

	No.1876C	<h1 style="margin: 0;">DTB3</h1> <p style="margin: 0;">Silicon Diffused Junction Type 3.0A Bidirectional Thyristor</p>
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Features

- Glass passivation for high reliability
- Peak OFF-state voltage : 100 to 600V
- RMS ON-state current : 3A
- TO-202 package

Absolute Maximum Ratings at Ta = 25°C

			DTB3B	DTB3C	DTB3E	DTB3G	unit
Repetitive Peak OFF-State Voltage	V_{DRM}		100	200	400	600	V
RMS ON-State Current	$I_{T(RMS)}$	$T_c = 71^\circ\text{C}$, single-phase full-wave	→	→	→	3	A
Surge ON-State Current	I_{TSM}	Peak 1 cycle, 50Hz	→	→	→	27	A
Amperes Squared-Seconds	$\int i^2 T \cdot dt$	$1\text{ms} \leq t \leq 10\text{ms}$	→	→	→	3.6	A ² s
Peak Gate	P_{GM}	$f \geq 50\text{Hz}$, duty $\leq 10\%$	→	→	→	3	W
Average Gate	$P_{G(AV)}$		→	→	→	0.3	W
Peak Gate Current	I_{GM}	$f \geq 50\text{Hz}$, duty $\leq 10\%$	→	→	→	± 2	A
Peak Gate Voltage	V_{GM}	$f \geq 50\text{Hz}$, duty $\leq 10\%$	→	→	→	± 10	V
Junction Temperature	T_j		→	→	→	110	°C
Storage Temperature	T_{stg}		→	→	→	-40 to +110	°C
Weight			→	→	→	1.5	g

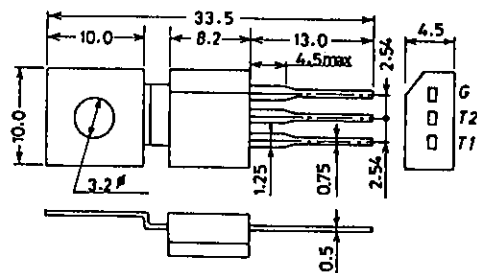
Electrical Characteristics at Ta = 25°C

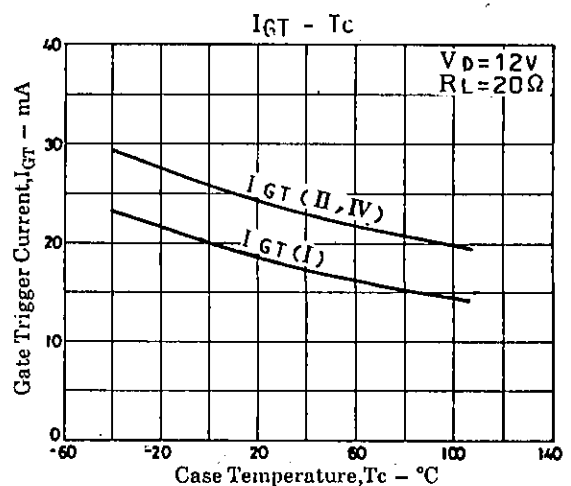
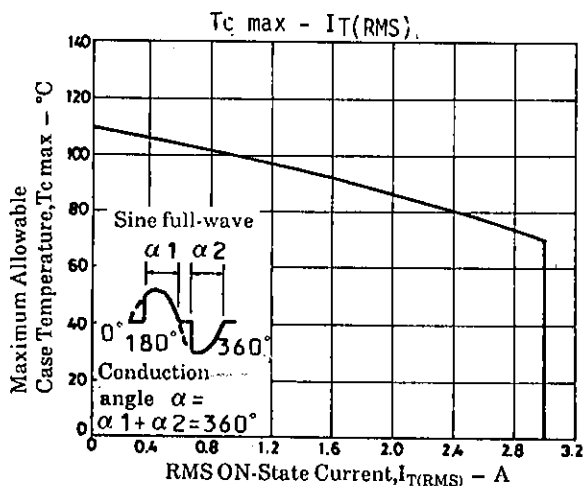
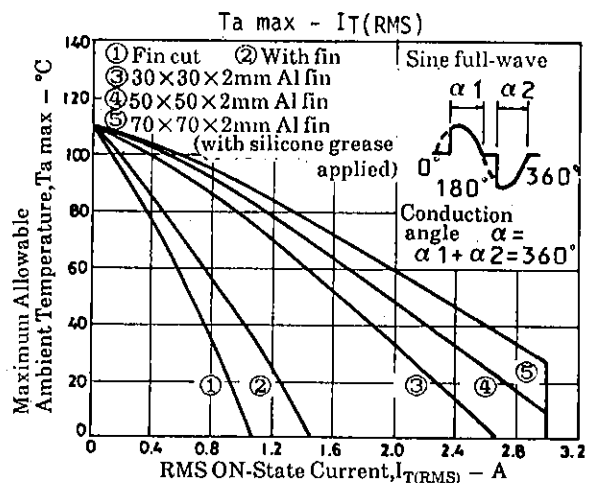
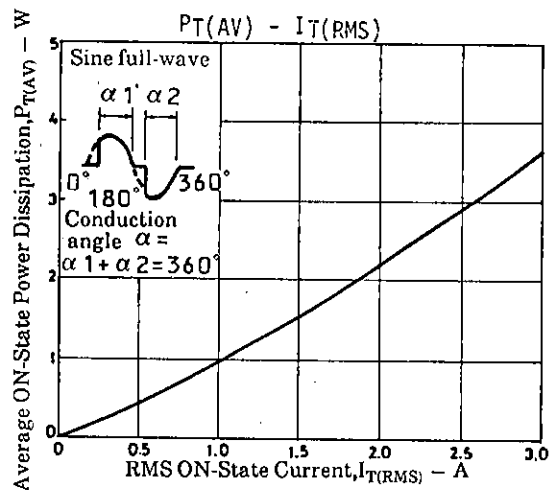
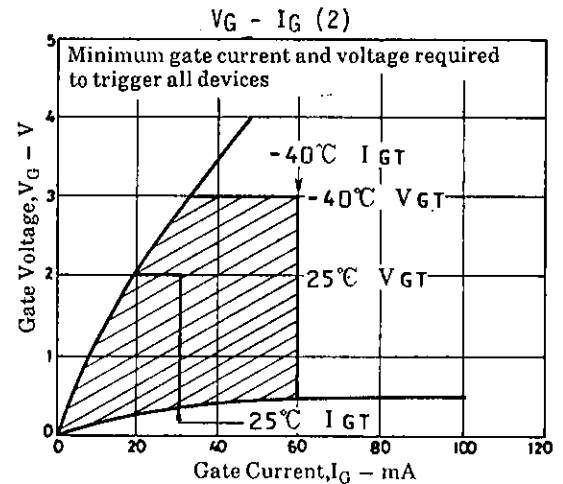
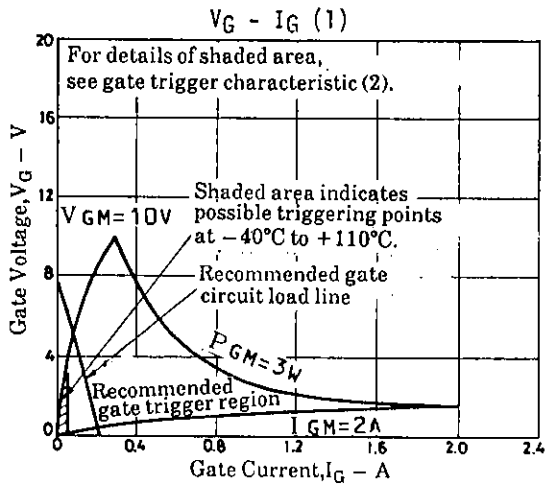
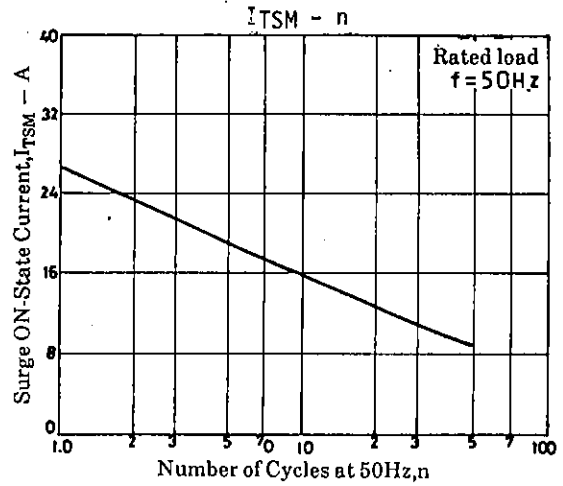
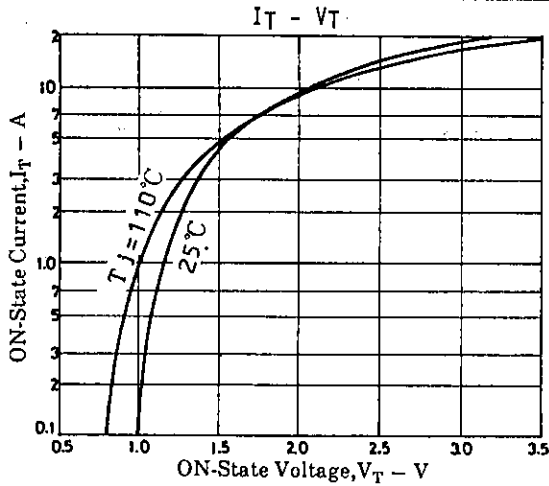
			min	typ	max	unit
Repetitive Peak OFF-State Current	I_{DRM}	$T_j = 110^\circ\text{C}, V_D = V_{DRM}$			1	mA
Peak ON-State Voltage	V_{TM}	$I_{TM} = 4.5\text{A}$			1.5	V
Holding Current	I_H	$R_L = 100\Omega$			25	mA
Gate Trigger Current* (I)	(I) I_{GT}	$V_D = 12\text{V}, R_L = 20\Omega$			30	mA
	(II) I_{GT}	$V_D = 12\text{V}, R_L = 20\Omega$			30	mA
	(IV) I_{GT}	$V_D = 12\text{V}, R_L = 20\Omega$			30	mA
Gate Trigger Voltage* (V)	(I) V_{GT}	$V_D = 12\text{V}, R_L = 20\Omega$			2	V
	(II) V_{GT}	$V_D = 12\text{V}, R_L = 20\Omega$			2	V
	(IV) V_{GT}	$V_D = 12\text{V}, R_L = 20\Omega$			2	V
Gate Nontrigger Voltage	V_{GD}	$T_c = 110^\circ\text{C}, V_D = 1/2 V_{DRM}$	0.2			V
Thermal Resistance	$R_{th(j-c)}$	Between junction and case, AC			10	°C/W

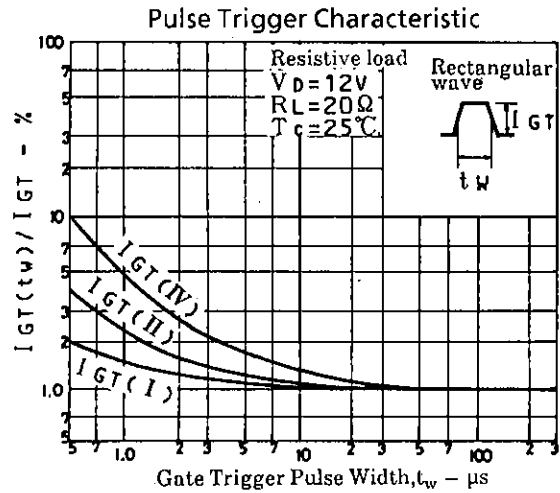
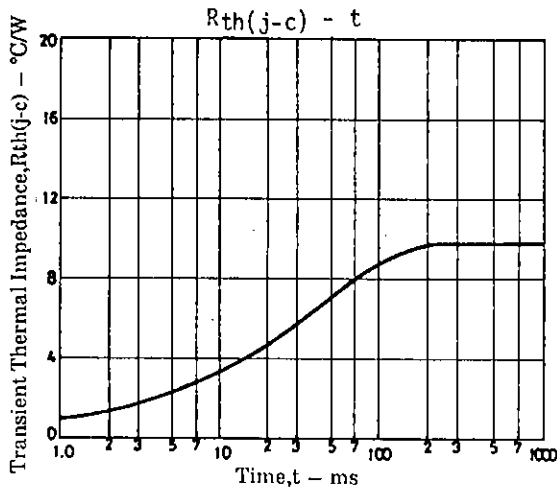
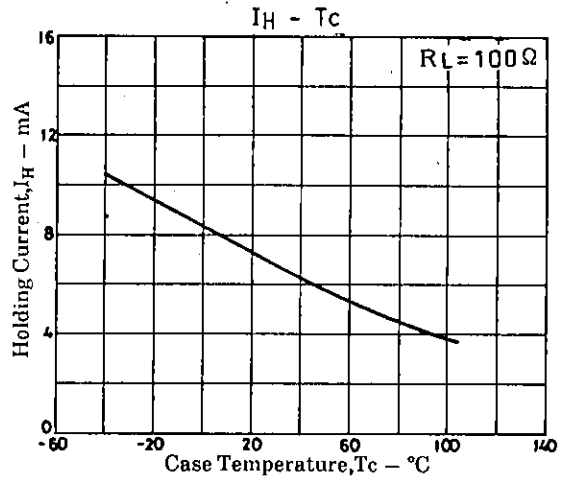
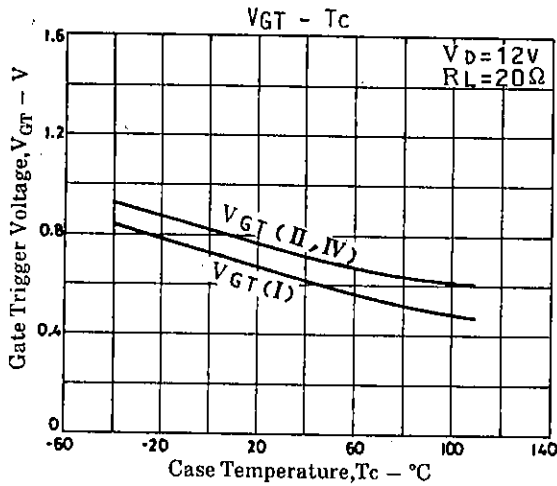
* : The gate trigger mode is shown below.

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

Package Dimensions 1142
(unit: mm)







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