Ordering number : EN2283B

Silicon Planar Type

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-StateVoltage	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	$\int i^2T \cdot dt$	1ms≤t≤10ms	→	0.32	A^2s
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
Strage Temperature	Tstg			–40 to +125	°C
Weght			→	0.2	g

Electrical Characteristics at Ta=25°C

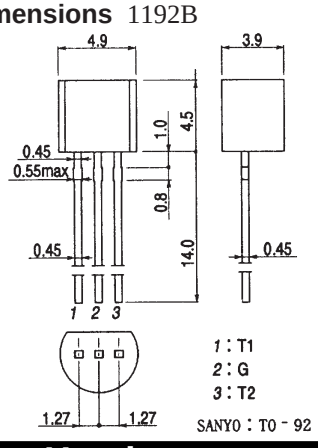
				min	typ	max	unit
Repetitive Peak OFF-State Current		I_{DRM}	Tj=25°C, $V_D=V_{DRM}$			10	μA
Peak ON-State Voltage		V_{TM}	I_{TM}=1.5A			1.5	V
Holding Current		I_H	V_D=12V, gate open			10	mA
Gate Trigger Current*	(I)	I_{GT}	V_D=12V, R_L=20Ω			5	mA
	(II)	I_{GT}	V_D=12V, R_L=20Ω			5	mA
	(III)	I_{GT}	V_D=12V, R_L=20Ω		10		mA
	(IV)	I_{GT}	V_D=12V, R_L=20Ω			5	mA
Gate Trigger Voltage*	(I)	V_{GT}	V_D=12V, R_L=20Ω			2	V
	(II)	V_{GT}	V_D=12V, R_L=20Ω			2	V
	(III)	V_{GT}	V_D=12V, R_L=20Ω		2	–	V
	(IV)	V_{GT}	V_D=12V, R_L=20Ω			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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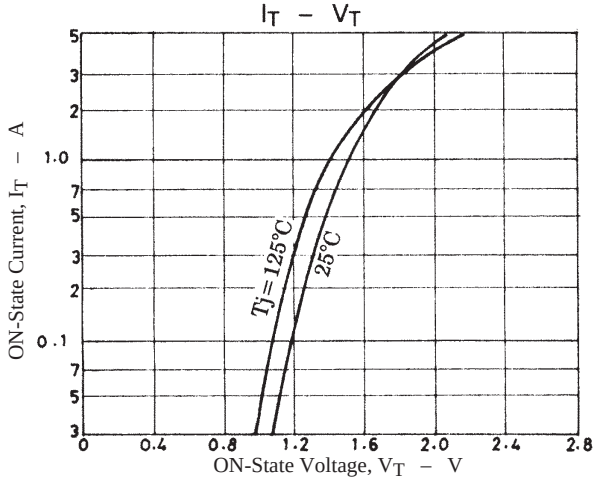
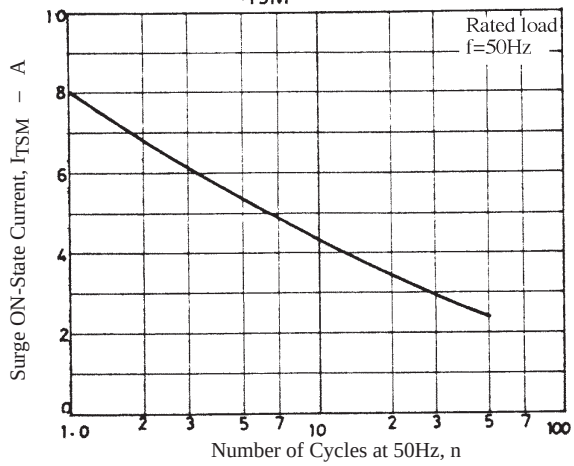
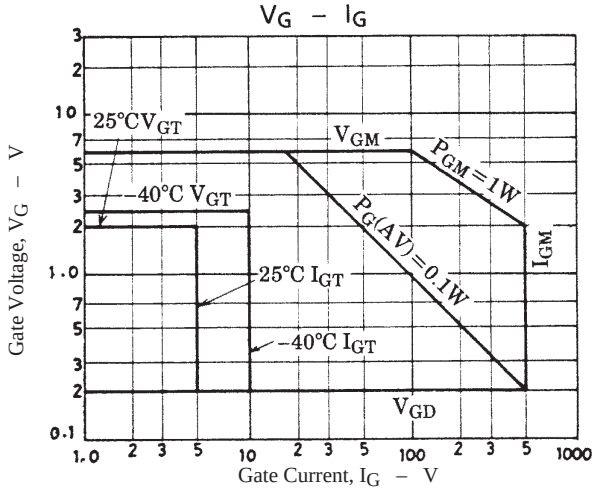
$I_T - V_T$



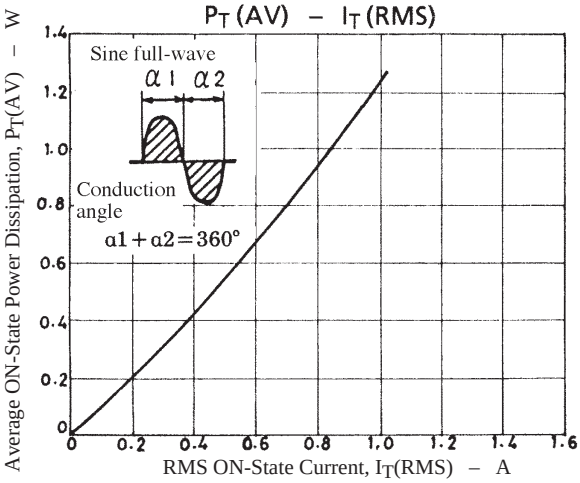
$I_{TSM} - n$



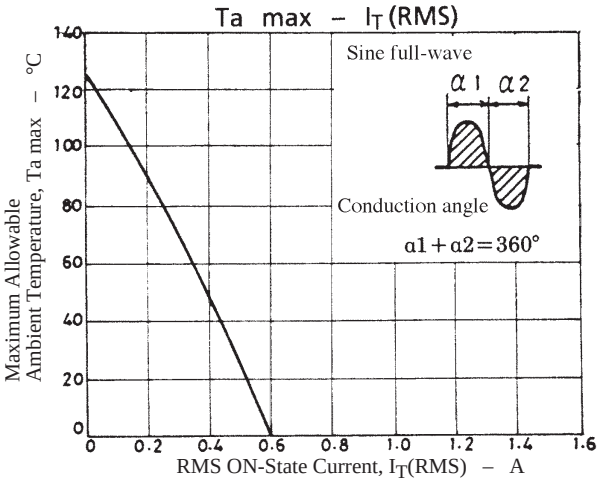
$V_G - I_G$



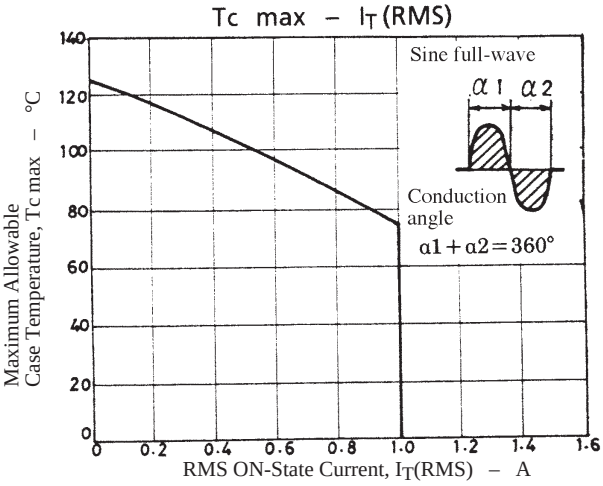
$P_T(AV) - I_T(RMS)$



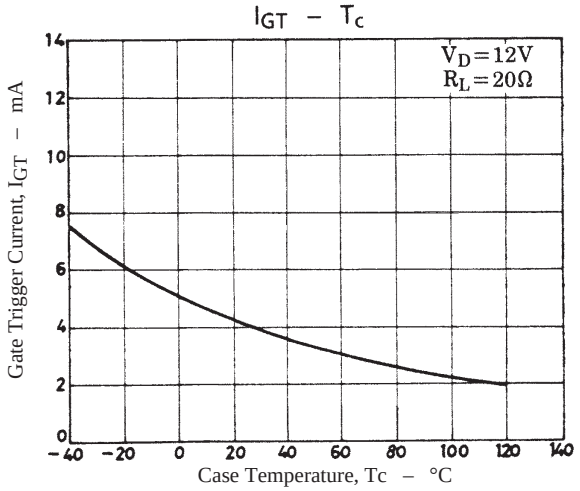
Ta max – I_T(RMS)



Tc max – I_T(RMS)



$I_{GT} - T_c$



$V_{GT} - T_c$