

SANYO

No.2303A

DTM10-N

Silicon Planar Type

10A Bidirectional Thyristor**Features**

- Insulation type
- Peak OFF-state voltage : 200 to 600V
- RMS ON-state current : 10A
- TO-220 package

Absolute Maximum Ratings at Ta = 25°C

			DTM10C-N	DTM10E-N	DTM10G-N	unit
Repetitive Peak OFF-State Voltage	V_{DRM}		200	400	600	V
RMS ON-State Current	I_T (RMS)	$T_c = 83^\circ\text{C}$, single-phase full-wave Peak 1 cycle, 50Hz	→	→	10	A
Surge ON-State Current	I_{TSM}	1ms ≤ t ≤ 10ms	→	→	100	A
Amperes Squared-Seconds	$\int i^2 T \cdot dt$	f ≥ 50Hz, duty ≤ 10%	→	→	32	A ² s
Peak Gate Power Dissipation	P_{GM}	f ≥ 50Hz, duty ≤ 10%	→	→	5	W
Average Gate Power Dissipation	$P_{G(AV)}$	f ≥ 50Hz, duty ≤ 10%	→	→	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	T_j		→	→	125	°C
Storage Temperature	T_{stg}		→	→	-40 to +125	°C
Weight			→	→	1.8	g

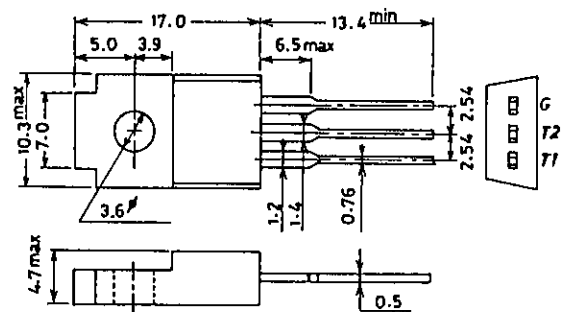
Electrical Characteristics at Ta = 25°C

			min	typ	max	unit
Repetitive Peak OFF-State Current	I_{DRM}	$T_j = 125^\circ\text{C}, V_D = V_{DRM}$			2	mA
Peak ON-State Voltage	V_{TM}	$I_{TM} = 17\text{A}$			1.5	V
Critical Rate of Rise of OFF-State Voltage	(dv/dt) _c	$T_j = 125^\circ\text{C}, V_D = 200\text{V (C)}, 400\text{V (E to G)}$	10			V/μs
Holding Current	I_H	$R_L = 100\Omega$			50	mA

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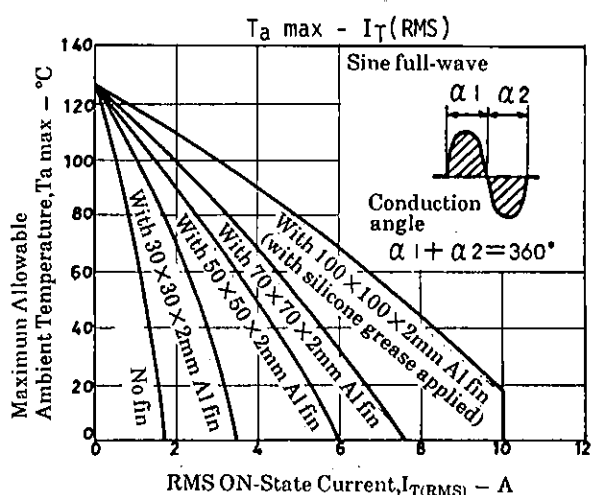
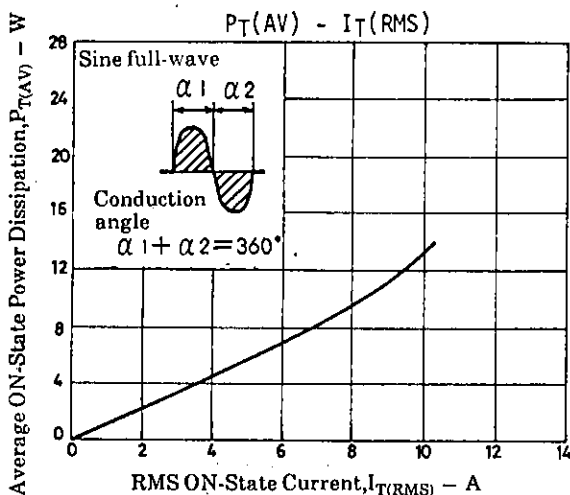
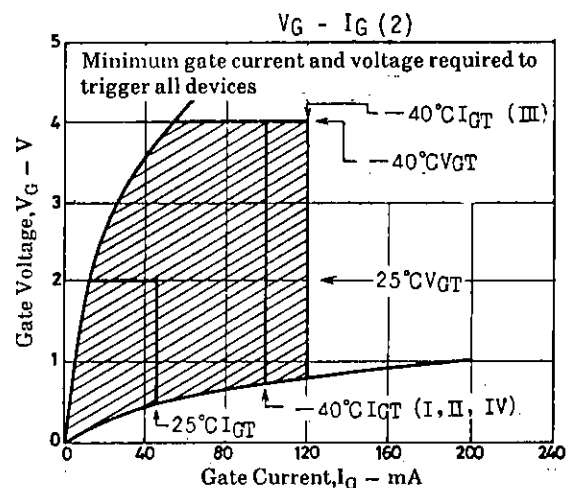
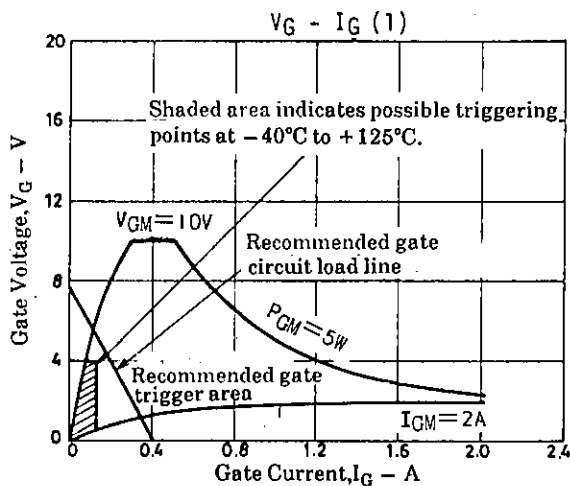
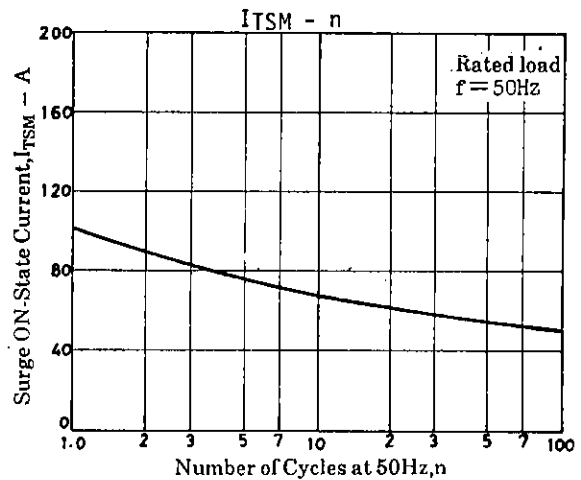
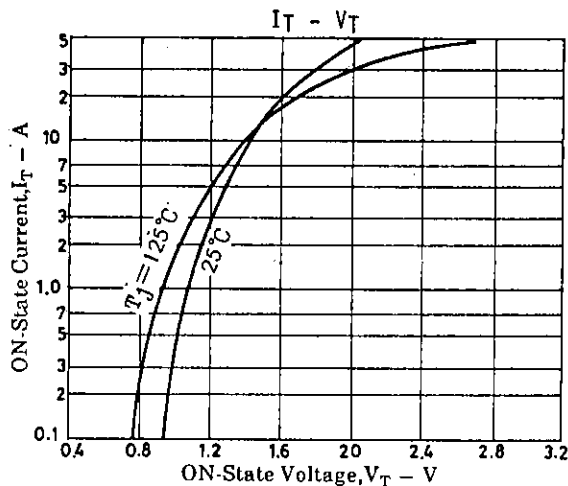
※ : The gate trigger mode is shown below.

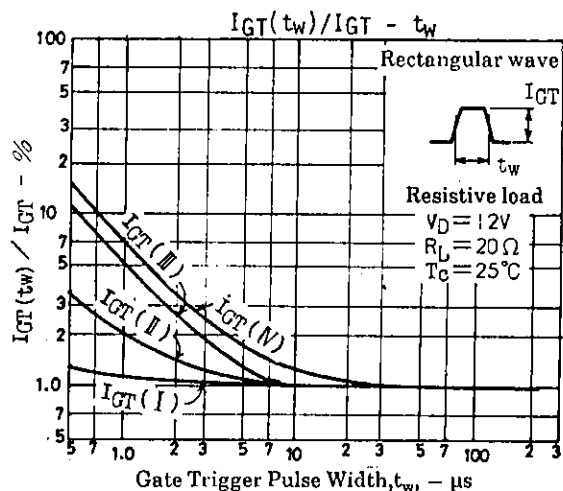
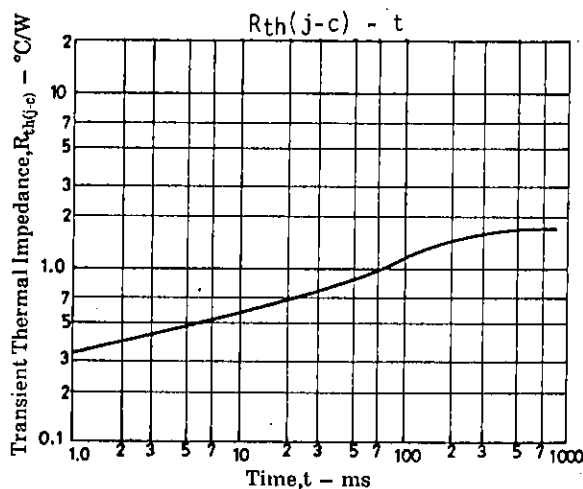
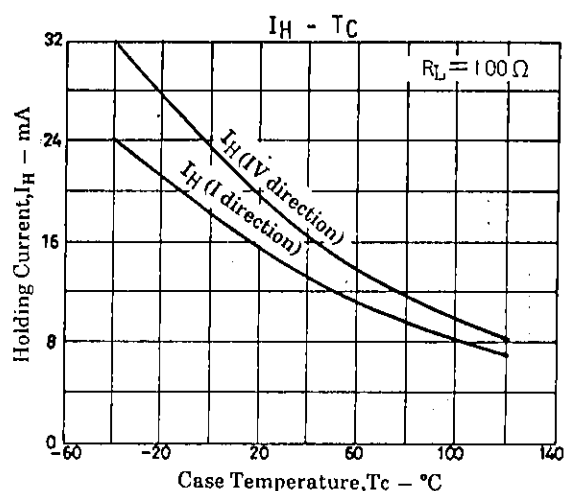
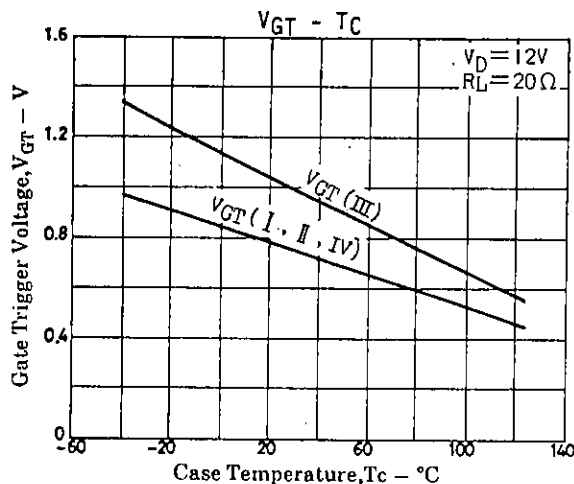
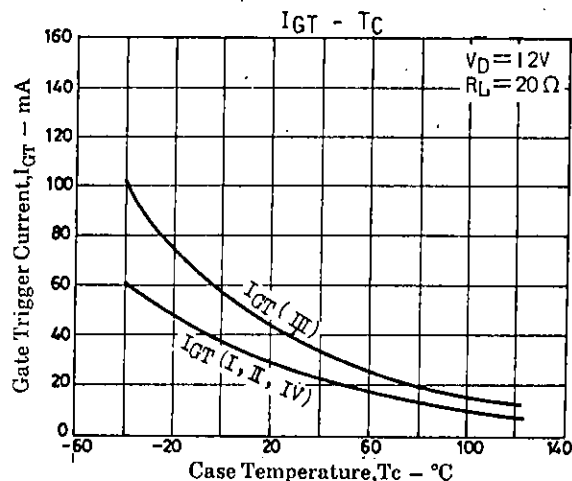
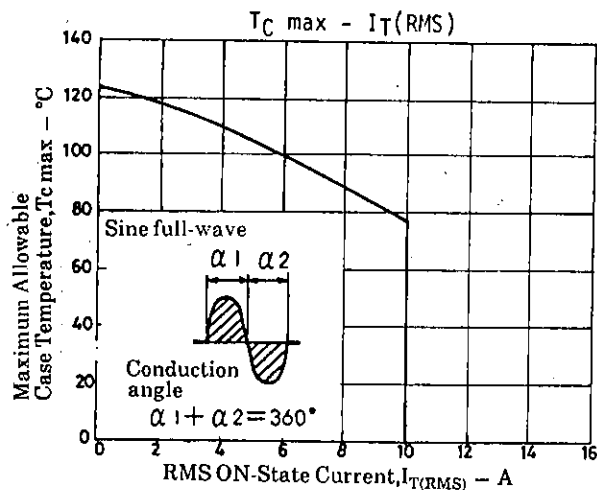
Trigger mode	T2	T1	G
I	+	-	+
II	+	-	-
III	-	+	+
IV	-	+	-

Package Dimensions 1144
(unit: mm)

Continued from preceding page.

			min	typ	max	unit
Gate Trigger Current (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)	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			3.0	$^\circ C/W$





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