

SANYO**DTA05**

Silicon Planar Type

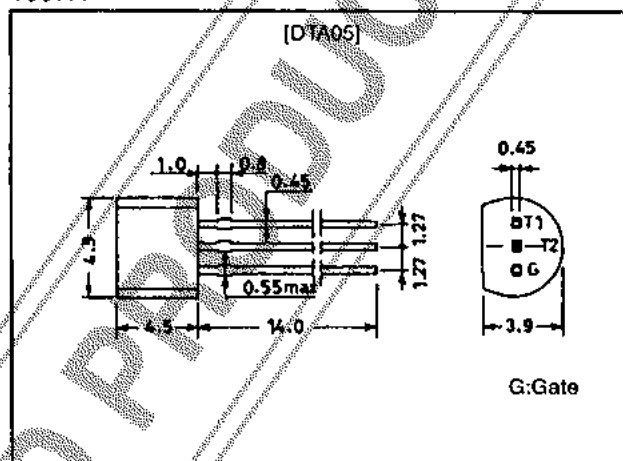
0.5A Bidirectional Thyristor**Features**

- Low AC power control.
- Small size and light weight : 0.2g.
- Peak OFF-state voltage : 100 to 400V.
- RMS ON-state current : 0.5A.
- TO-92 package.

Package Dimensions

unit:mm

1097A



*:The gate trigger mode is shown below.

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

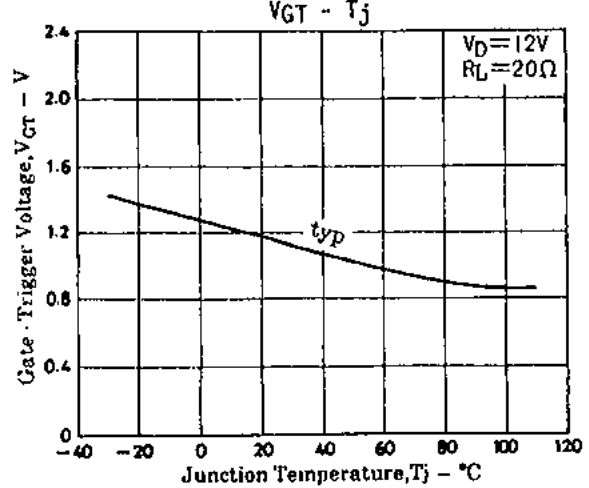
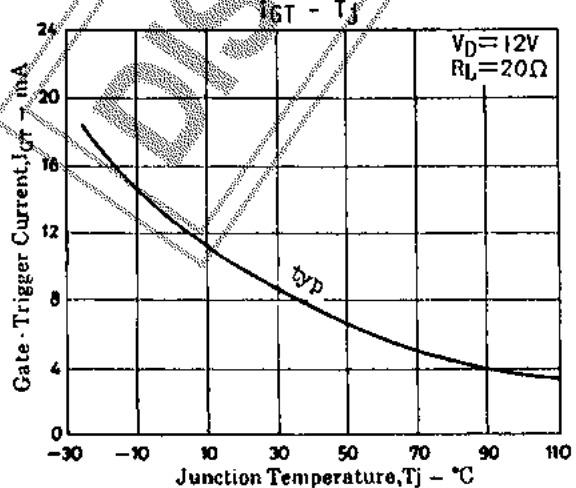
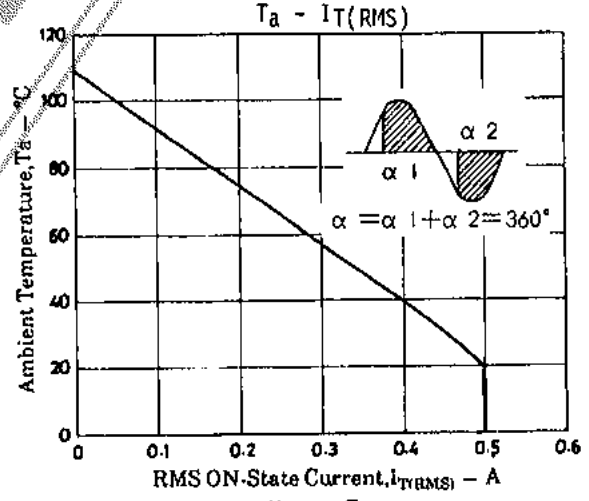
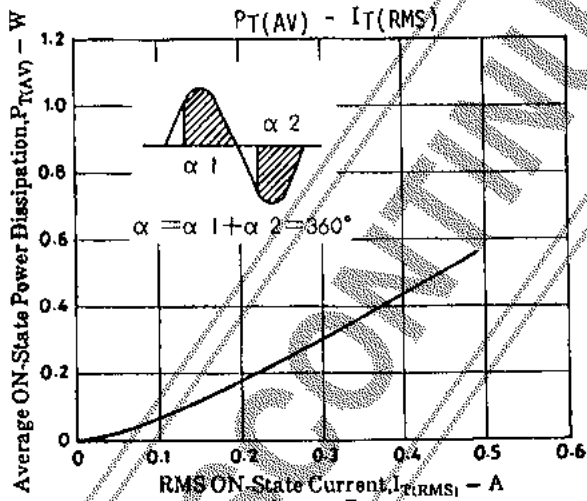
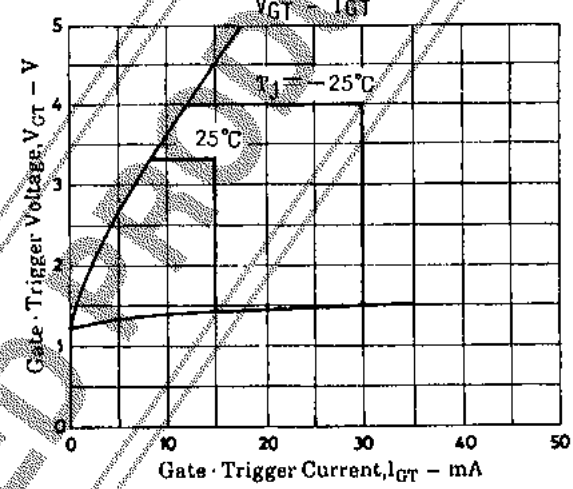
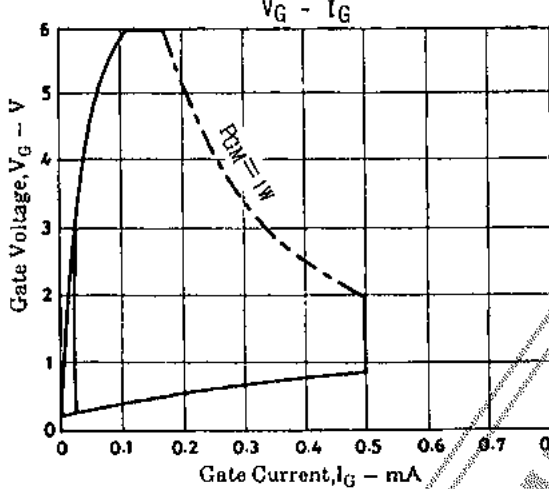
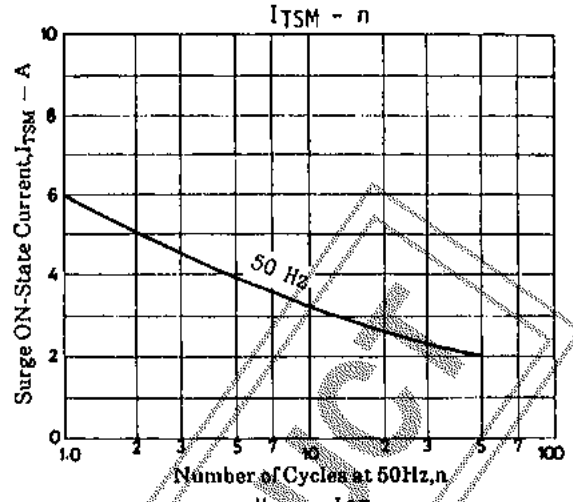
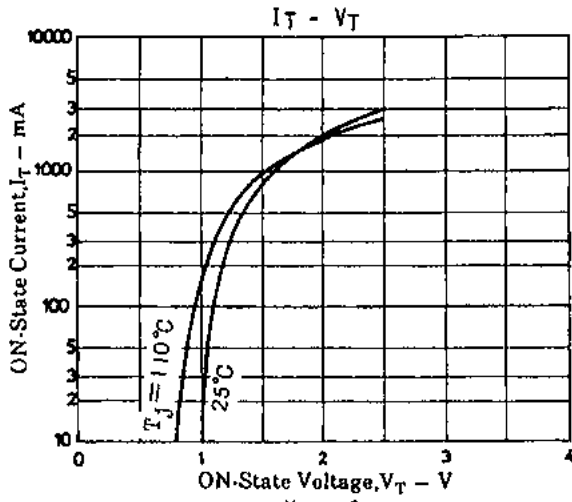
SpecificationsAbsolute Maximum Ratings at $T_a = 25^\circ\text{C}$

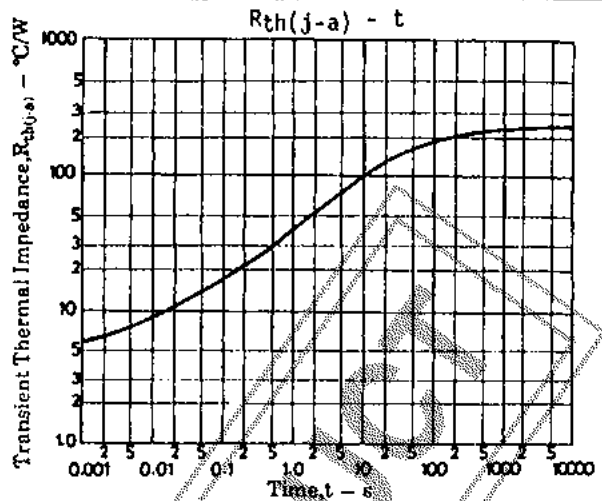
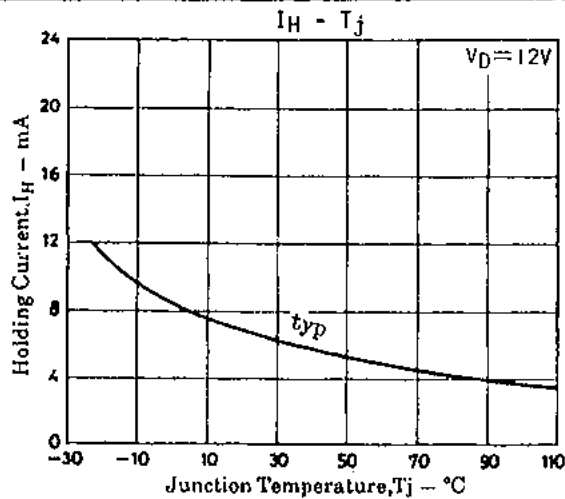
Parameter	Symbol	Conditions	DTA05B	DTA05C	DTA05E	Unit
Repetitive Peak OFF-State Voltage	V_{DRM}		100	200	400	V
RMS ON-State Current	$I_T(RMS)$	$T_a=25^\circ\text{C}$, single-phase full-wave	→	→	0.5	A
Surge ON-State Current	I_{TSM}	Peak 1 cycle, 50Hz	→	→	6	A
Ampere Squared-Seconds	I^2t		→	→	0.18	A ² s
Peak Gate Power Dissipation	P_{GM}		→	→	1	W
Average Gate Power Dissipation	$P_{G(AV)}$		→	→	0.1	W
Peak Gate Current	I_{GM}		→	→	0.5	A
Peak Gate Voltage	V_{GM}		→	→	6	V
Junction Temperature	T_j		→	→	110	$^\circ\text{C}$
Storage Temperature	T_{slg}		→	→	-25 to +110	$^\circ\text{C}$

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

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Repetitive Peak OFF-State Current	I_{ORM}	$T_j=110^\circ\text{C}$, $V_D=V_{DRM}$			0.1	mA
ON-State Voltage	V_T	$I_T=2\text{A}$			2.0	V
Holding Current	I_H	$R_L=100\Omega$			25	mA
Gate Trigger Current* (I)	I_{GT}	$V_D=12\text{V}$, $R_L=20\Omega$			15	mA
Gate Trigger Current* (II)	I_{GT}	$V_D=12\text{V}$, $R_L=20\Omega$			15	mA
Gate Trigger Current* (III)	I_{GT}	$V_D=12\text{V}$, $R_L=20\Omega$			-	
Gate Trigger Current* (IV)	I_{GT}	$V_D=12\text{V}$, $R_L=20\Omega$			15	mA
Gate Trigger Voltage* (I)	V_{GT}	$V_D=12\text{V}$, $R_L=20\Omega$			2.3	V
Gate Trigger Voltage* (II)	V_{GT}	$V_D=12\text{V}$, $R_L=20\Omega$			2.3	V
Gate Trigger Voltage* (IV)	V_{GT}	$V_D=12\text{V}$, $R_L=20\Omega$			-	
Gate Trigger Voltage* (IV)	V_{GT}	$V_D=12\text{V}$, $R_L=20\Omega$			2.3	V
Gate Nontrigger Voltage	V_{GD}	$T_j=25^\circ\text{C}$, $V_D=V_{DRM}$	0.2			V
Thermal Resistance	$R_{th(j-a)}$				250	$^\circ\text{C/W}$

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