

SANYO**DTA6-N****6A Bidirectional Thyristor****Features**

- Peak OFF-state voltage : 200 to 600V
- RMS ON-state current : 6A
- TO-220 package.

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

			DTA6C-N	DTA6B-N	DT6AG-N	unit
Repetitive Peak OFF-State Voltage	V_{DRM}		200	400	600	V
RMS ON-State Current	$I_{\text{T(RMS)}}$	$T_c=104^\circ\text{C}$, 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	$P_{\text{G(AV)}}$		→	→	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	$^\circ\text{C}$
Storage Temperature	T_{stg}		→	→	-40 to +125	$^\circ\text{C}$
Weight			→	→	1.8	g

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

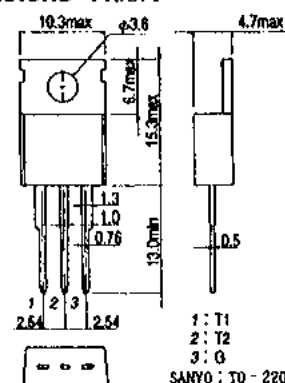
			min	typ	max	unit
Repetitive Peak OFF-State Current	I_{DRM}	$T_j=125^\circ\text{C}$, $V_D=V_{\text{DRM}}$			2	mA
Peak ON-State Voltage	V_{TM}	$I_{\text{TM}}=9\text{A}$			1.5	V
Critical Rate of Rise of OFF-State Voltage	dv/dt	$T_j=125^\circ\text{C}$, $V_D=200\text{V (C)}$, 400V (E to G)	10			V/ μs
Holding 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
(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}	$T_c=125^\circ\text{C}$, $V_D=\text{Rated voltage}$	0.2			V
Thermal Resistance	$R_{\text{th(j-c)}}$	Between junction and case, AC			2	$^\circ\text{C/W}$

* : The gate trigger mode is shown below.

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

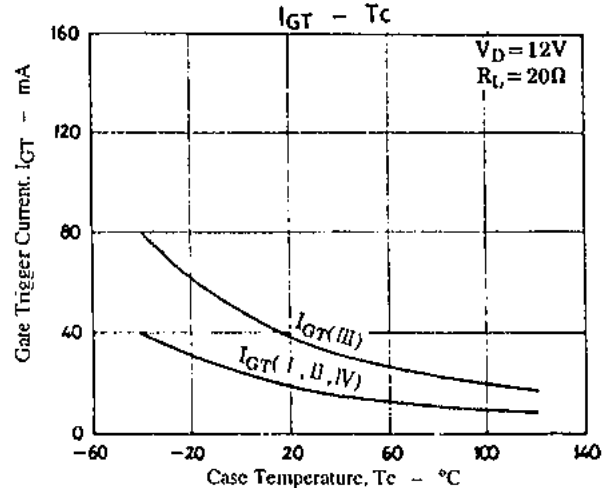
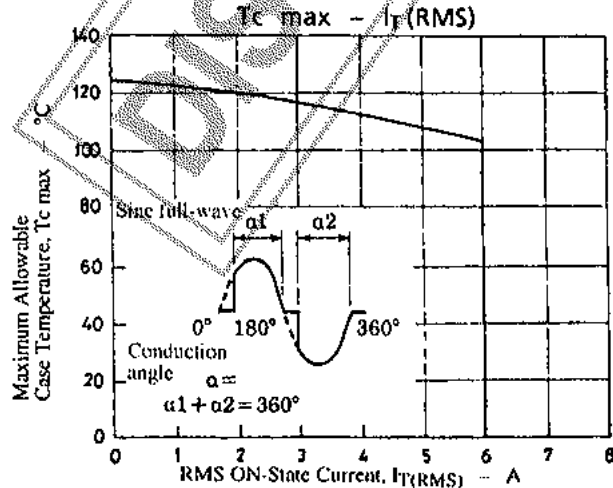
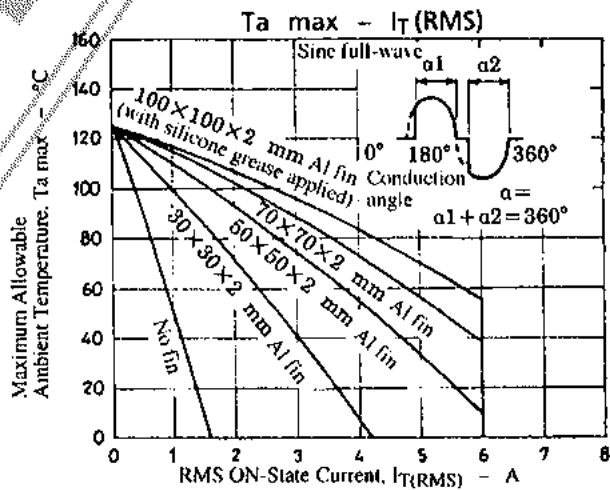
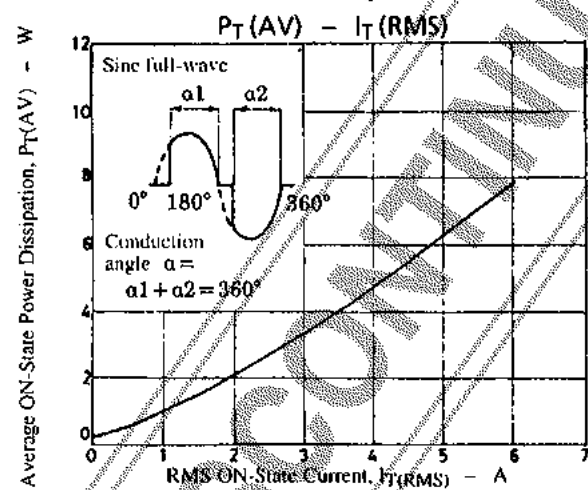
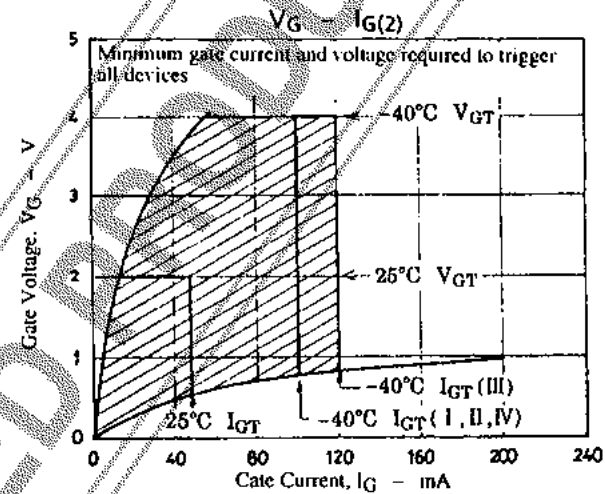
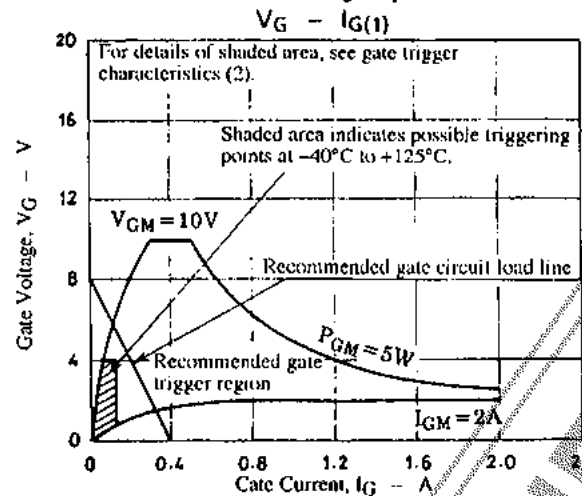
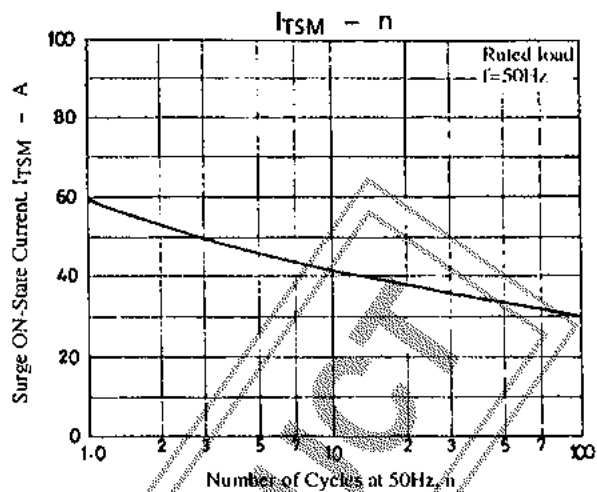
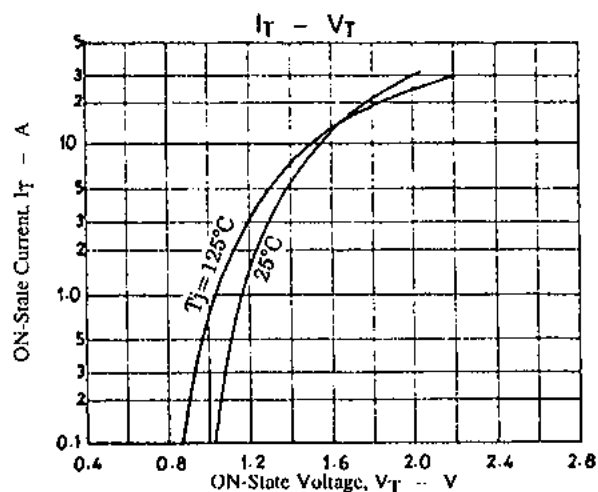
Package Dimensions 1155A

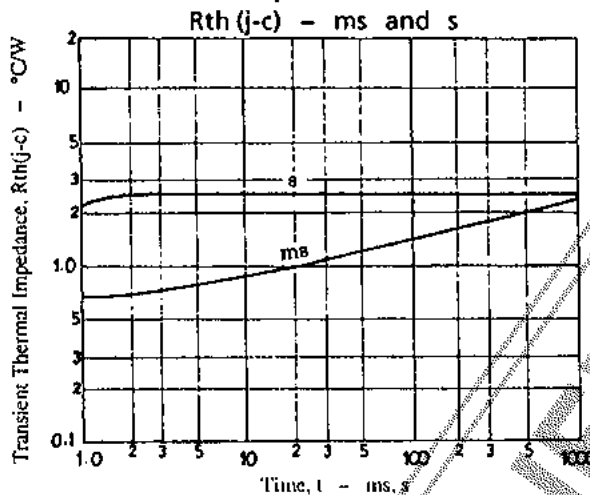
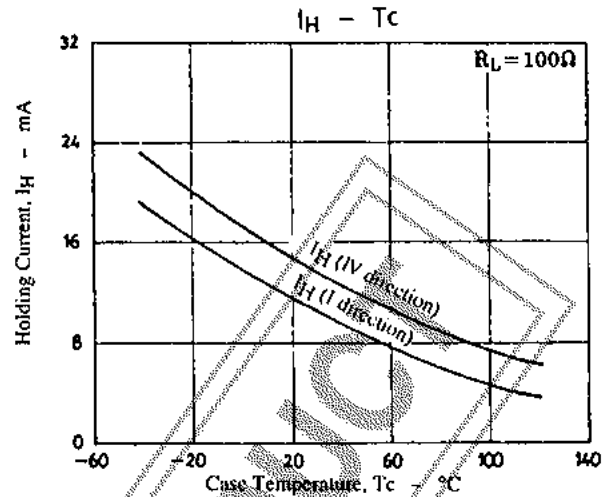
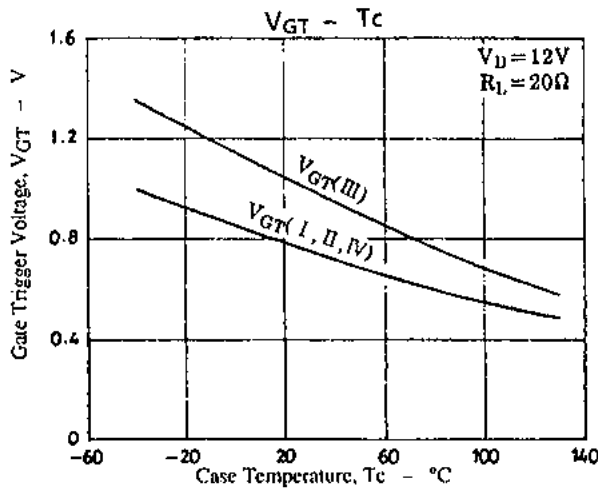
(unit : mm)

**SANYO Electric Co., Ltd. Semiconductor Business Headquarters**

TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110 JAPAN

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