



**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 Ta=25°C

			DTA1C	DTA1E	unit
Repetitive Peak OFF-State Voltage	$V_{DRM}$		200	400	V
RMS ON-State Current	$I_{T(RMS)}$	Tc=74°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 ≤ t ≤ 10ms	→	0.32	A <sup>2</sup> s
Peak Gate Power Dissipation	$P_{GM}$	f ≥ 50Hz, duty ≤ 10%	→	1	W
Average Gate Power Dissipation	$P_{G(AV)}$		→	0.1	W
Peak Gate Current	$I_{GM}$	f ≥ 50Hz, duty ≤ 10%	→	±0.5	A
Peak Gate Voltage	$V_{GM}$	f ≥ 50Hz, duty ≤ 10%	→	±6	V
Junction Temperature	Tj		→	125	°C
Storage Temperature	Tstg		→	-40 to +125	°C
Weight			→	0.2	g

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

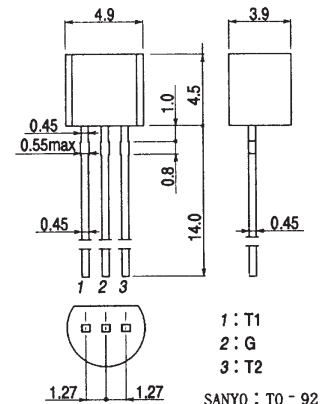
			min	typ	max	unit
Repetitive Peak OFF-State Current	$I_{DRM}$	Tj=25°C, $V_D = V_{DRM}$			10	μA
Peak ON-State Voltage	$V_{TM}$	$I_{TM} = 1.5A$			1.5	V
Holding Current	$I_H$	$V_D = 12V$ , gate open			10	mA
Gate Trigger Current* (I)	$I_{GT}$	$V_D = 12V, R_L = 20\Omega$			5	mA
	$I_{GT}$	$V_D = 12V, R_L = 20\Omega$			5	mA
	$I_{GT}$	$V_D = 12V, R_L = 20\Omega$		10		mA
	$I_{GT}$	$V_D = 12V, R_L = 20\Omega$			5	mA
Gate Trigger Voltage* (I)	$V_{GT}$	$V_D = 12V, R_L = 20\Omega$			2	V
	$V_{GT}$	$V_D = 12V, R_L = 20\Omega$			2	V
	$V_{GT}$	$V_D = 12V, R_L = 20\Omega$		2	-	V
	$V_{GT}$	$V_D = 12V, R_L = 20\Omega$			2	V
Gate Nontrigger Voltage	$V_{GD}$	Tc=125°C, $V_D = V_{DRM}$	0.2		-	V
Thermal Resistance	Rth(j-c)	Between junction and case, AC			40	°C/W

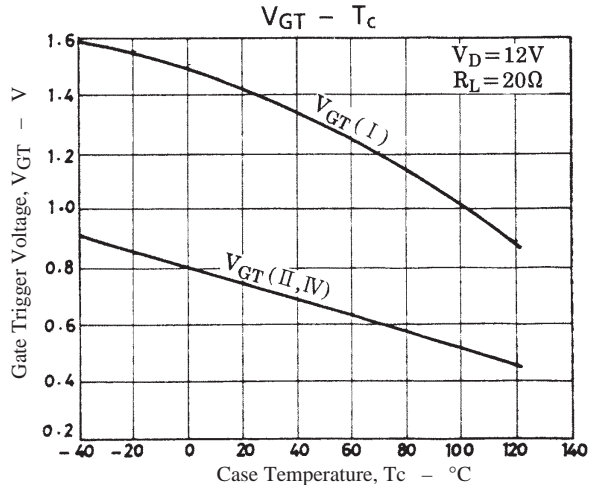
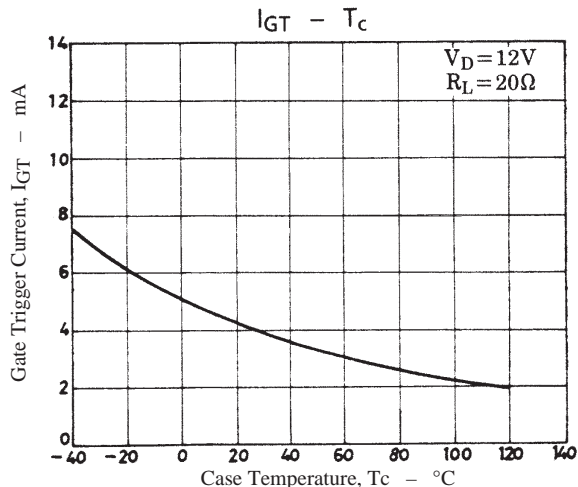
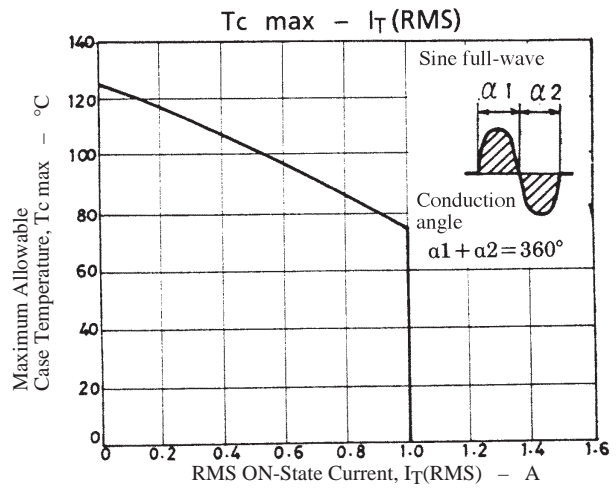
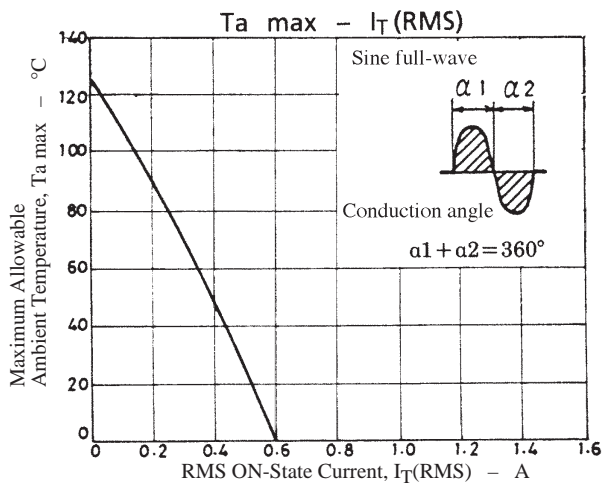
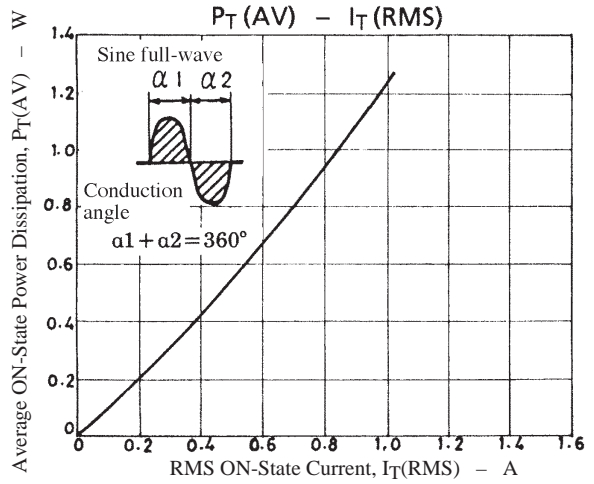
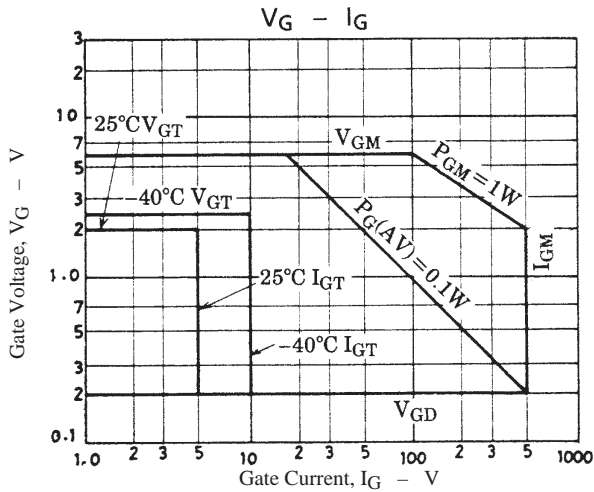
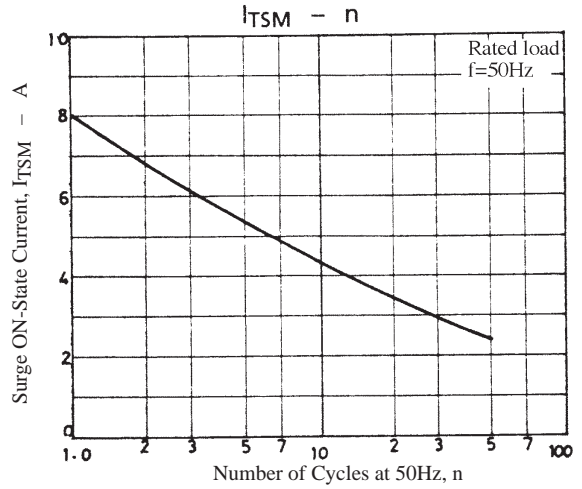
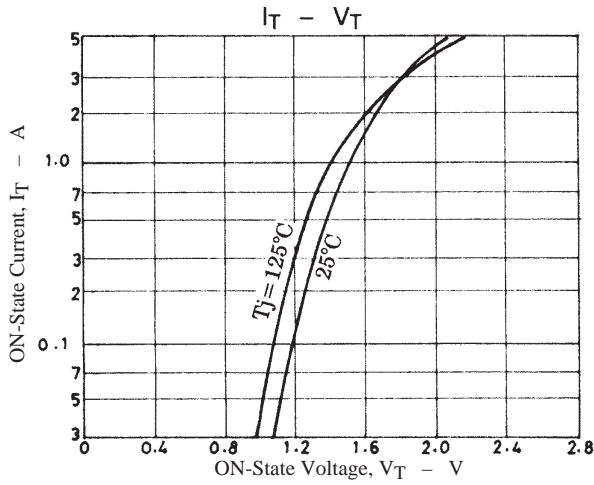
\* : The gate trigger mode is shown below.

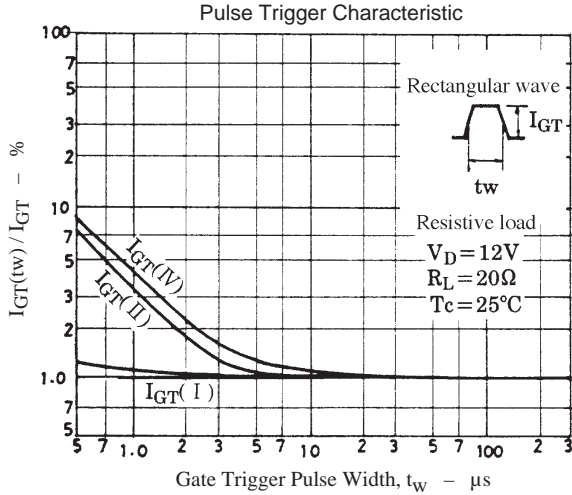
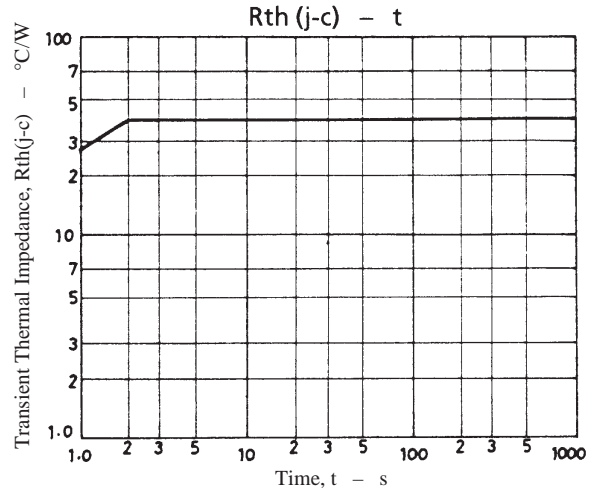
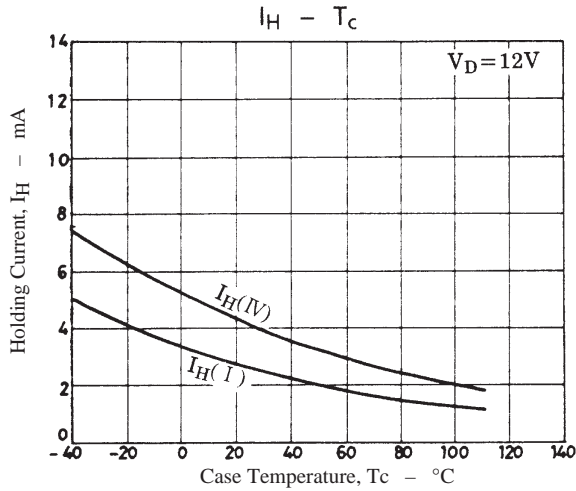
Trigger mode	T2	T1	G
I	+	-	+
II	+	-	-
III	-	+	+
IV	-	+	-

**Package Dimensions** 1192B

(unit : mm)







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