

SANYO

No.1877B

DTC8-N

Silicon Planar Type

8A Bidirectional Thyristor

Features

- Peak OFF-state voltage : 200 to 600V
- RMS ON-state current : 8A
- TO-220 package

Absolute Maximum Ratings at Ta = 25°C

		DTC8C-N	DTC8E-N	DTC8G-N	unit
Repetitive Peak OFF-State Voltage	V_{DRM}	200	400	600	V
RMS ON-State Current	$I_{T(RMS)}$	Tc = 105°C, single-phase full-wave Peak 1 cycle, 50Hz		8	A
Surge ON-State Current	I_{TSM}	Peak 1 cycle, 50Hz		80	A
Amperes Squared-Seconds	$\int i^2 T \cdot dt$	1ms ≤ t ≤ 10ms		32	A ² s
Peak Gate Power Dissipation	P_{GM}	f ≥ 50Hz, duty ≤ 10%		5	W
Average Gate Power Dissipation	$P_{G(AV)}$	f ≥ 50Hz, duty ≤ 10%		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

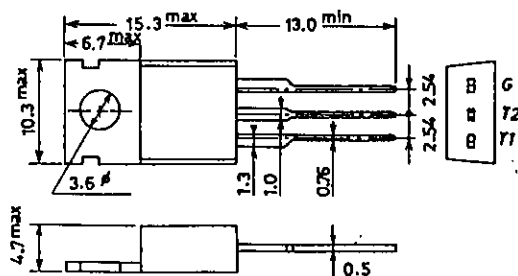
			min	typ	max	unit
Repetitive Peak OFF-State Current	I_{DRM}	Tj = 125°C, V _D = V _{DRM}			2	mA
Peak ON-State Voltage	V_{TM}	I _{TM} = 12A			1.5	V
Critical Rate of Rise of OFF-State Voltage	(dv/dt) _C	{ Tj = 125°C, V _D = 200V (C), 400V (E to G)	10			V/μs
Holding Current	I_H	R _L = 100Ω			50	mA
Gate Trigger Current※ (I)	I_{GT}	V _D = 12V, R _L = 20Ω			30	mA
(II)	I_{GT}	V _D = 12V, R _L = 20Ω			30	mA
(III)	I_{GT}	V _D = 12V, R _L = 20Ω			50	mA
(IV)	I_{GT}	V _D = 12V, R _L = 20Ω			30	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	R _{th(j-c)}	Between junction and case, AC			2	°C/W

※ : The gate trigger mode is shown below.

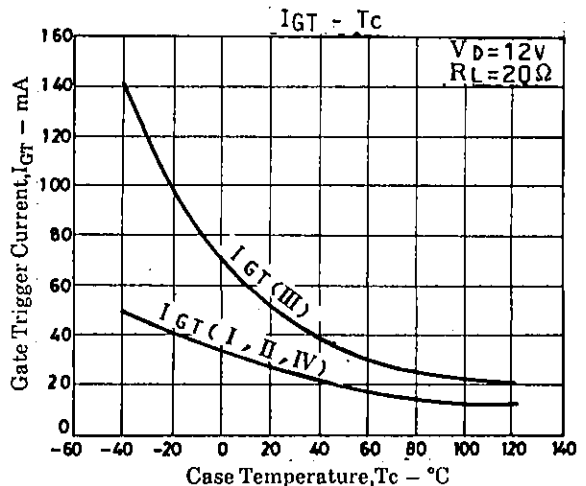
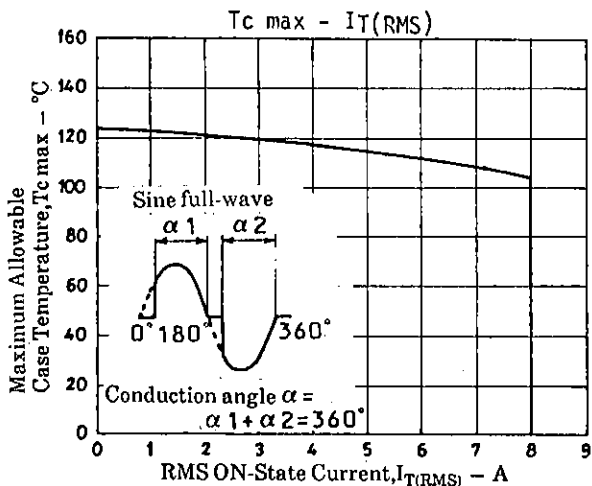
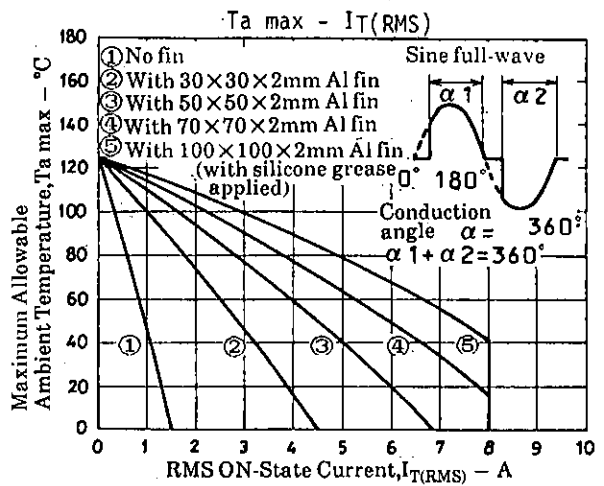
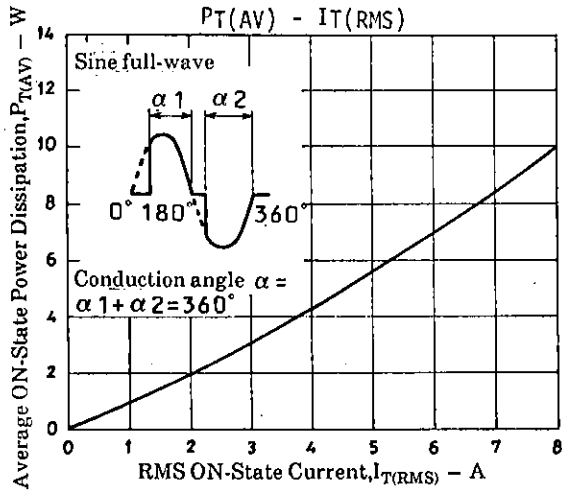
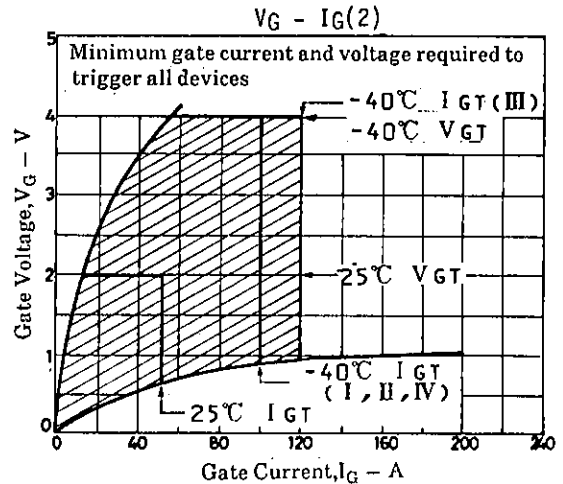
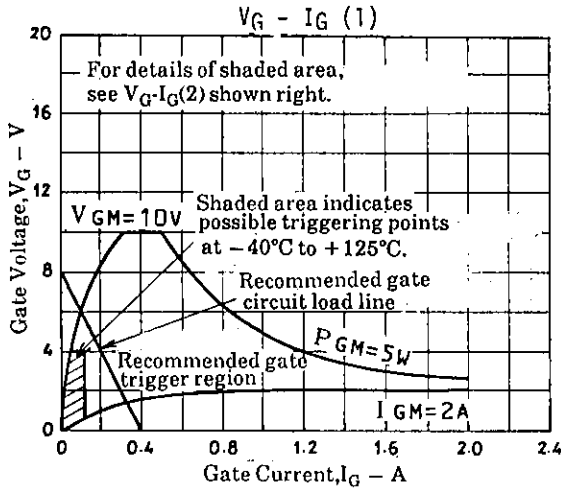
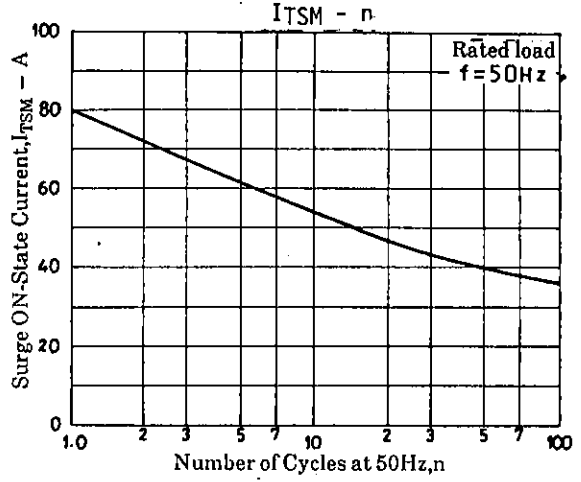
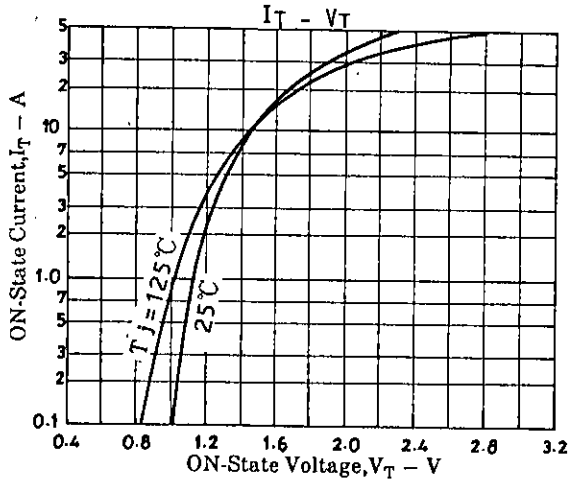
Trigger mode	T2	T1	G
I	+	-	+
II	+	-	-
III	-	+	+
IV	-	+	-

Package Dimensions 1155

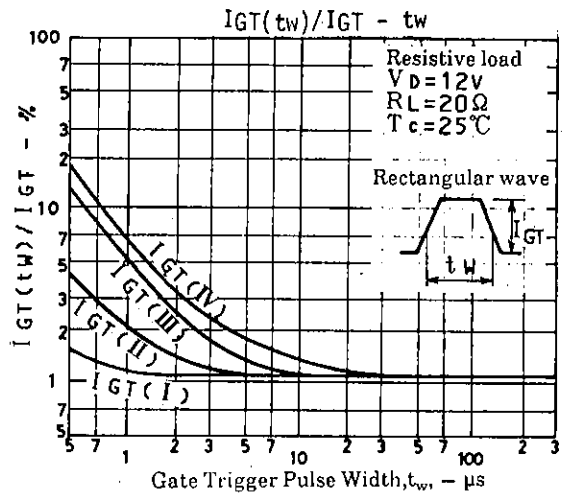
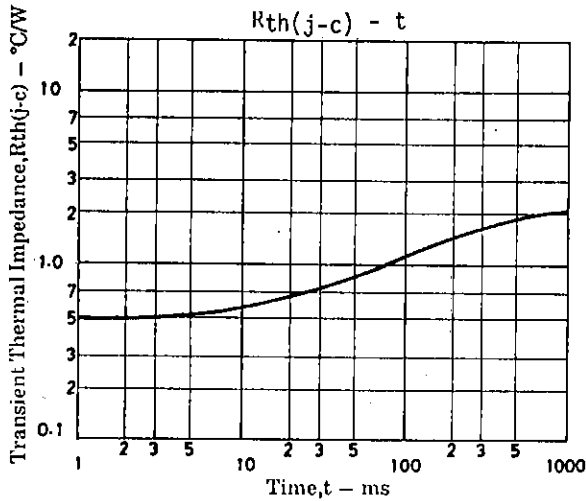
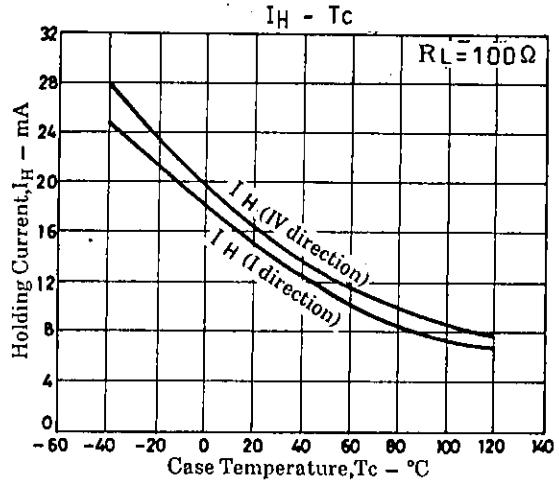
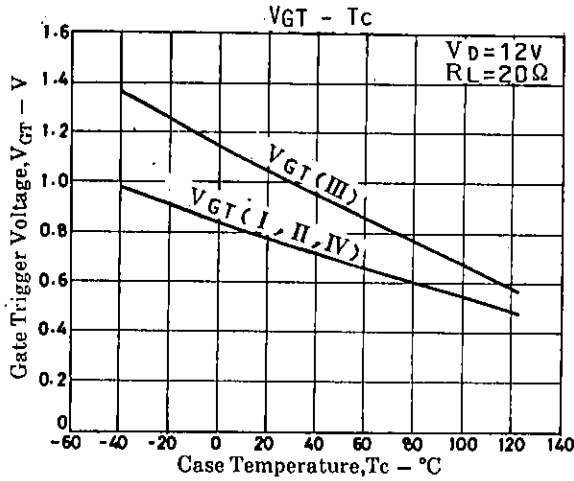
(unit: mm)



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