

**SANYO**

No.2096B

**DTC10-N**

Silicon Planar Type

10A Bidirectional Thyristor

**Features**

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

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

		DTC 10C-N	DTC 10E-N	DTC 10G-N	unit
Repetitive Peak OFF-State Voltage	$V_{DRM}$	200	400	600	V
RMS ON-State Current	$I_{T(RMS)}$	→	→	10	A
Surge ON-State Current	$I_{TSM}$	→	→	80	A
Amperes Squared-Seconds	$\int i^2 T dt$	→	→	32	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		→	→	1.8	g

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

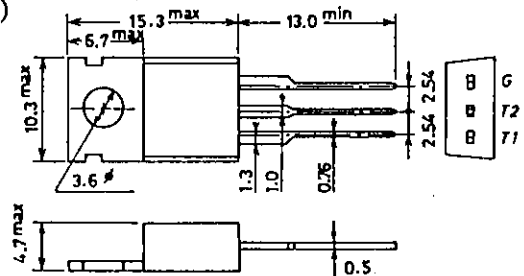
			min	typ	max	unit
Repetitive Peak OFF-State Current	$I_{DRM}$	$T_j = 125^\circ\text{C}, V_D = V_{DRM}$			2	mA
Peak ON-State Voltage	$V_{TM}$	$I_{TM} = 14\text{A}$			1.5	V
Critical Rate of Rise of OFF-State Voltage	$(dv/dt)_C$	$T_j = 125^\circ\text{C}, V_D = 200\text{V(C)}, 400\text{V(E,G)}$	10			V/ $\mu\text{s}$
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			1.8	°C/W

※ : The gate trigger mode is shown below.

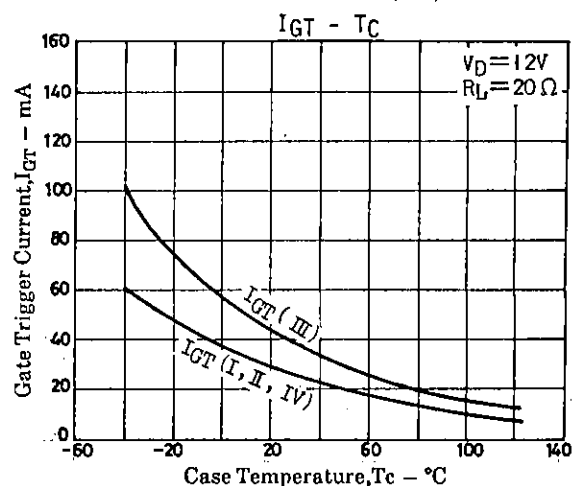
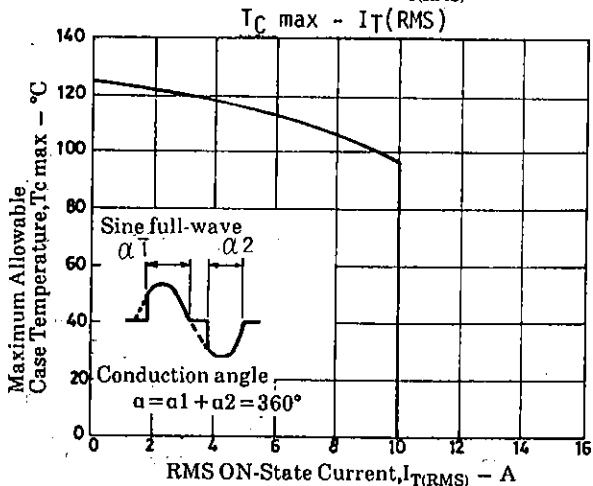
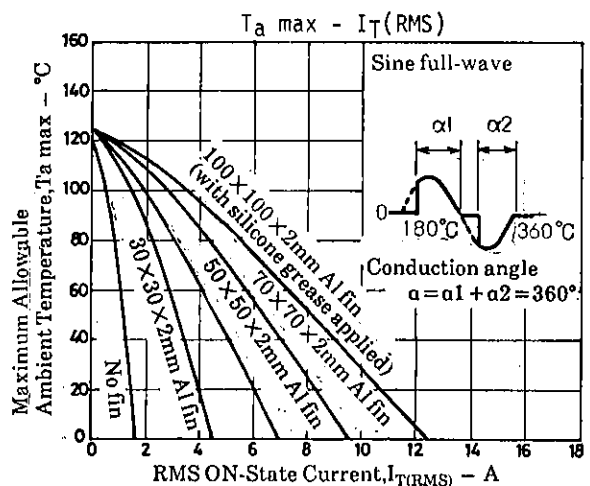
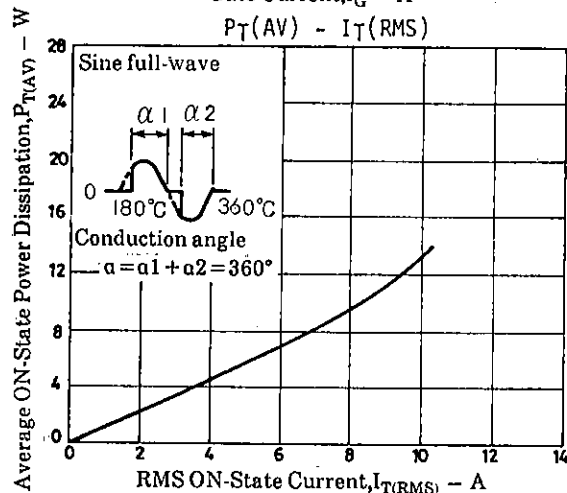
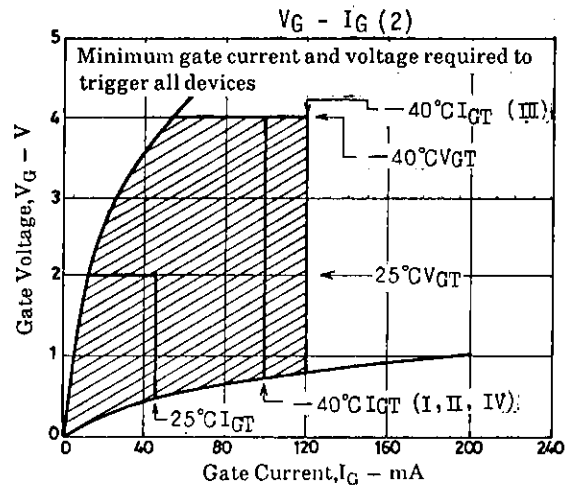
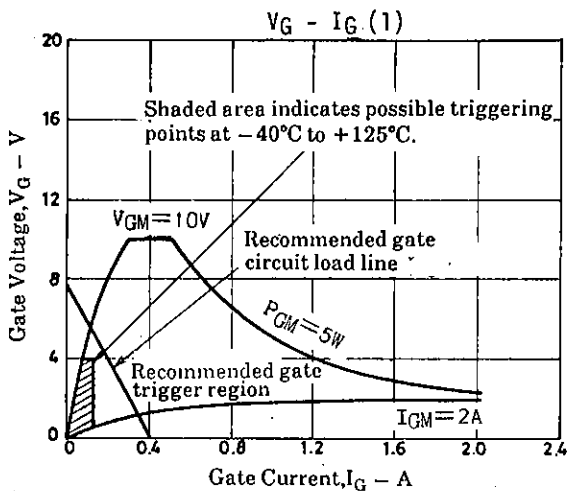
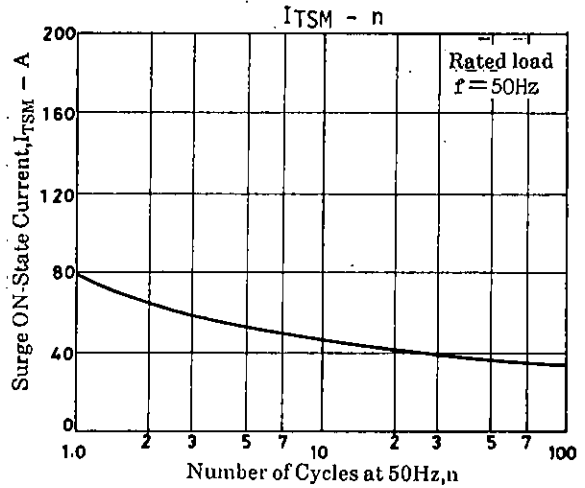
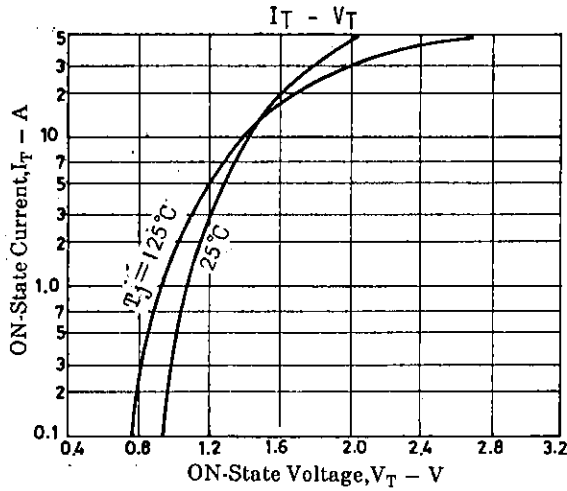
Trigger mode	T2	T1	G
I	+	-	+
II	+	-	-
III	-	+	+
IV	-	+	-

**Package Dimensions 1155**

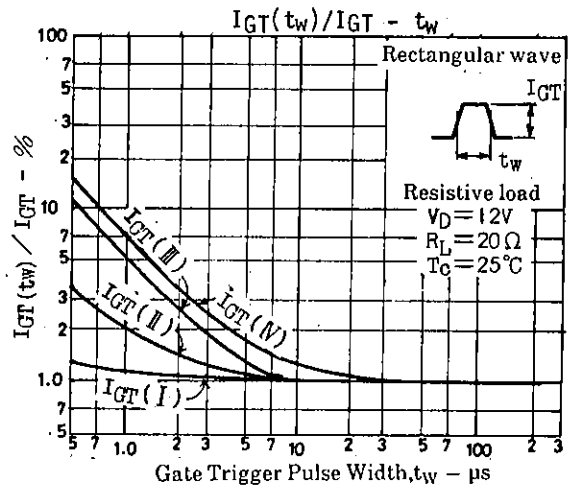
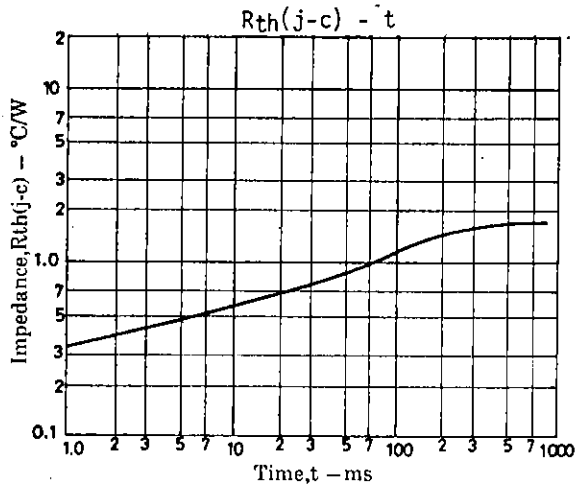
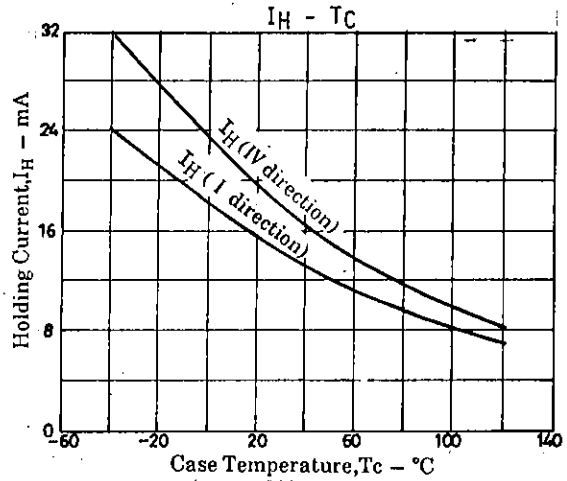
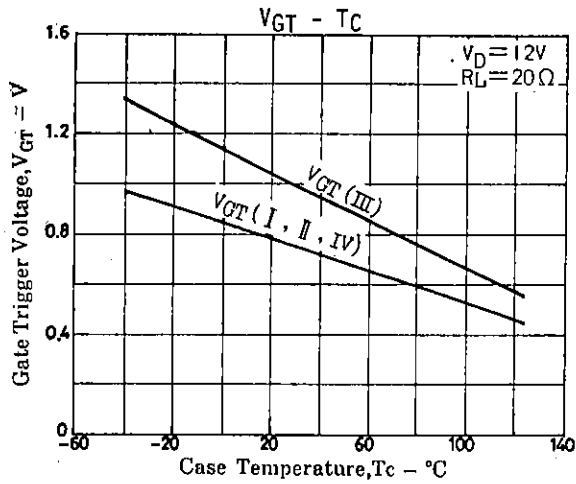
(unit: mm)



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