

SANYO**DTM10-N**

Silicon Planar Type

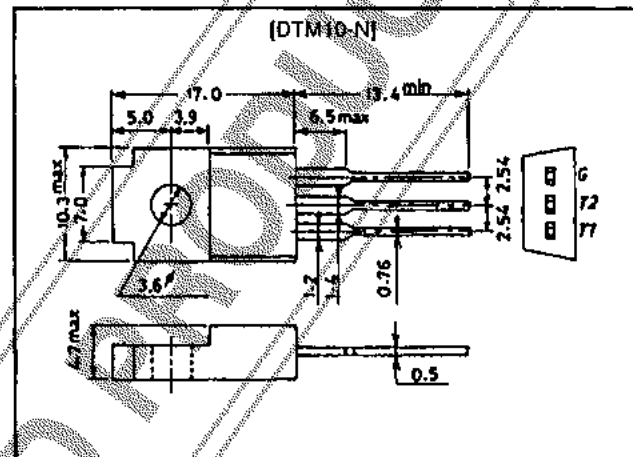
10A Bidirectional Thyristor**Features**

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

Package Dimensions

unit:mm

1144



*:The gate trigger mode is shown below.

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

SpecificationsAbsolute Maximum Ratings at $T_a = 25^\circ\text{C}$

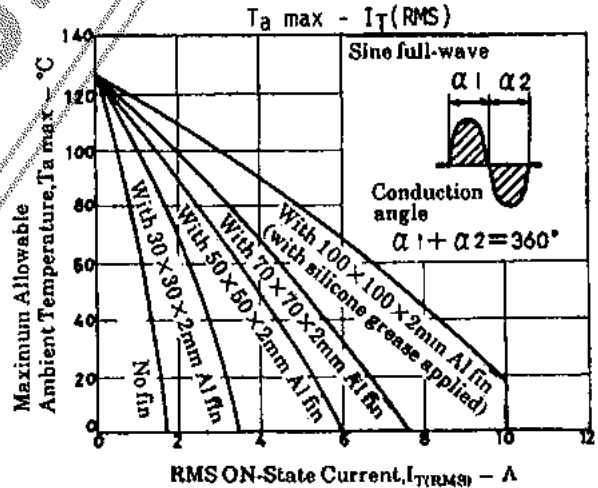
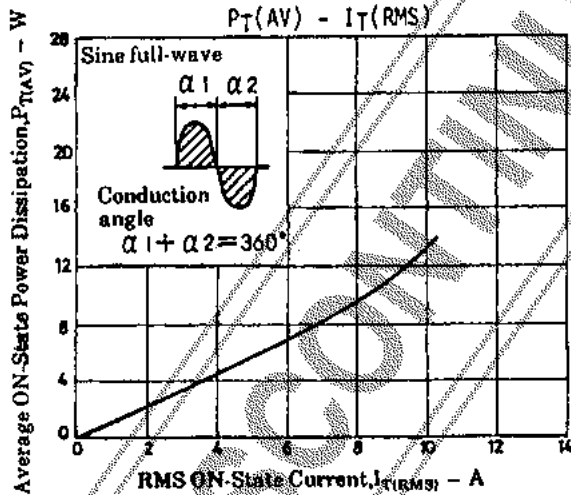
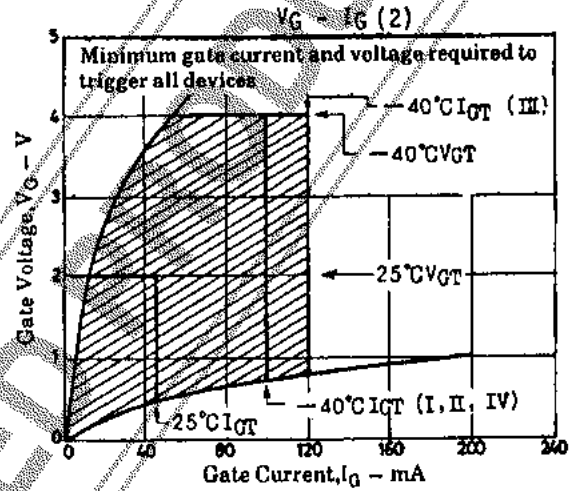
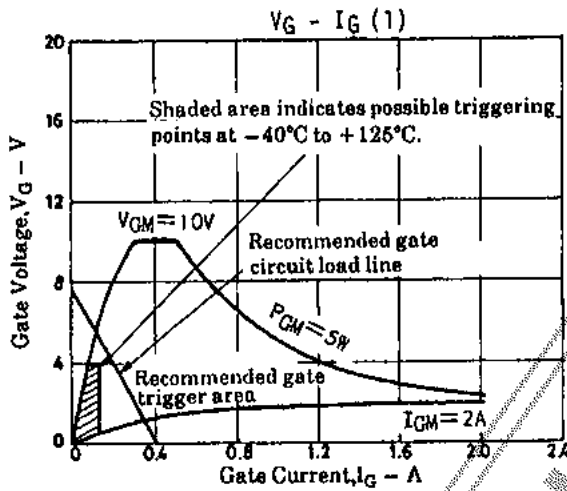
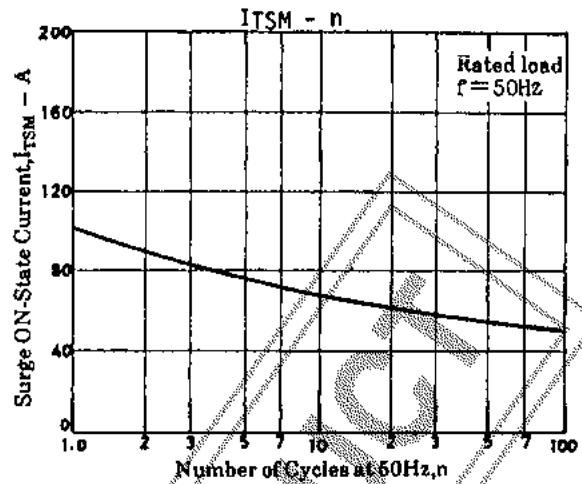
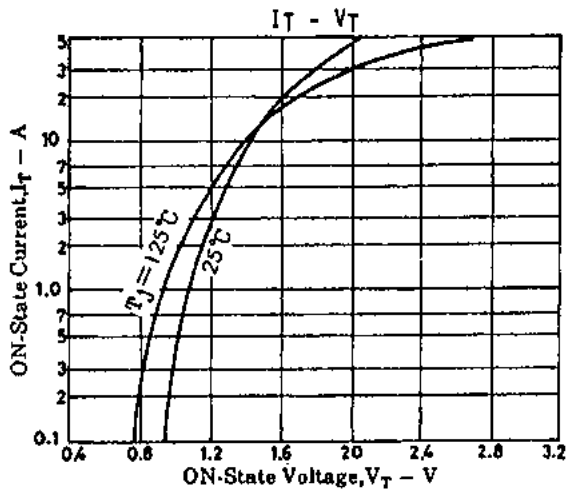
Parameter	Symbol	Conditions	DTM10C-N	DTM10E-N	DTM10G-N	Unit
Repetitive Peak OFF-State Current	V_{DRM}		200	400	600	V
RMS ON-State Voltage	$V_T(RMS)$	$T_c = 83^\circ\text{C}$, single-phase full-wave	→	→	10	A
Surge ON-State Current	I_{TSM}	Peak 1 cycle, 50Hz	→	→	100	A
Ampere Squared-Seconds	$[I^2t]_d$	$t_{ms} \leq 10\text{ms}$	→	→	32	A^2s
Peak Gate Power Dissipation	P_{GM}	$f = 50\text{Hz}$, duty $\leq 10\%$	→	→	5	W
Average Gate Power Dissipation	$P_{G(AV)}$		→	→	0.5	W
Peak Gate Current	I_{GM}	$f = 50\text{Hz}$, duty $\leq 10\%$	→	→	± 2	A
Peak Gate Voltage	V_{GM}	$f = 50\text{Hz}$, duty $\leq 10\%$	→	→	± 10	V
Junction Temperature	T_j		→	→	125	$^\circ\text{C}$
Storage Temperature	T_{stg}		→	→	-40 to +125	$^\circ\text{C}$
Weight			→	→	1.8	g

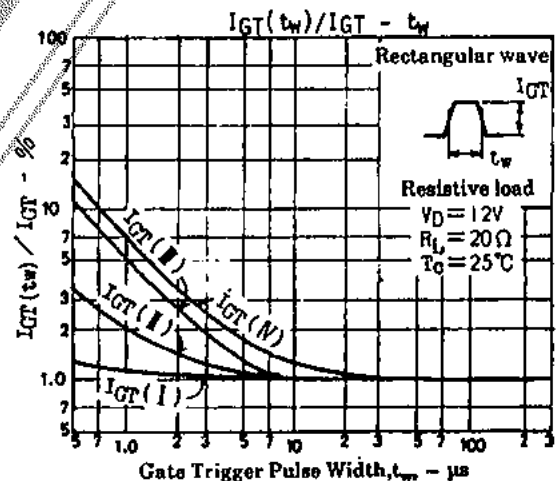
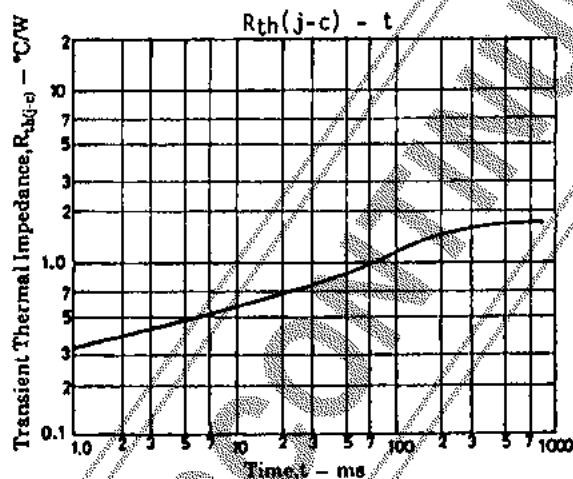
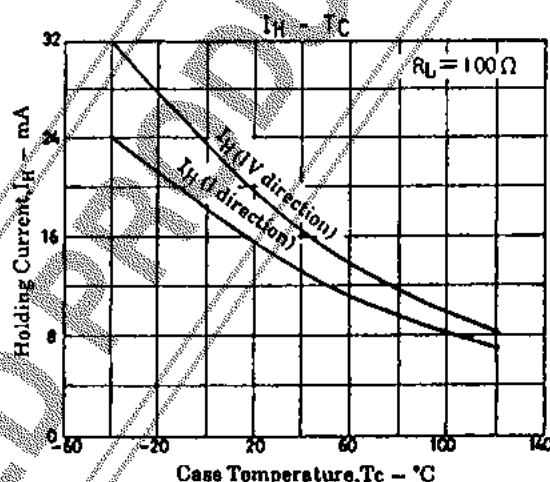
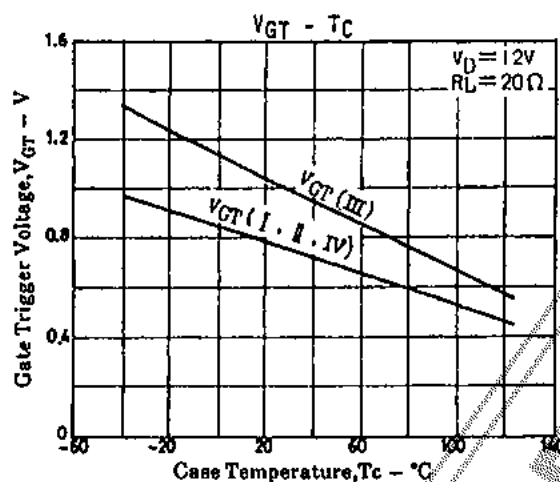
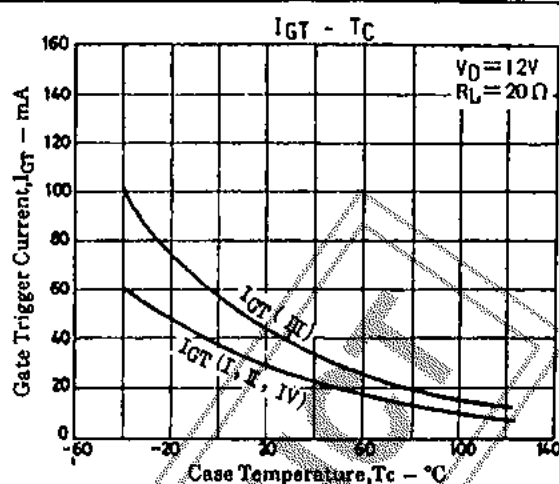
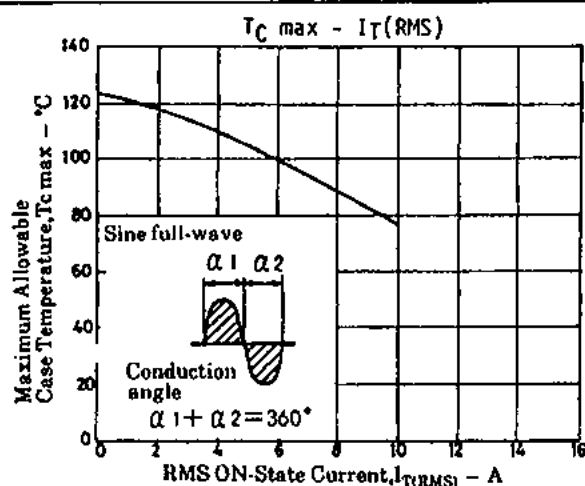
Electrical Characteristics at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
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	$(dv/dt)_c$	$T_j = 125^\circ\text{C}$, $V_D = 200\text{V (C)}$, 400V (E to G)	10			V/ μs
Holding Current	I_H	$R_L = 100\Omega$			60	mA
Gate Trigger Current (I)	I_{GT}	$V_D = 12\text{V}$, $R_L = 20\Omega$			30	mA
Gate Trigger Current (II)	I_{GT}	$V_D = 12\text{V}$, $R_L = 20\Omega$			30	mA
Gate Trigger Current (III)	I_{GT}	$V_D = 12\text{V}$, $R_L = 20\Omega$			50	mA
Gate Trigger Current (IV)	I_{GT}	$V_D = 12\text{V}$, $R_L = 20\Omega$			30	mA
Gate Trigger Voltage (I)	V_{GT}	$V_D = 12\text{V}$, $R_L = 20\Omega$			2	V
Gate Trigger Voltage (II)	V_{GT}	$V_D = 12\text{V}$, $R_L = 20\Omega$			2	V
Gate Trigger Voltage (III)	V_{GT}	$V_D = 12\text{V}$, $R_L = 20\Omega$			2	V
Gate Trigger Voltage (IV)	V_{GT}	$V_D = 12\text{V}$, $R_L = 20\Omega$			2	V
Gate Nonttrigger Voltage	V_{GD}	$T_c = 125^\circ\text{C}$, $V_D = V_{DRM}$	0.2			V
Thermal Resistance	$R_{th(j-c)}$	Between junction and case, AC			3.0	$^\circ\text{C/W}$

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