

SANYO**DTA1****1.0A Bidirectional Thyristor****Features**

- Low AC power control use.
- Peak OFF-state voltage : 200 to 400V
- RMS ON-state current : 1A
- TO-92 package.

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

			DTA1C	DTA1E	unit
Repetitive Peak OFF-State Voltage	V_{DRM}		200	400	V
RMS ON-State Current	$I_{\text{T(RMS)}}$	$T_c=74^\circ\text{C}$, single-phase full-wave	→	1.0	A
Surge ON-State Current	I_{TSM}	Peak 1 cycle, 50Hz	→	8	A
Amperes Squared-Seconds	$\int i^2 T \cdot dt$	1ms $\leq t \leq 10$ ms	→	0.32	A ² s
Peak Gate Power Dissipation	P_{GM}	$f \geq 50\text{Hz}$, duty $\leq 10\%$	→	1	W
Average Gate Power Dissipation	$P_{\text{G(AV)}}$		→	0.1	W
Peak Gate Current	I_{GM}	$f \geq 50\text{Hz}$, duty $\leq 10\%$	→	± 0.5	A
Peak Gate Voltage	V_{GM}	$f \geq 50\text{Hz}$, duty $\leq 10\%$	→	± 6	V
Junction Temperature	T_j		→	125	$^\circ\text{C}$
Storage Temperature	T_{stg}		→	-40 to +125	$^\circ\text{C}$
Weight			→	0.2	g

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

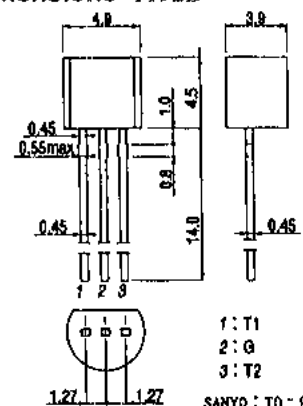
			min	typ	max	unit
Repetitive Peak OFF-State Current	I_{DRM}	$T_j=25^\circ\text{C}$, $V_D=V_{\text{DRM}}$			10	μA
Peak ON-State Voltage	V_{TM}	$I_{\text{TM}}=1.5\text{A}$			1.5	V
Holding Current	I_{H}	$V_D=12\text{V}$, gate open			10	mA
Gate Trigger Current* (I)	I_{GT}	$V_D=12\text{V}$, $R_L=20\Omega$			5	mA
(II)	I_{GT}	$V_D=12\text{V}$, $R_L=20\Omega$			5	mA
(III)	I_{GT}	$V_D=12\text{V}$, $R_L=20\Omega$		10		mA
(IV)	I_{GT}	$V_D=12\text{V}$, $R_L=20\Omega$			5	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_{GB}	$T_c=125^\circ\text{C}$, $V_D=V_{\text{DRM}}$	0.2			V
Thermal Resistance	$R_{\text{th(j-c)}}$	Between junction and case, AC			40	$^\circ\text{C/W}$

* : The gate trigger mode is shown below.

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

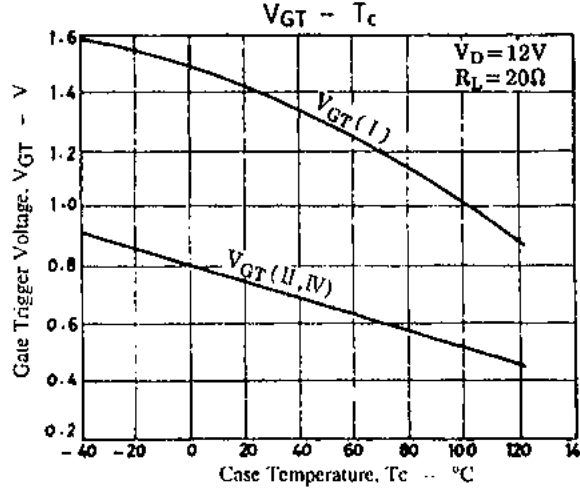
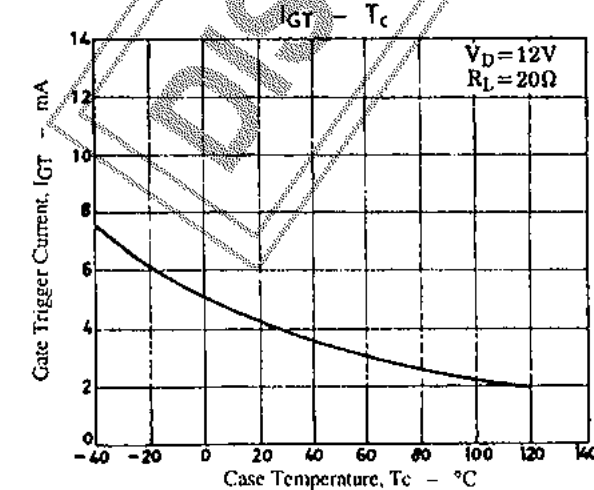
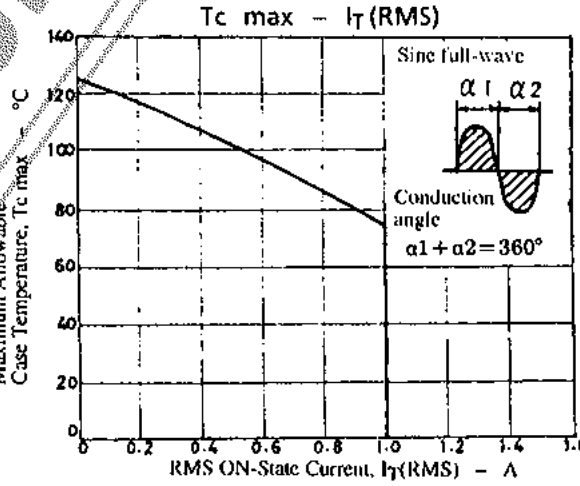
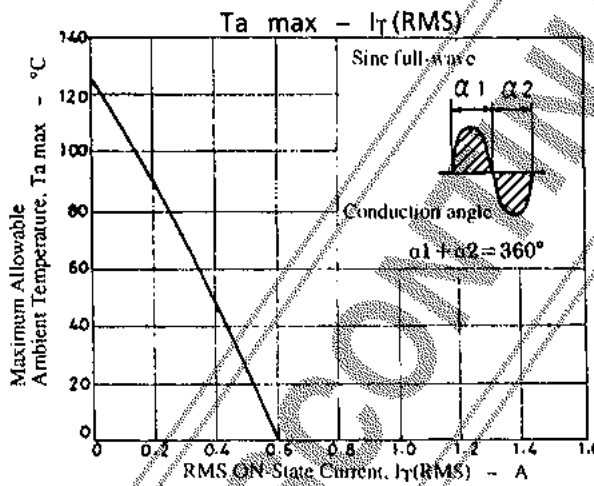
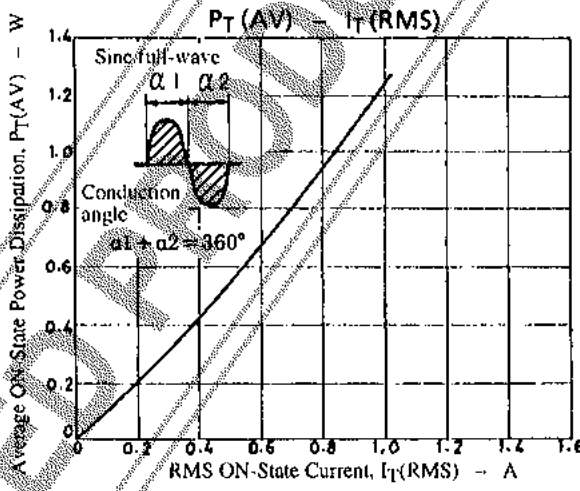
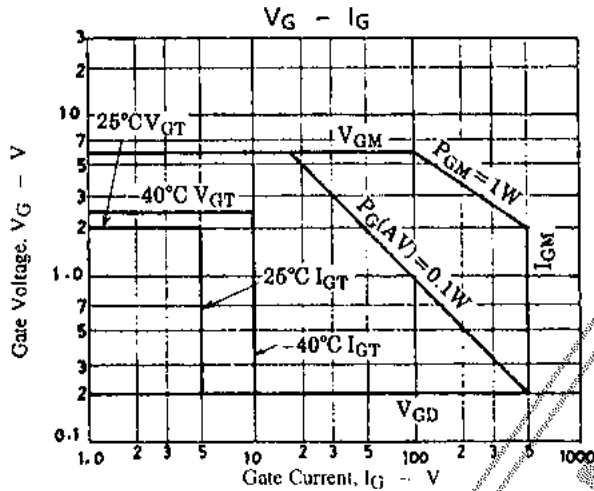
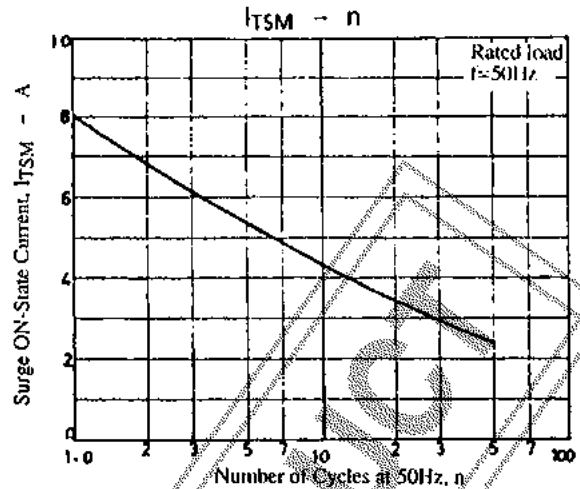
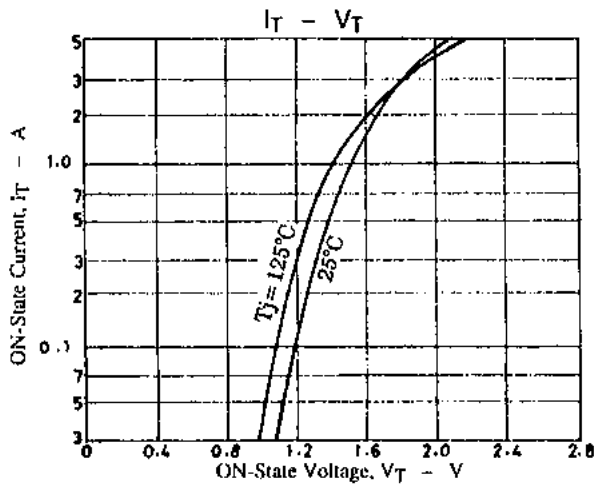
Package Dimensions 1192B

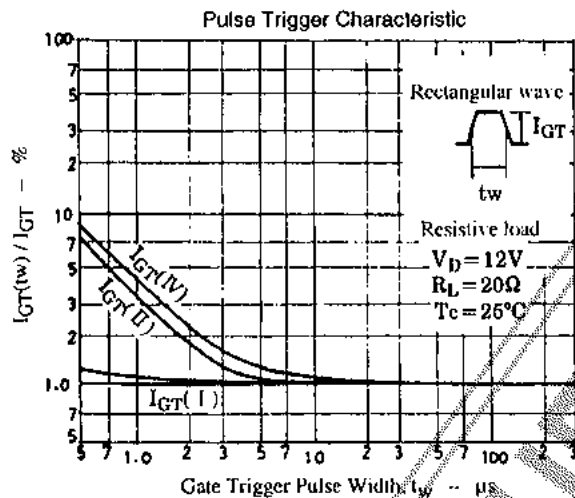
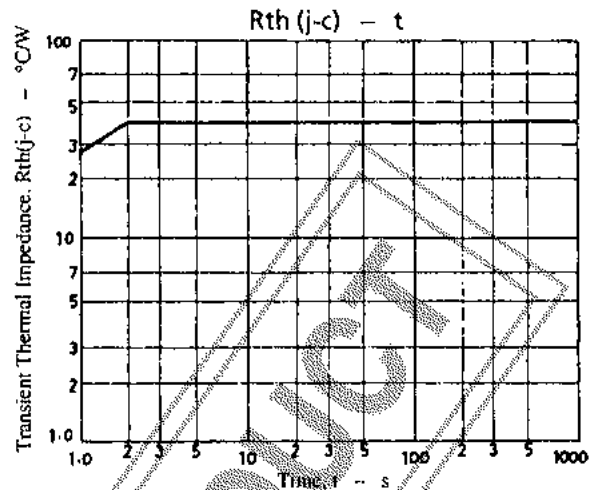
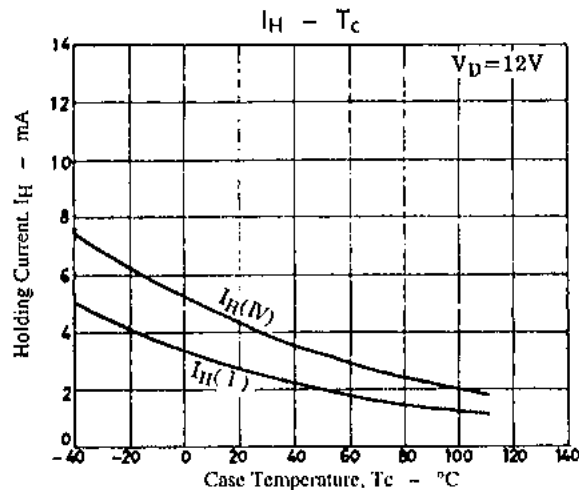
(unit : mm)

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