



**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 Ta=25°C

			DTA6C-N	DTA6E-N	DT6AG-N	unit
Repetitive Peak OFF-State Voltage	$V_{DRM}$		200	400	600	V
RMS ON-State Current	$I_{T(RMS)}$	Tc=104°C, single-phase full-wave	→	→	6	A
Surge ON-State Current	$I_{TSM}$	Peak 1 cycle, 50Hz	→	→	60	A
Amperes Squared-Seconds	$\int i^2 T \cdot dt$	1ms≤t≤10ms	→	→	18	A <sup>2</sup> s
Peak Gate Power Dissipation	$P_{GM}$	f≥50Hz, duty≤10%	→	→	5	W
Average Gate Power Dissipation	$P_{G(AV)}$		→	→	0.5	W
Peak Gate Current	$I_{GM}$	f≥50Hz, duty≤10%	→	→	±2	A
Peak Gate Voltage	$V_{GM}$	f≥50Hz, duty≤10%	→	→	±10	V
Junction Temperature	Tj		→	→	125	°C
Storage Temperature	Tstg			→	-40 to +125	°C
Weight			→	→	1.8	g

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

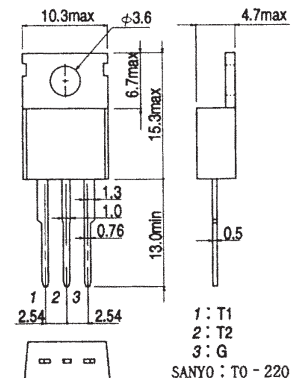
			min	typ	max	unit
Repetitive Peak OFF-State Current	$I_{DRM}$	Tj=125°C, $V_D=V_{DRM}$			2	mA
Peak ON-State Voltage	$V_{TM}$	$I_{TM}=9A$			1.5	V
Critical Rate of Rise of OFF-State Voltage	dv/dt	Tj=125°C, $V_D=200V$ (C), 400V (E to G)	10			V/μs
Holding Current	$I_H$	$R_L=100\Omega$			50	mA
Gate Trigger Current (I)	$I_{GT}$	$V_D=12V, R_L=20\Omega$			30	mA
(II)	$I_{GT}$	$V_D=12V, R_L=20\Omega$			30	mA
(III)	$I_{GT}$	$V_D=12V, R_L=20\Omega$			50	mA
(IV)	$I_{GT}$	$V_D=12V, R_L=20\Omega$			30	mA
Gate Trigger Voltage (I)	$V_{GT}$	$V_D=12V, R_L=20\Omega$			2	V
(II)	$V_{GT}$	$V_D=12V, R_L=20\Omega$			2	V
(III)	$V_{GT}$	$V_D=12V, R_L=20\Omega$			2	V
(IV)	$V_{GT}$	$V_D=12V, R_L=20\Omega$			2	V
Gate Nontrigger Voltage	$V_{GD}$	Tc=125°C, $V_D=Rated$ voltage	0.2			V
Thermal Resistance	Rth(j-c)	Between junction and case, AC			2	°C/W

\* : The gate trigger mode is shown below.

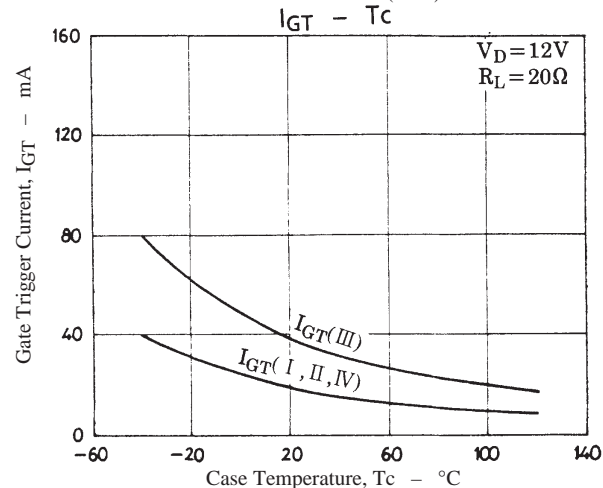
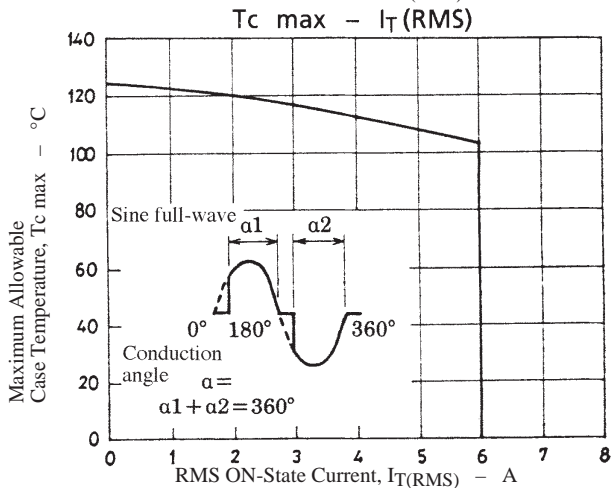
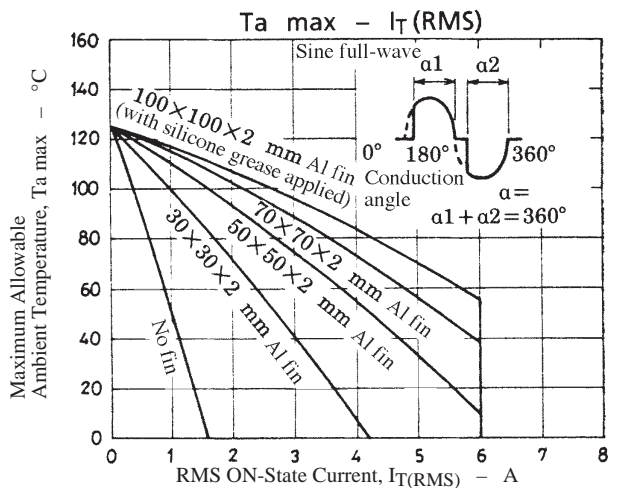
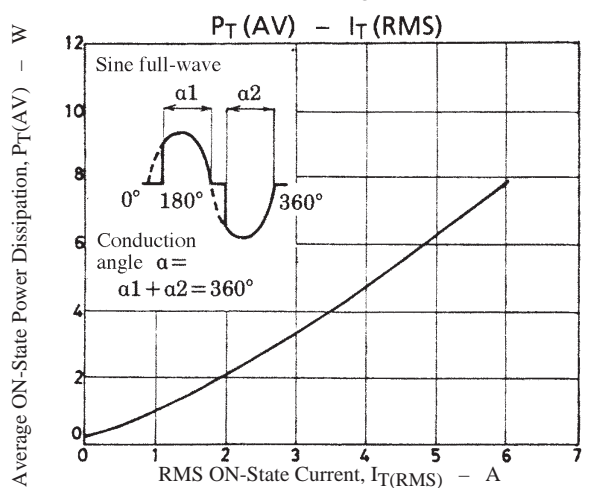
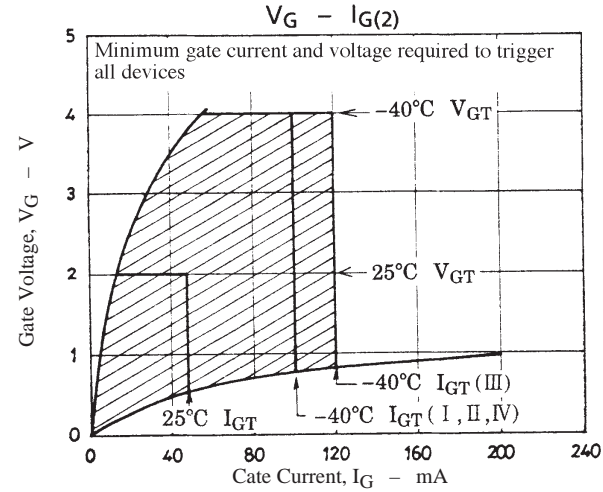
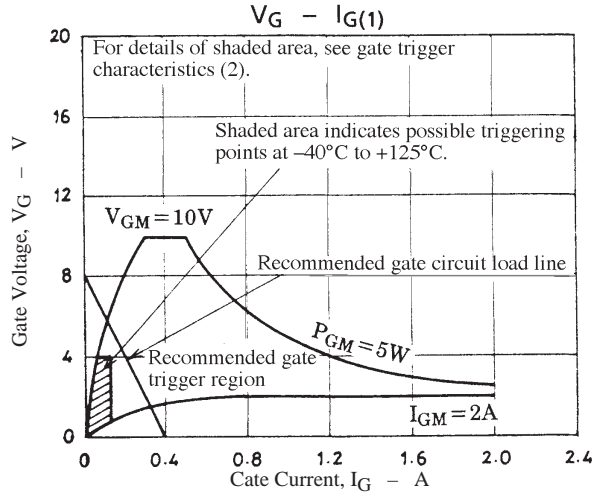
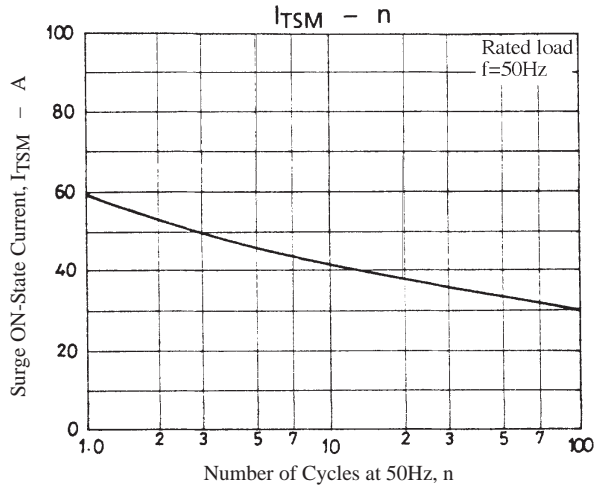
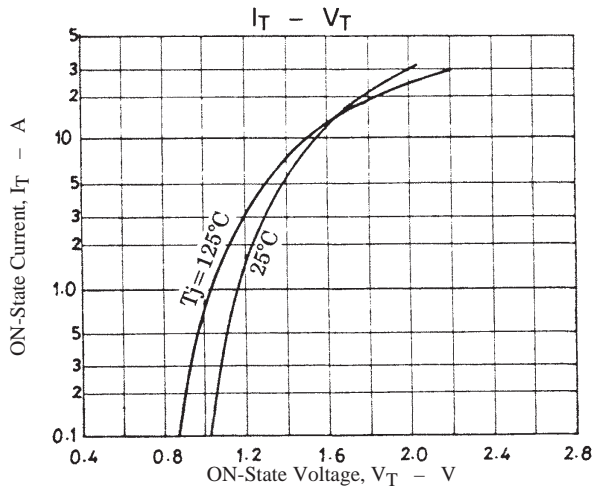
Trigger mode	T2	T1	G
I	+	-	+
II	+	-	-
III	-	+	+
IV	-	+	-

**Package Dimensions 1155A**

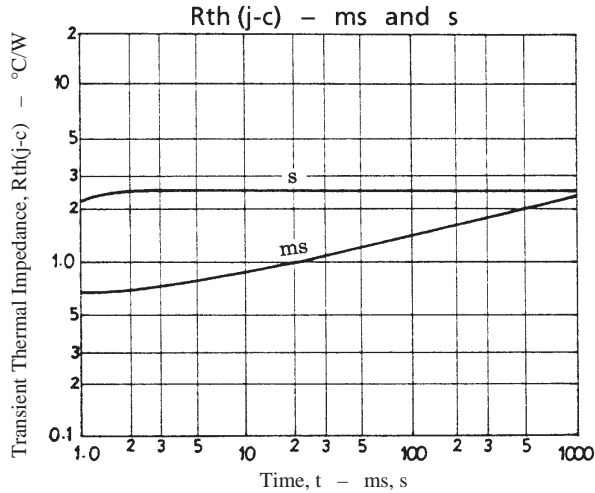
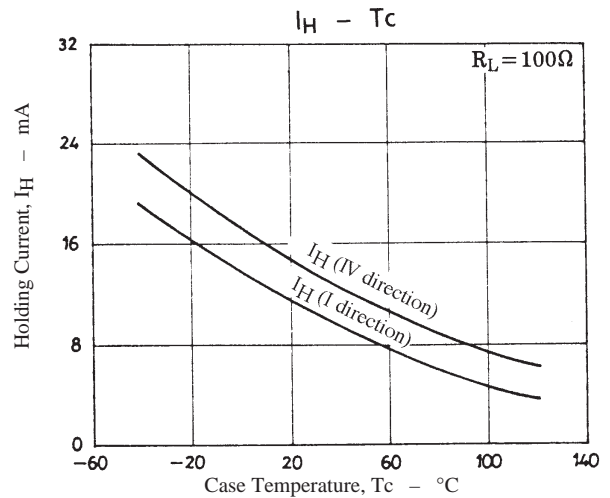
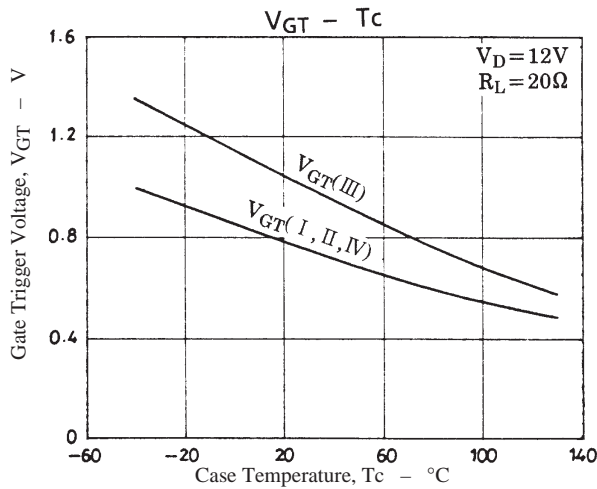
(unit : mm)



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