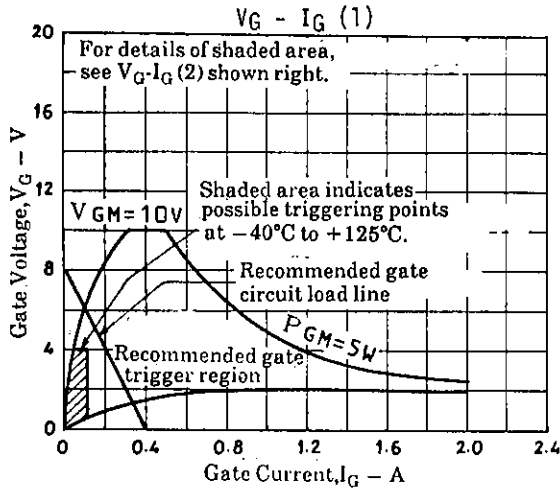
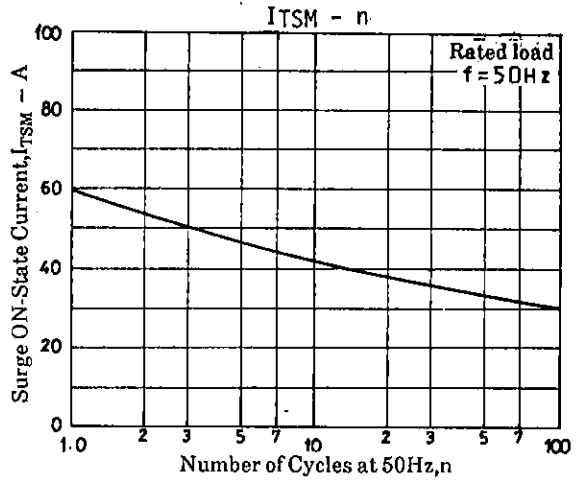
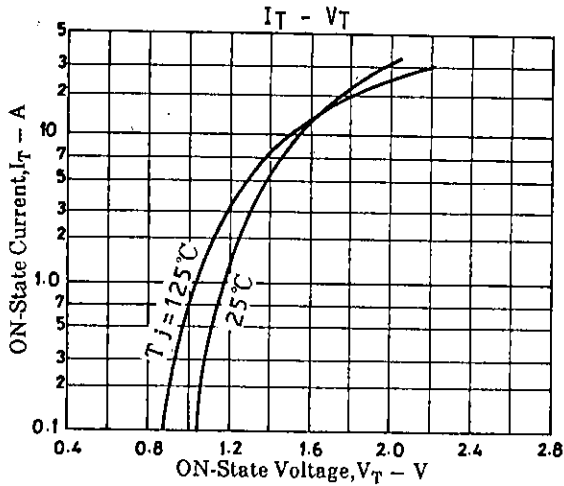
Trigger mode	T2	T1	G
I	+	-	+
II	+	-	-
III	-	+	+
IV	-	+	-

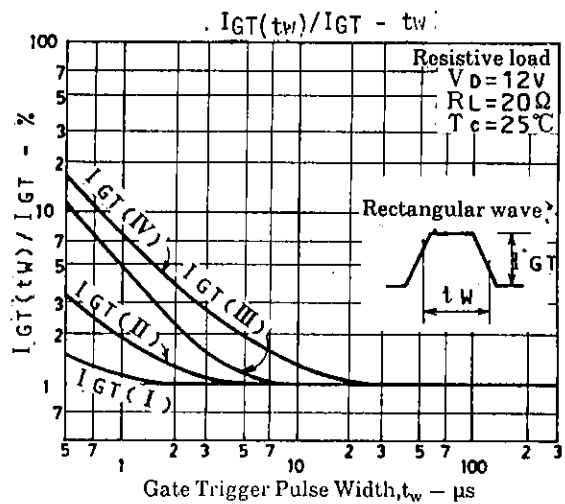
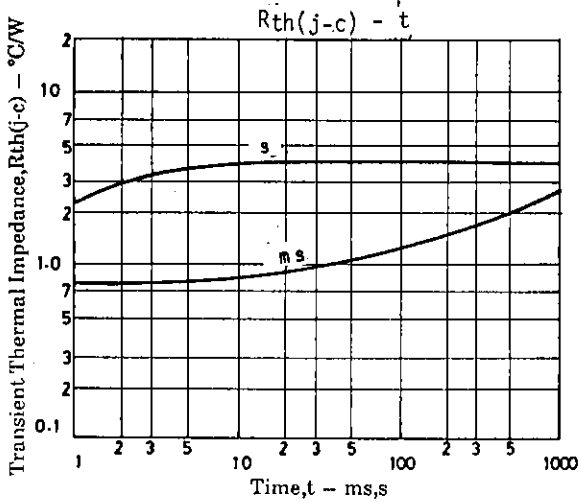
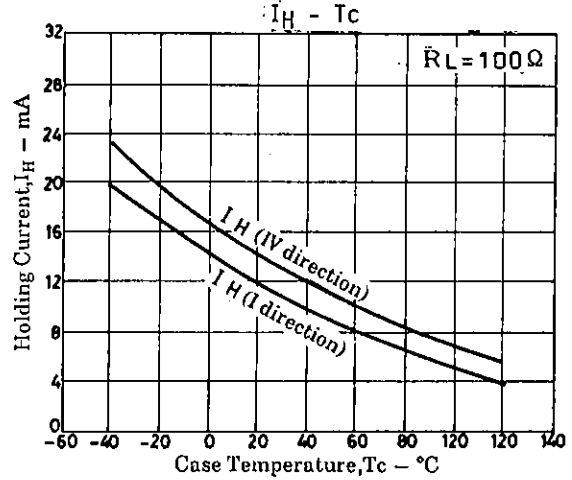
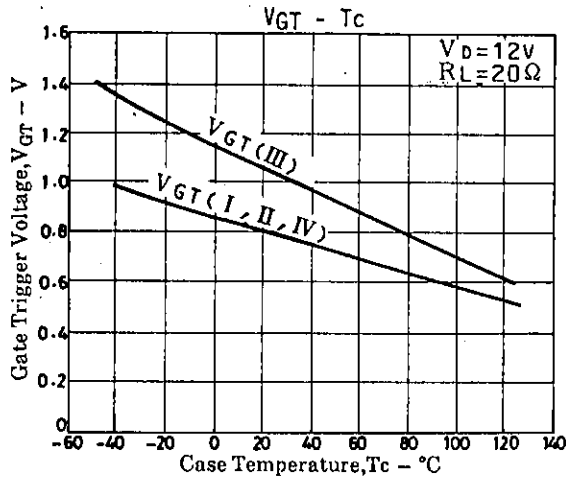
**Package Dimensions 1144**

(unit: mm)



DTM6-N





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