

SANYO

No.1878B

DTM-6-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	$I_{T(RMS)}$	$T_c=70^\circ\text{C}$, single-phase full-wave	→	→	6	A
Surge ON-State Current	I_{TSM}	Peak 1 cycle, 50Hz	→	→	60	A
Amperes Squared-Seconds	$\int i^2 T \cdot dt$	$1\text{ms} \leq t \leq 10\text{ms}$	→	→	18	A ² s
Peak Gate Power Dissipation	P_{GM}	$f \geq 50\text{Hz}$, duty $\leq 10\%$	→	→	5	W
Average Gate Power Dissipation	$P_{G(AV)}$		→	→	0.5	W
Peak Gate Current	I_{GM}	$f \geq 50\text{Hz}$, duty $\leq 10\%$	→	→	± 2	A
Peak Gate Voltage	V_{GM}	$f \geq 50\text{Hz}$, 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

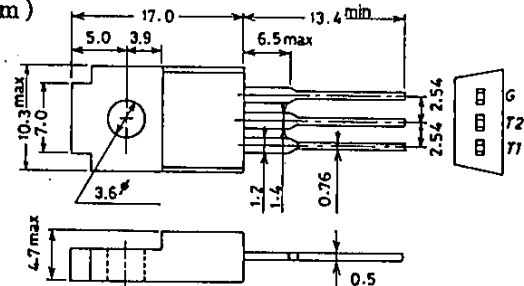
				min	typ	max	unit
Repetitive Peak OFF-State Current	I_{DRM}	$T_j=125^\circ\text{C}$, $V_D=V_{DRM}$				2	mA
Peak ON-State Voltage	V_{TM}	$I_{TM}=9\text{A}$				1.5	V
Critical Rate of Rise of OFF-State Voltage	(dv/dt) _C	$\left\{ \begin{array}{l} T_j=125^\circ\text{C}, V_D=200\text{V (C)}, \\ 400\text{V (E to G)} \end{array} \right.$		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
	(II) I_{GT}	$V_D=12\text{V}, R_L=20\Omega$				30	mA
	(III) I_{GT}	$V_D=12\text{V}, R_L=20\Omega$				50	mA
	(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
	(II) V_{GT}	$V_D=12\text{V}, R_L=20\Omega$				2	V
	(III) V_{GT}	$V_D=12\text{V}, R_L=20\Omega$				2	V
	(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

※ : The gate trigger mode is shown below.

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

Package Dimensions 1144

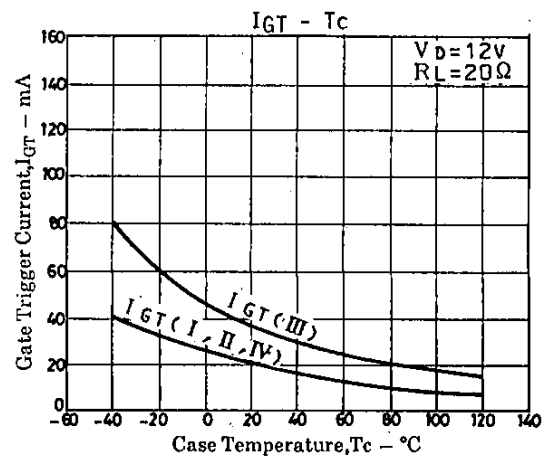
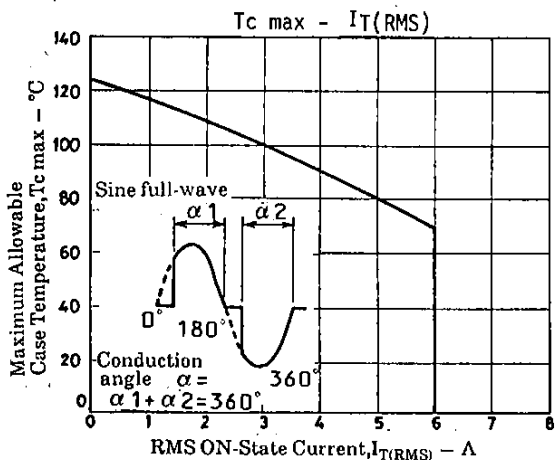
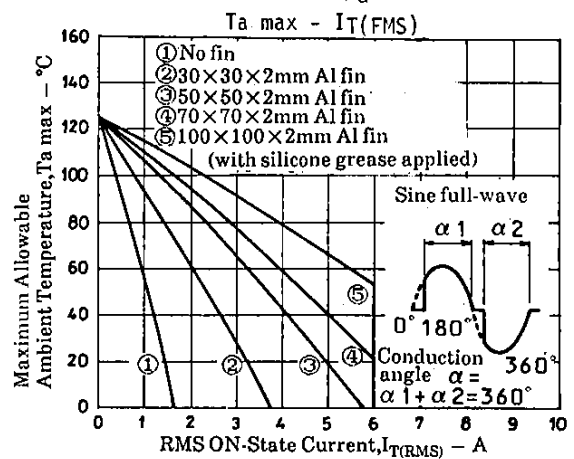
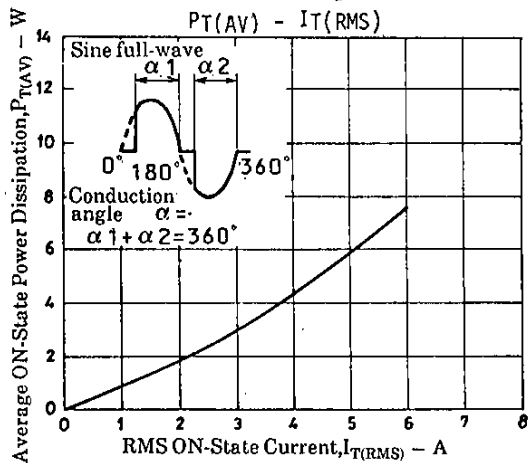
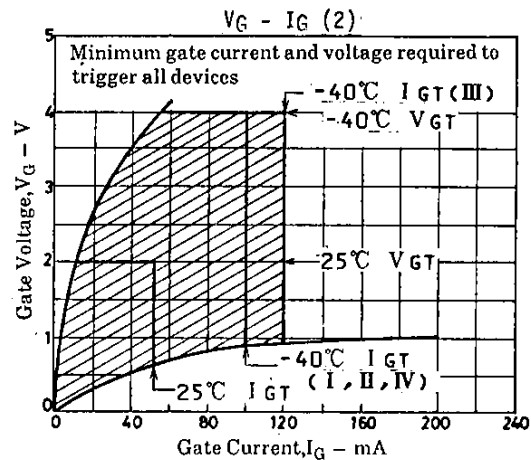
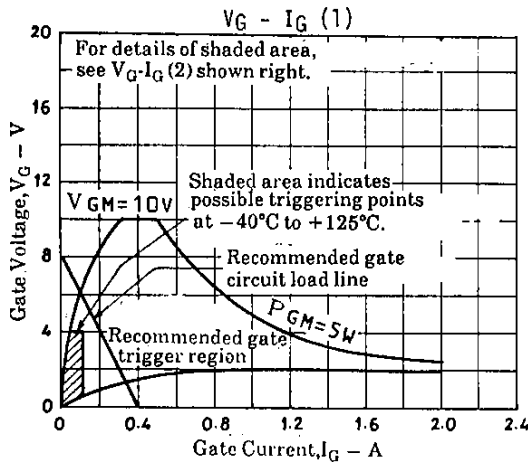
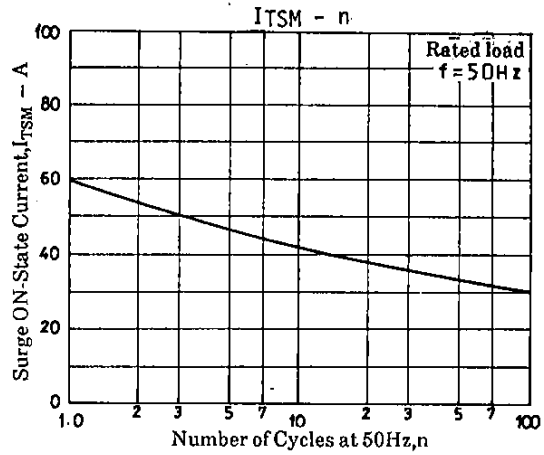
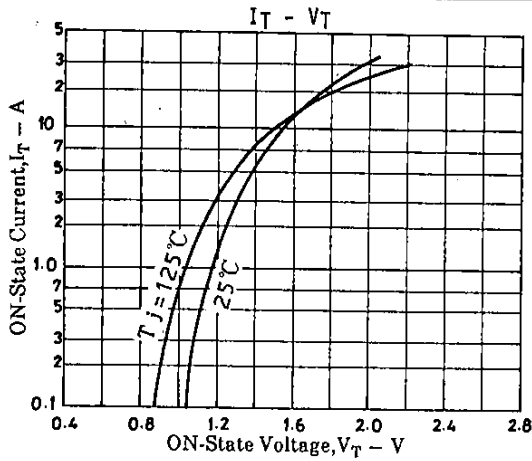
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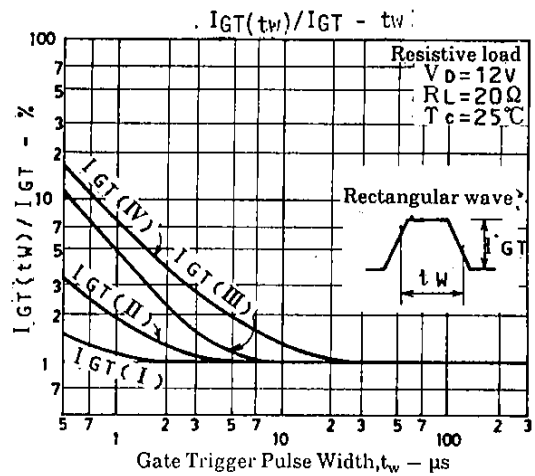
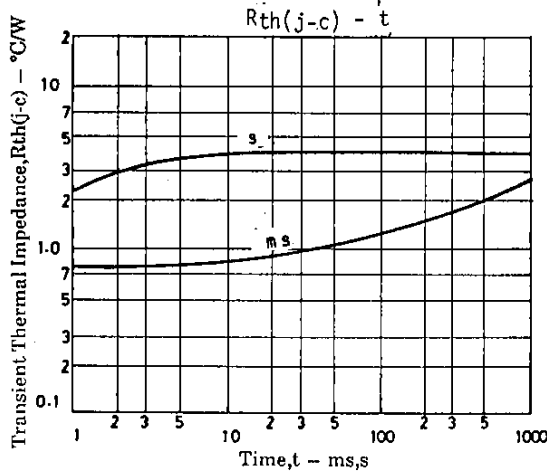
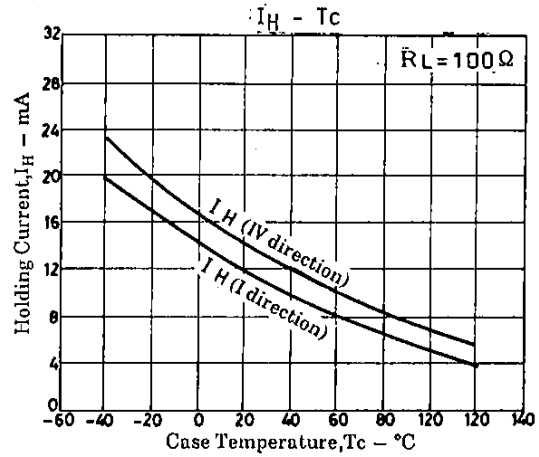
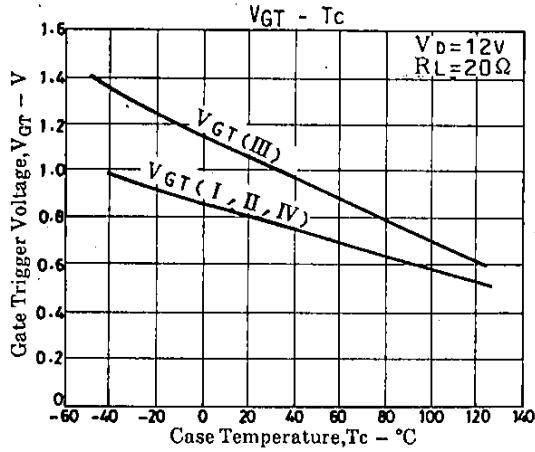
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