

<b>SANYO</b>	No.1880B	<b>DTM12-N</b> Silicon Planar Type <b>12A Bidirectional Thyristor</b>
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**Features**

- Insulation type
- Peak OFF-state voltage : 200 to 600V
- RMS ON-state current : 12A
- TO-220 package

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

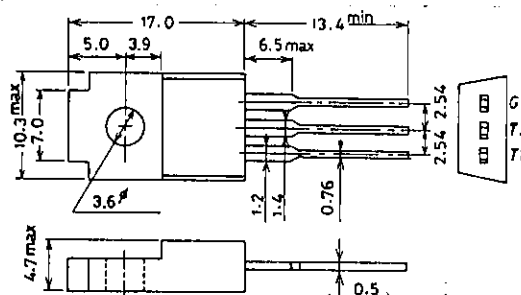
		DTM 12C-N	DTM 12E-N	DTM 12G-N	unit
Repetitive Peak OFF-State Voltage	$V_{DRM}$	200	400	600	V
RMS ON-State Current	$I_{T(RMS)}$	→	→	12	A
Surge ON-State Current	$I_{TSM}$	→	→	100	A
Amperes Squared-Seconds	$i^2t \cdot dt$	→	→	50	A <sup>2</sup> S
Peak Gate Power Dissipation	$P_{GM}$	→	→	5	W
Average Gate Power Dissipation	$P_{G(AV)}$	→	→	0.5	W
Peak Gate Current	$I_{GM}$	→	→	±2	A
Peak Gate Voltage	$V_{GM}$	→	→	±10	V
Junction Temperature	$T_j$	→	→	125	°C
Storage Temperature	$T_{stg}$	→	-40 to	+125	°C
Weight		→	→	2.1	g

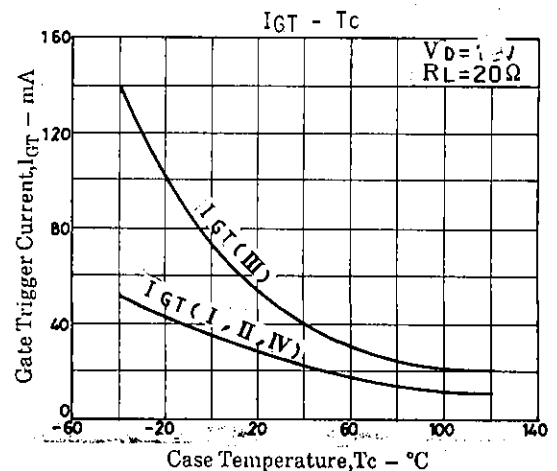
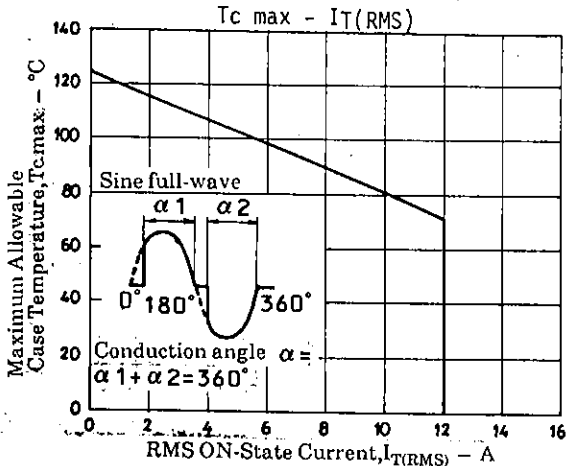
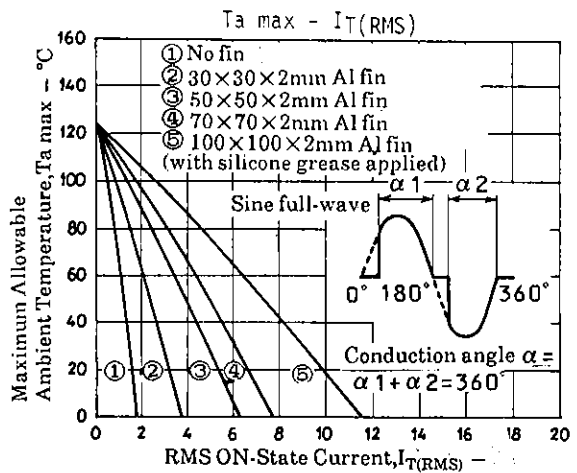
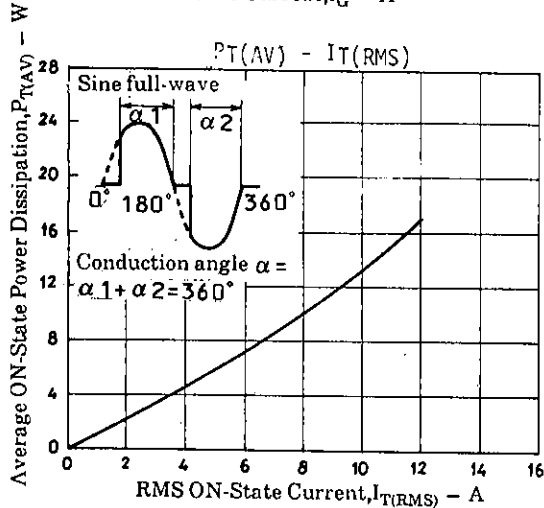
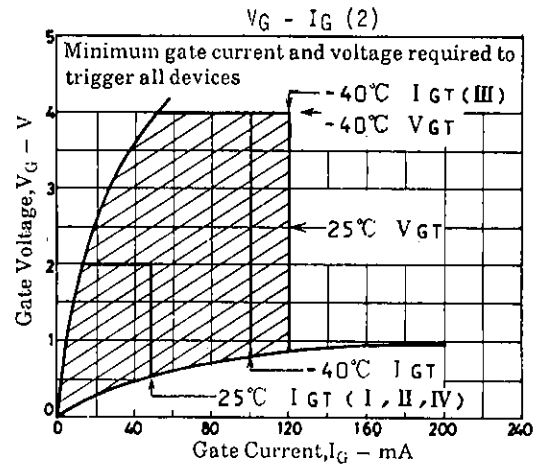
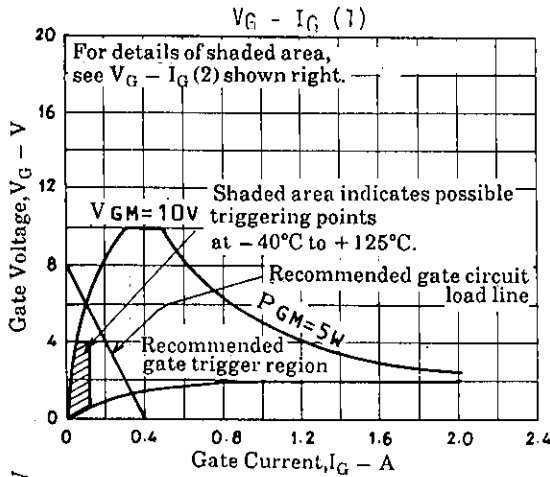
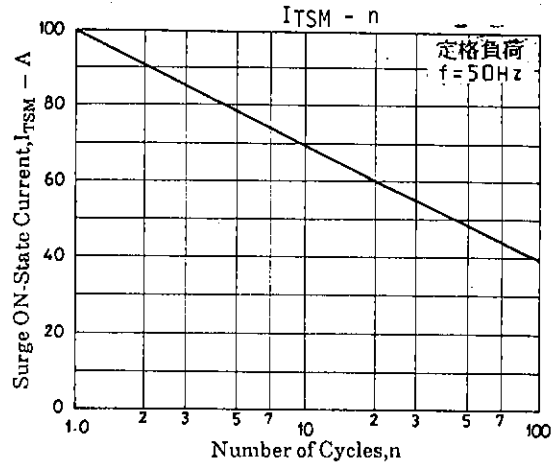
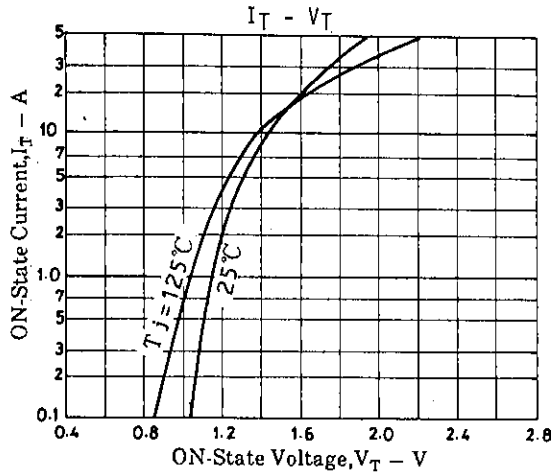
**Electrical Characteristics at Ta = 25°C**

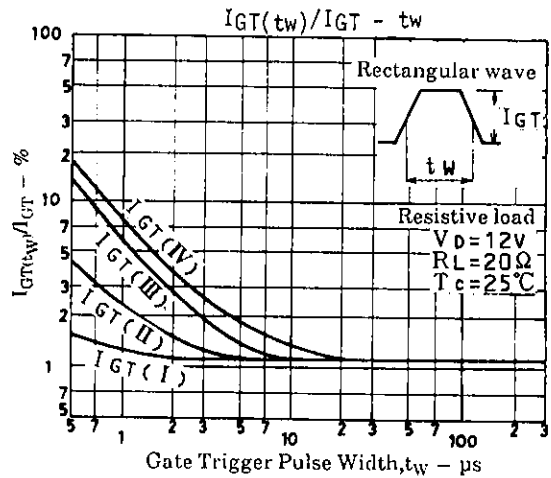
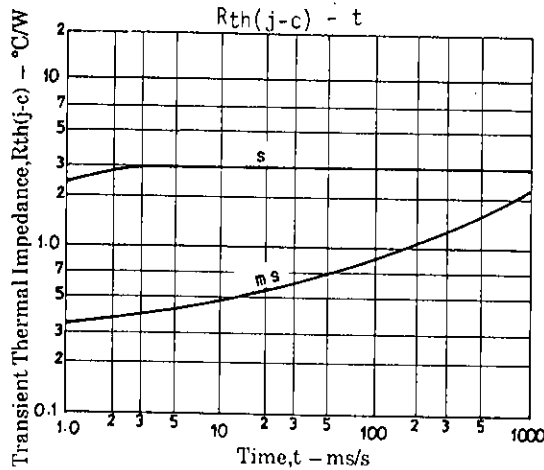
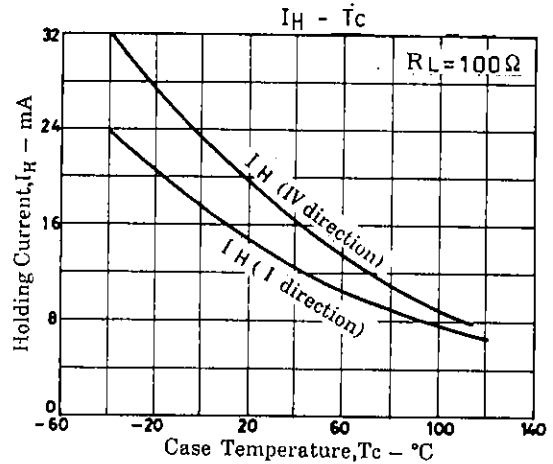
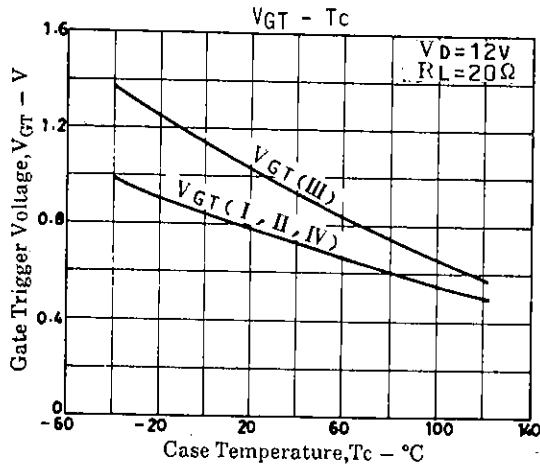
			min	typ	max	unit
Repetitive Peak OFF-State Current	$I_{DRM}$	$T_j = 125^\circ C, V_D = V_{DRM}$			2	mA
Peak ON-State Voltage	$V_{TM}$	$I_{TM} = 12A$			1.5	V
Critical Rate of Rise of OFF-State Voltage	$(dv/dt)_c$	$T_j = 125^\circ C, V_D = 200V(C), 400V(E \text{ to } G)$	10			V/ $\mu$ s
Holding Current	$I_H$	$R_L = 100\Omega$			50	mA
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	°C/W

\* : The gate trigger mode is shown below. **Package Dimensions 1144**  
( unit: mm )

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







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