



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 ² 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

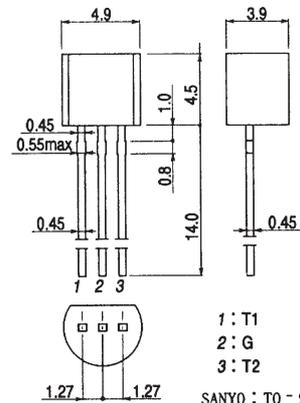
			min	typ	max	unit
Repetitive Peak OFF-State Current	I_{DRM}	Tj=25°C, $V_D=V_{DRM}$			10	μA
Peak ON-State Voltage	V_{TM}	$I_{TM}=1.5A$			1.5	V
Holding Current	I_H	$V_D=12V$, gate open			10	mA
Gate Trigger Current* (I)	I_{GT}	$V_D=12V, R_L=20\Omega$			5	mA
	I_{GT}	$V_D=12V, R_L=20\Omega$			5	mA
	I_{GT}	$V_D=12V, R_L=20\Omega$		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	-	+	-

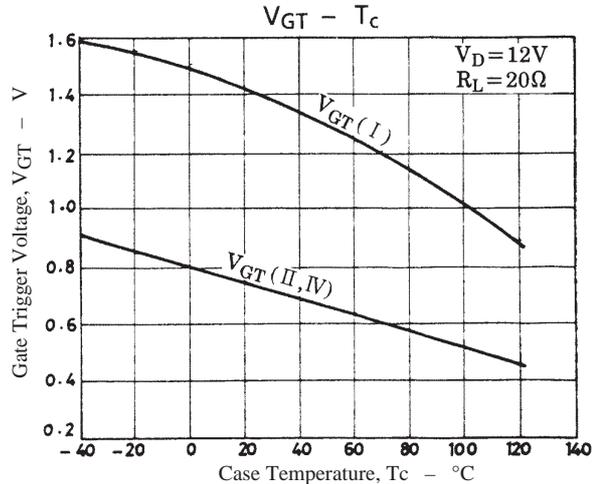
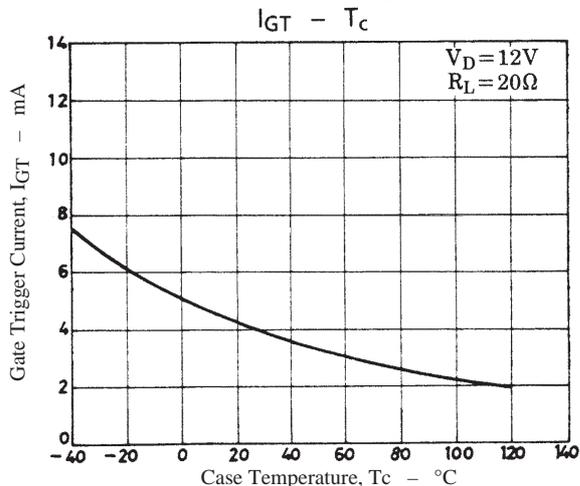
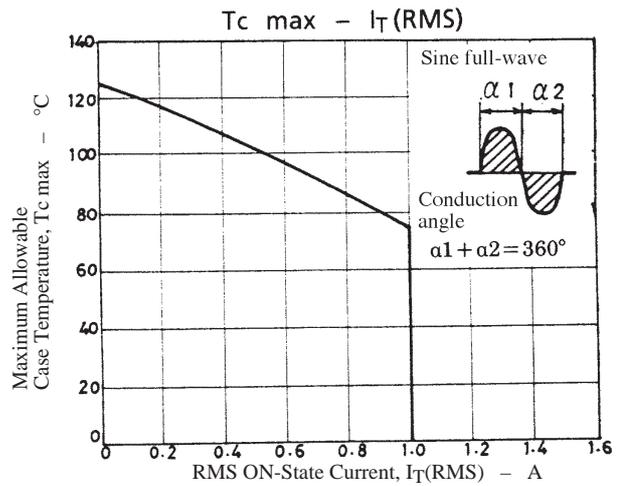
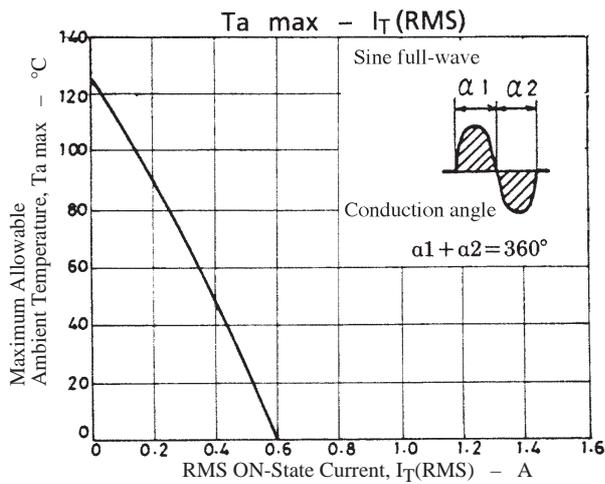
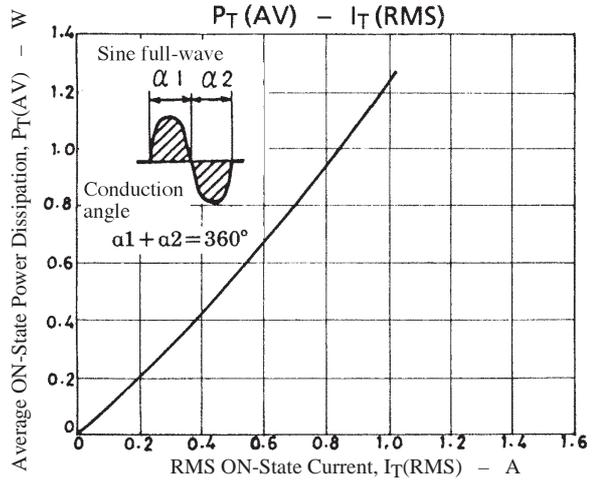
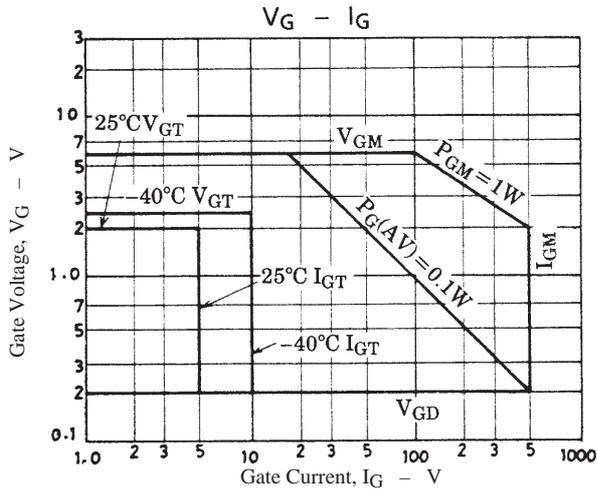
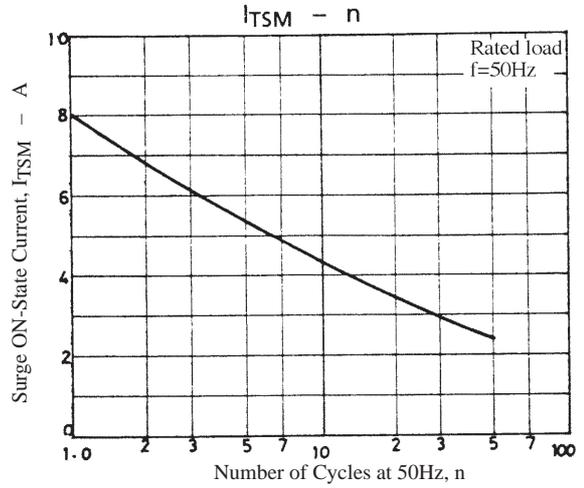
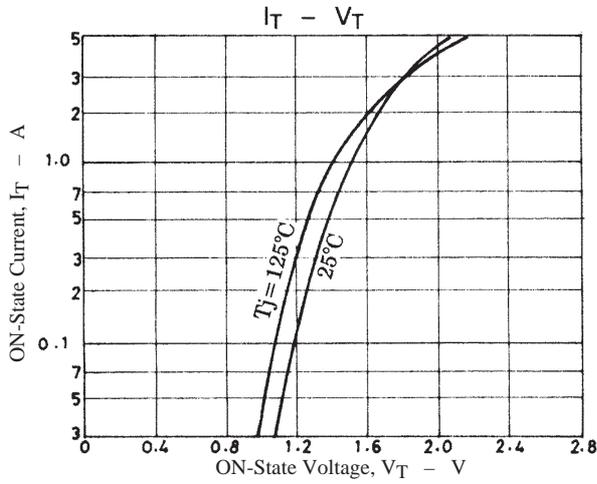
Package Dimensions 1192B

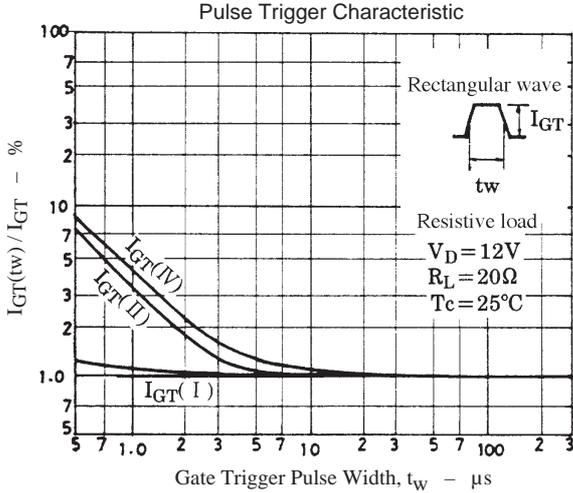
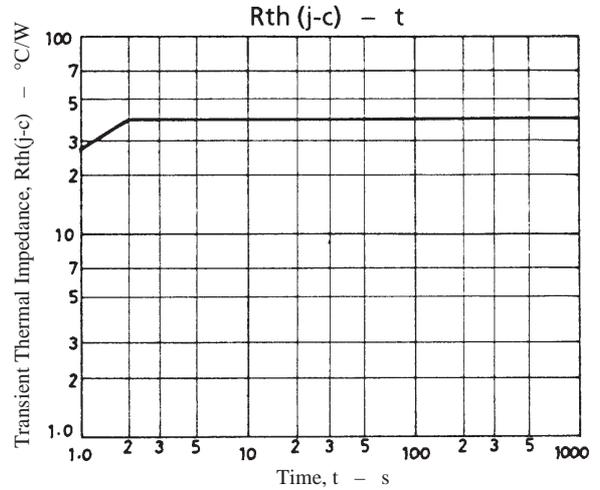
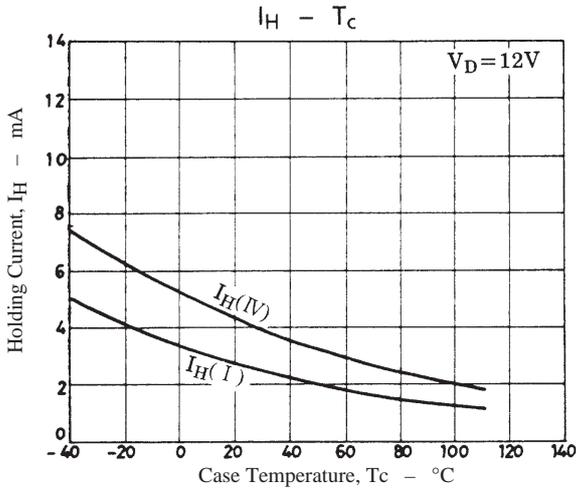
(unit : mm)



1 : T1
2 : G
3 : T2

SANYO : TO - 92





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