

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_{DRM}		200	400	600	V
RMS ON-State Current	$I_{T(RMS)}$	$T_c = 70^\circ C$, single-phase full-wave	→	→	6	A
Surge ON-State Current	I_{TSM}	Peak 1 cycle, 50Hz	→	→	60	A
Amperes Squared-Seconds	$\int i^2 T \cdot dt$	$1ms \leq t \leq 10ms$	→	→	18	A ² s
Peak Gate Power Dissipation	P_{GM}	$f \geq 50Hz, duty \leq 10\%$	→	→	5	W
Average Gate Power Dissipation	$P_{G(AV)}$		→	→	0.5	W
Peak Gate Current	I_{GM}	$f \geq 50Hz, duty \leq 10\%$	→	→	±2	A
Peak Gate Voltage	V_{GM}	$f \geq 50Hz, duty \leq 10\%$	→	→	±10	V
Junction Temperature	T_j		→	→	125	°C
Storage Temperature	T_{stg}		→	→	-40 to +125	°C
Weight			→	→	2.1	g

Electrical Characteristics at Ta = 25°C

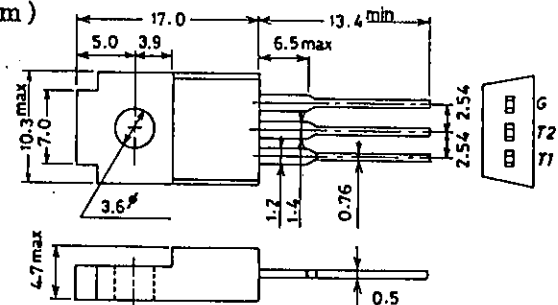
			min	typ	max	unit
Repetitive Peak OFF-State Current	I_{DRM}	$T_j = 125^\circ C, V_D = V_{DRM}$			2	mA
Peak ON-State Voltage	V_{TM}	$I_{TM} = 9A$			1.5	V
Critical Rate of Rise of OFF-State Voltage	(dv/dt) _C	$T_j = 125^\circ C, V_D = 200V (C), 400V (E \text{ to } G)$		10		V/μs
Holding Current	I_H	$R_L = 100\Omega$			50	mA
Gate Trigger Current* (I)	(I) I_{GT}	$V_D = 12V, R_L = 20\Omega$			30	mA
	(II) I_{GT}	$V_D = 12V, R_L = 20\Omega$			30	mA
	(III) I_{GT}	$V_D = 12V, R_L = 20\Omega$			50	mA
	(IV) I_{GT}	$V_D = 12V, R_L = 20\Omega$			30	mA
Gate Trigger Voltage* (I)	(I) V_{GT}	$V_D = 12V, R_L = 20\Omega$			2	V
	(II) V_{GT}	$V_D = 12V, R_L = 20\Omega$			2	V
	(III) V_{GT}	$V_D = 12V, R_L = 20\Omega$			2	V
	(IV) V_{GT}	$V_D = 12V, R_L = 20\Omega$			2	V
Gate Nontrigger Voltage	V_{GD}	$T_c = 125^\circ C, V_D = V_{DRM}$		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.

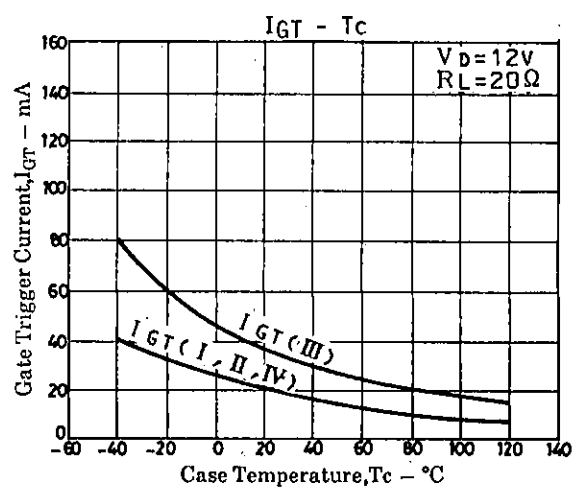
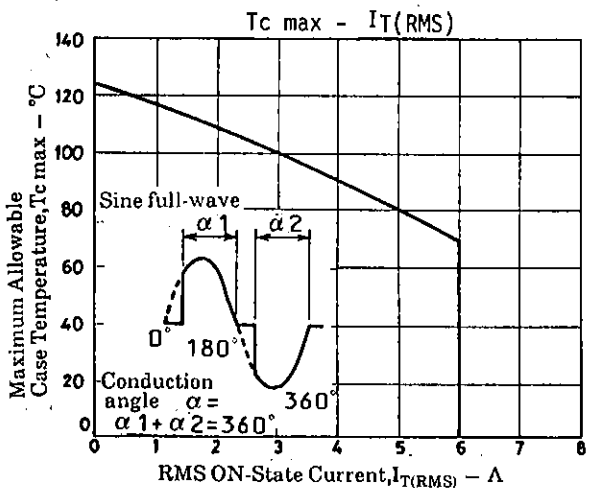
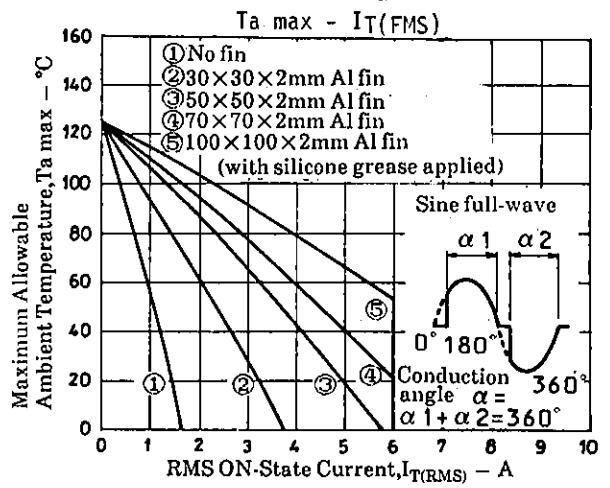
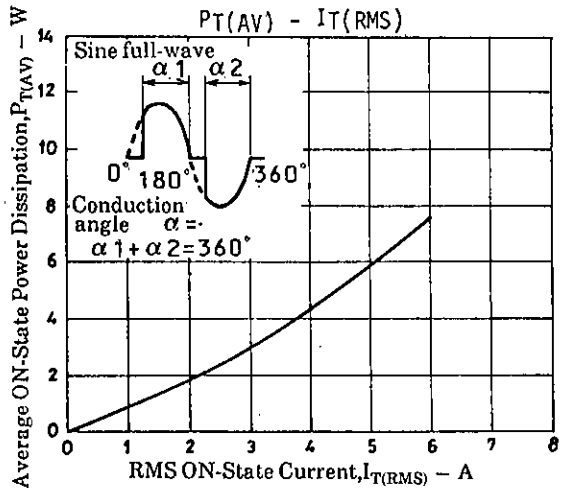
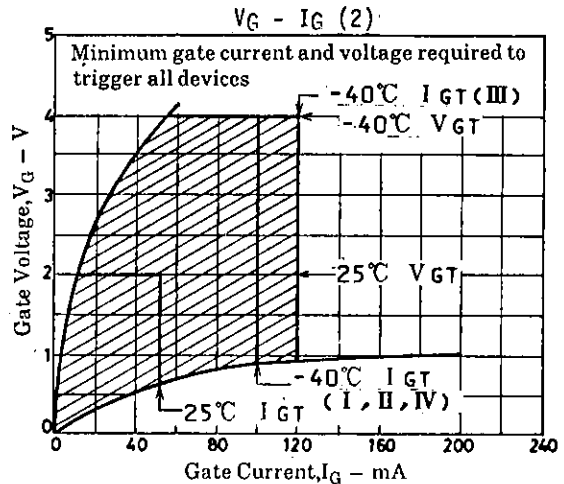
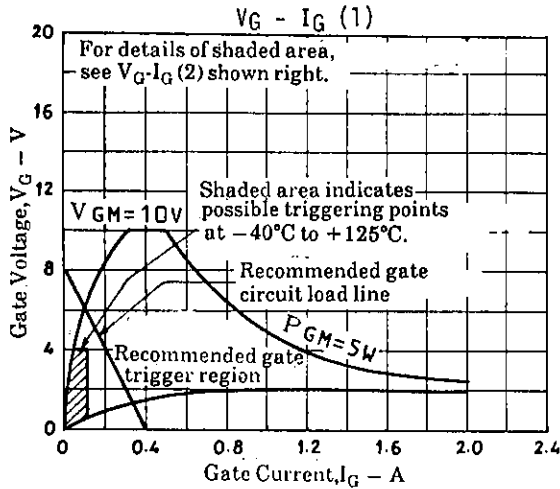
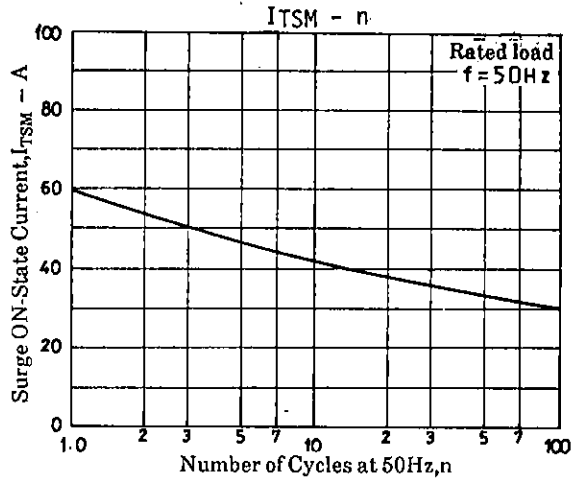
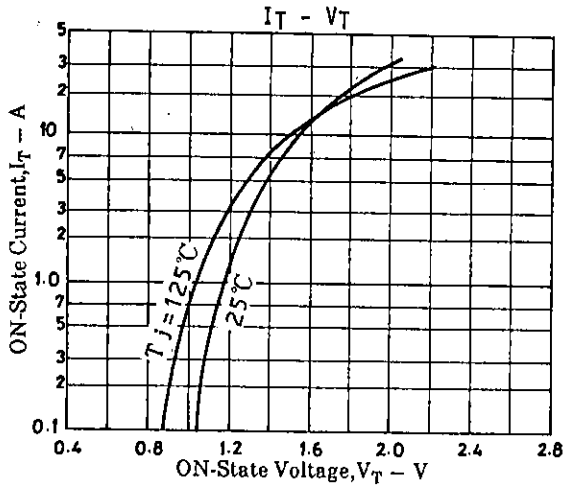
Trigger mode	T2	T1	G
I	+	-	+
II	+	-	-
III	-	+	+
IV	-	+	-

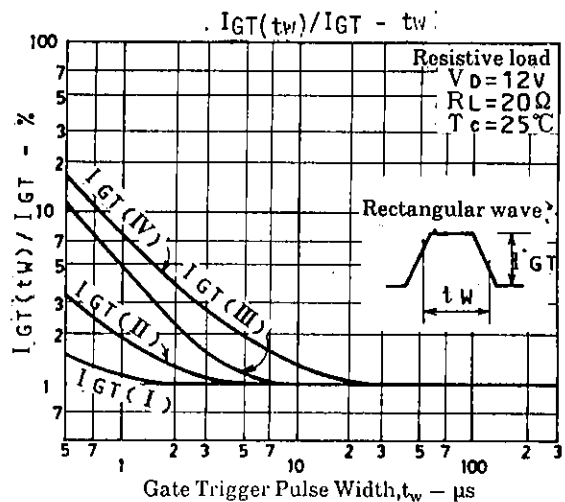
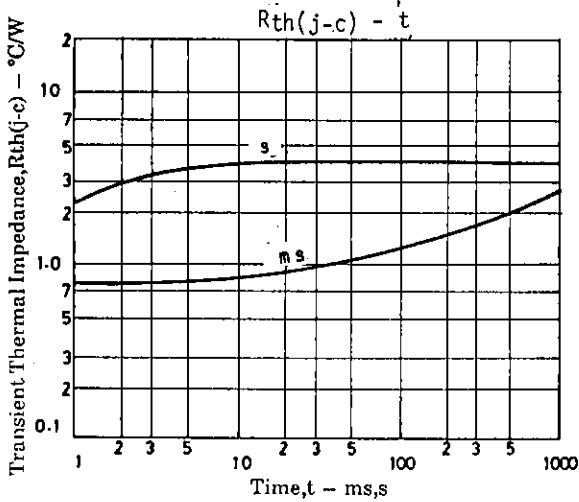
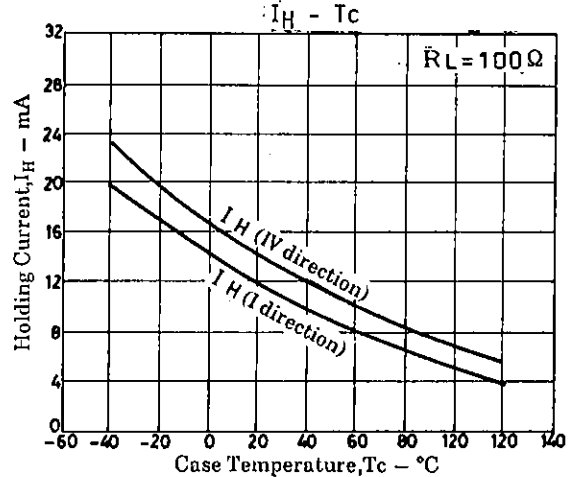
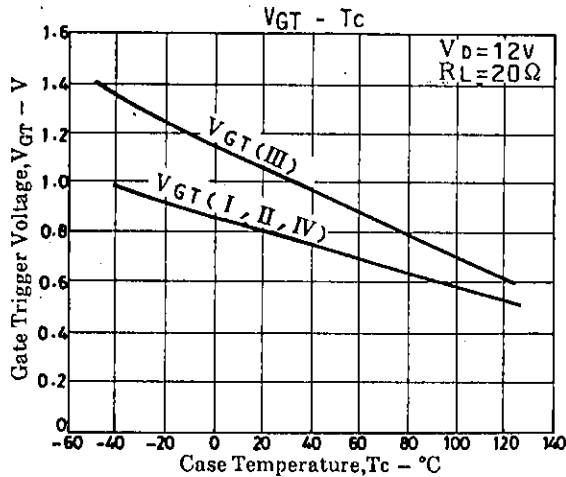
Package Dimensions 1144

(unit: mm)



DTM6-N





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