

SANYO**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.

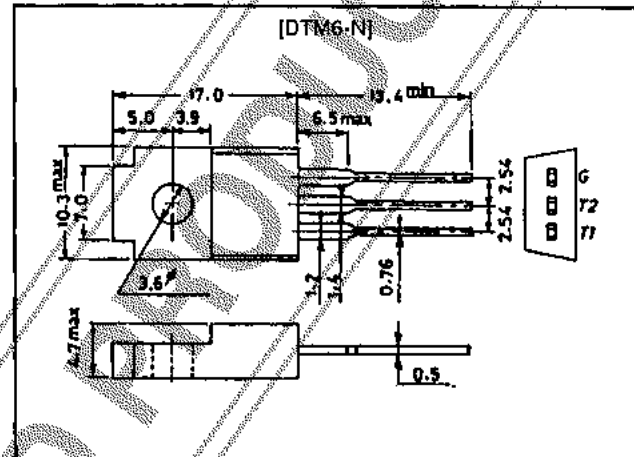
*The gate trigger mode is shown below.

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

Package Dimensions

unit:mm

1144

**Specifications****Absolute Maximum Ratings at Ta = 25°C**

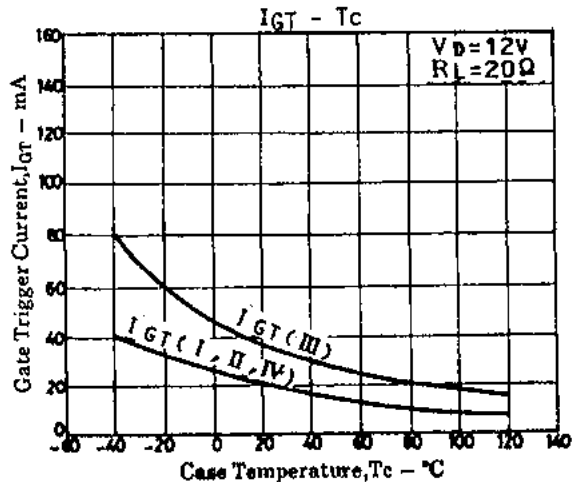
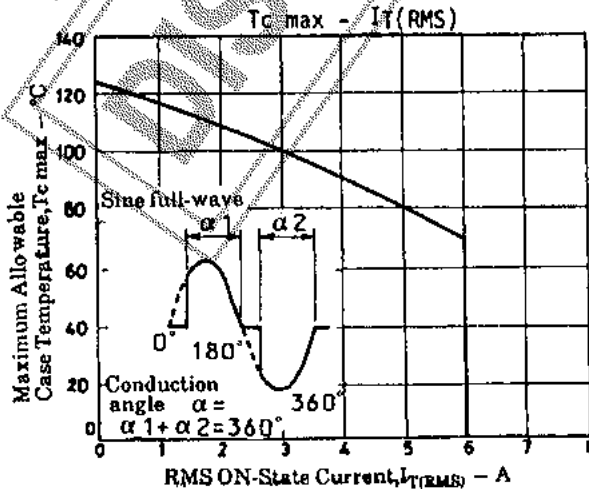
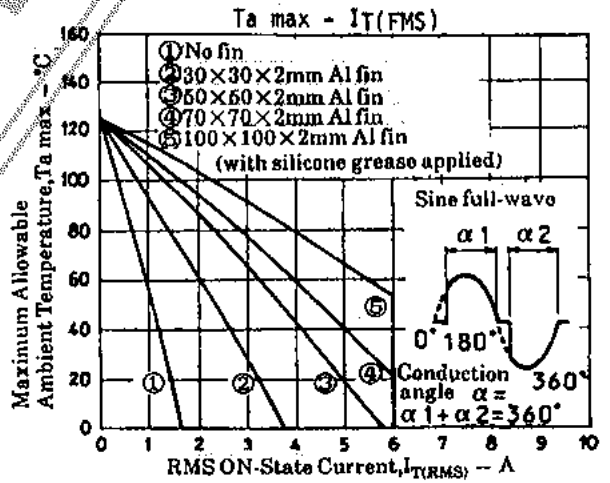
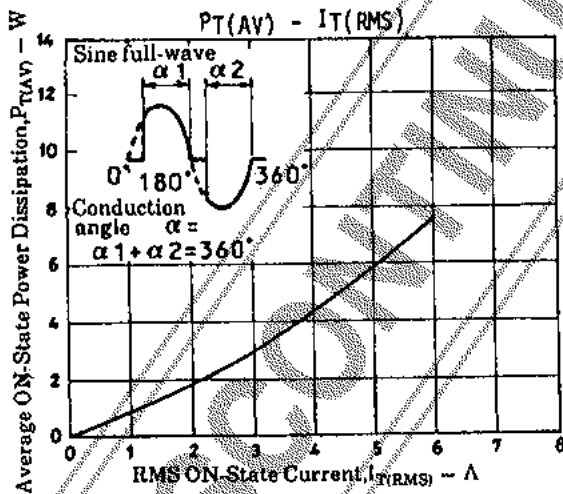
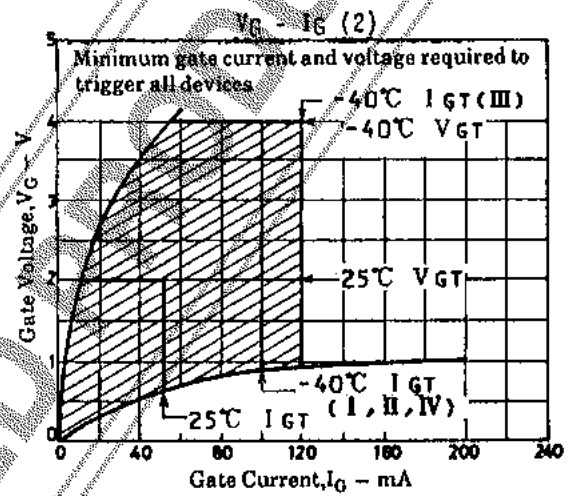
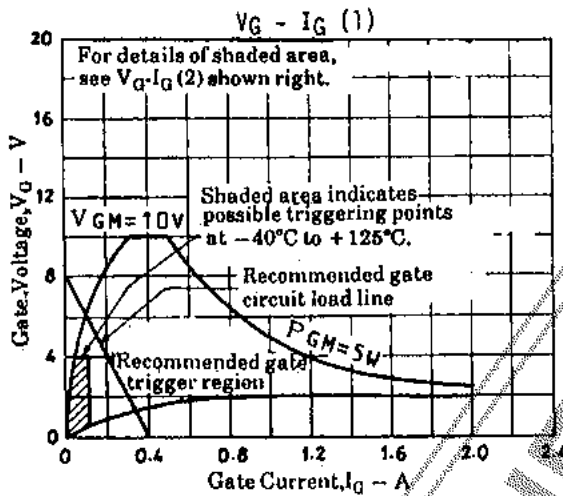
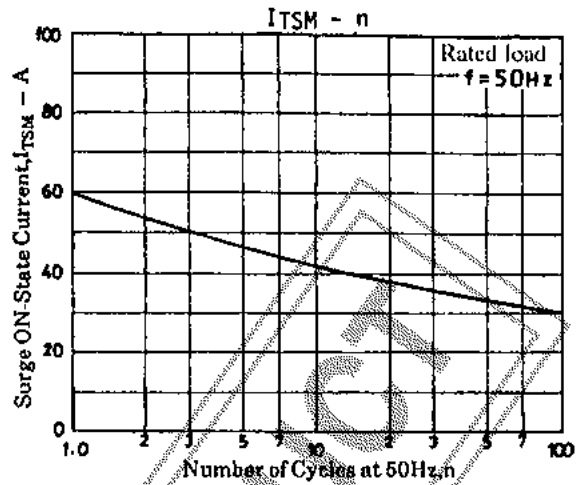
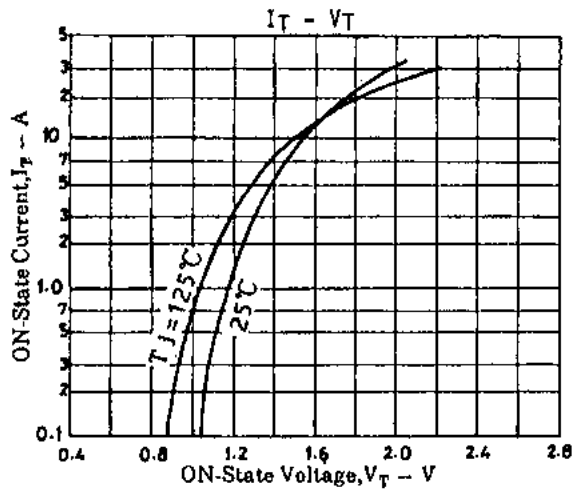
Parameter	Symbol	Conditions	DTC6C-N	DTC6E-N	DTC6G-N	Unit
Repetitive Peak OFF-State Voltage	V_{DRM}		200	400	600	V
RMS ON-State Current	$I_T(RMS)$	$T_c=70^\circ\text{C}$, single-phase full-wave	→	→	6	A
Surge ON-State Current	I_{TSM}	Peak 1 cycle, 50Hz	→	→	60	A
Amperes Squared-Seconds	$\int I^2 dt$	1ms to 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	T_j		→	→	125	°C
Storage Temperature	T_{sig}		→	→	-40 to +125	°C
Weight			→	→	2.1	g

Electrical Characteristics at Ta = 25°C

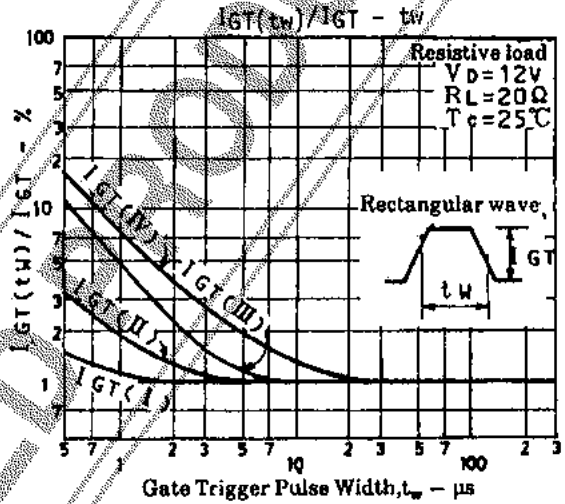
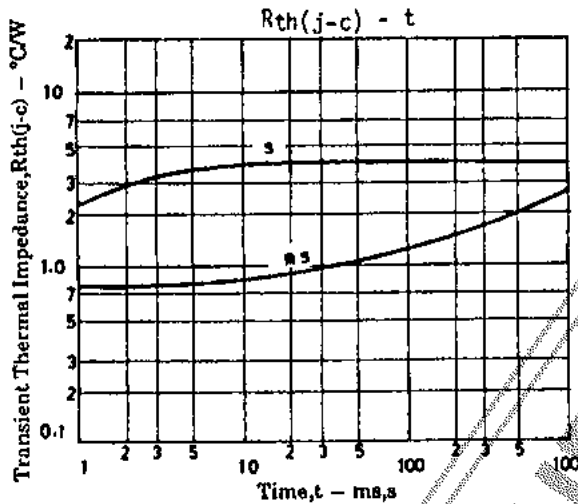
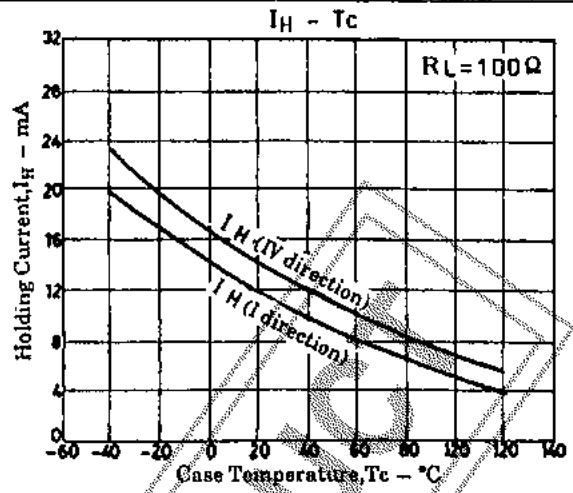
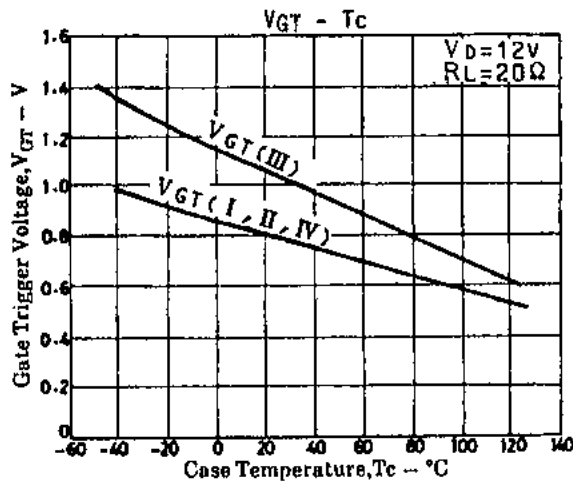
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Repetitive Peak OFF-State Current	I_{DRM}	$T_j=125^\circ\text{C}$, $V_D=V_{DRM}$			2	mA
Peak ON-State Voltage	V_{TM}	$I_{TM}=9\text{A}$			1.5	V
Critical Rate of Rise of OFF-State Voltage	$(dv/dt)_C$	$T_j=125^\circ\text{C}$, $V_D=200\text{V}$ (C), 400V (E to G)	10			V/ μs
Holding Current	I_H	$R_L=100\Omega$			50	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 Nontrigger 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			3.8	°C/W

SANYO Electric Co., Ltd. Semiconductor Business Headquarters
 TOKYO OFFICE, Tokyo Bldg., 1-10, Chome, Ueno, Taito-ku, TOKYO, 110-8534 JAPAN

DTM6-N



DTM6-N



■ No products described or contained herein are intended for use in surgical implants, life-support systems, aerospace equipment, nuclear power control systems, vehicles, disaster/crime-prevention equipment and the like, the failure of which may directly or indirectly cause injury, death or property loss.

■ Anyone purchasing any products described or contained herein for an above-mentioned use shall:

- ① Accept full responsibility and indemnity and defend SANYO ELECTRIC CO., LTD., its affiliates, subsidiaries and distributors and all their officers and employees, jointly and severally, against any and all claims and litigation and all damages, cost and expenses associated with such use;
- ② Not impose any responsibility for any fault or negligence which may be cited in any such claim or litigation on SANYO ELECTRIC CO., LTD., its affiliates, subsidiaries and distributors or any of their officers and employees jointly or severally.

■ Information (including circuit diagrams and circuit parameters) herein is for example only; it is not guaranteed for volume production. SANYO believes information herein is accurate and reliable, but no guarantees are made or implied regarding its use or any infringements of intellectual property rights or other rights of third parties.

This catalog provides information as of June, 1998. Specifications and information herein are subject to change without notice.