

SANYO	No.4732	DTN12 Silicon Diffused Junction Type
	12A Bidirectional Thyristor	

Features

- AC power control.
- Peak OFF-state voltage : 400, 600V.
- RMS ON-state current : 12A.

Absolute Maximum Ratings at Ta = 25°C

		DTN12E	DTN12G	unit
Repetitive Peak OFF-State Voltage	V_{DRM}	400	600	V
RMS ON-State Current	$I_{T(RMS)}$	→	12	A
Surge ON-State Current	I_{TSM}	→	120	A
Amperes Squared-Seconds	$SiT^2 \cdot dt$	→	72	A ² S
Critical Rate of Rise of ON-State Current	diT/dt	→	50	A/ μ s
Peak Gate Power Dissipation	P_{GM}	→	5	W
Average Gate Power Dissipation	$P_{G(AV)}$	→	0.5	W
Peak Gate Forward Current	I_{GM}	→	±2	A
Peak Gate Forward Voltage	V_{GM}	→	±10	V
Junction Temperature	T_j	→	125	°C
Storage Temperature	T_{stg}	→	-40 to +125	°C
Weight		→	1.7	g

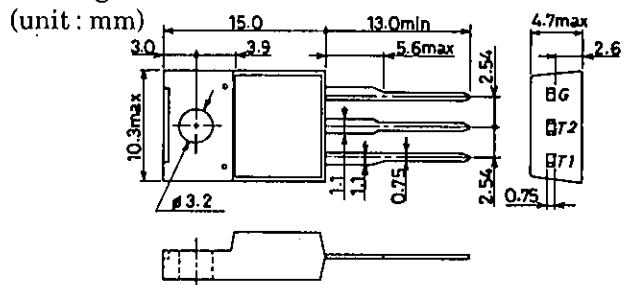
Electrical Characteristics at Ta = 25°C

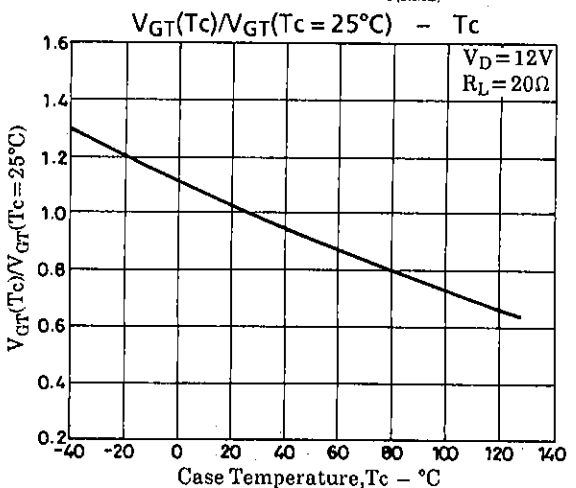
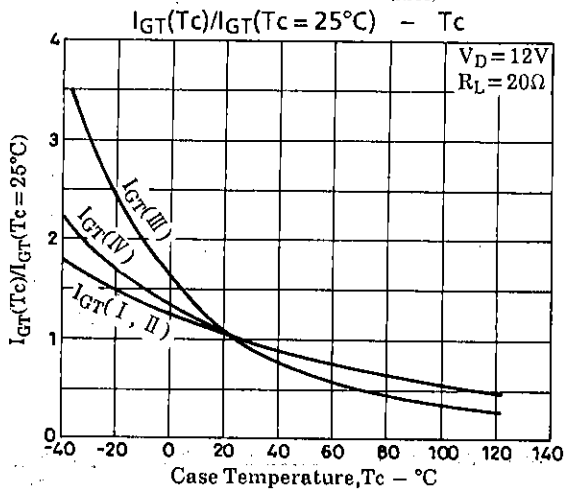
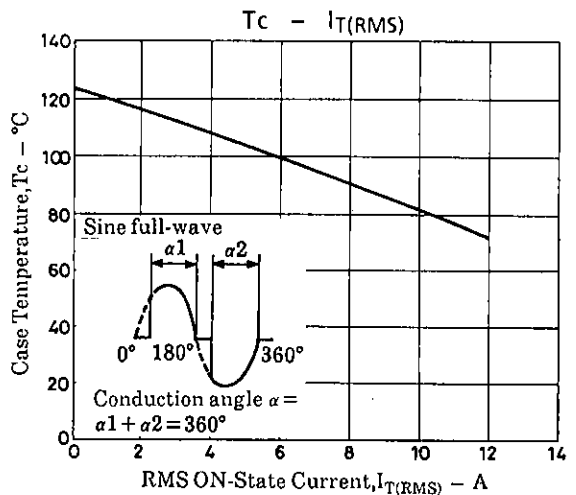
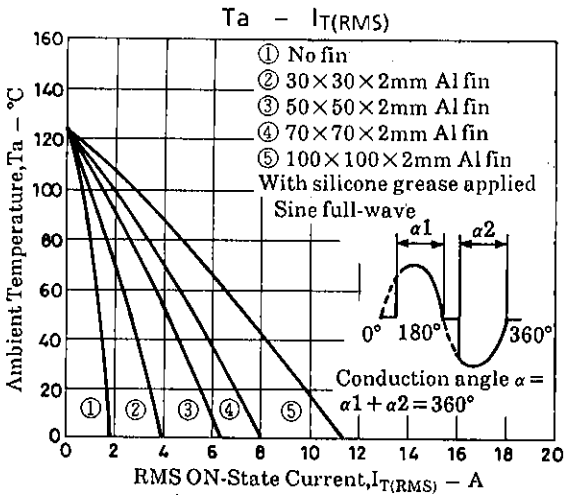
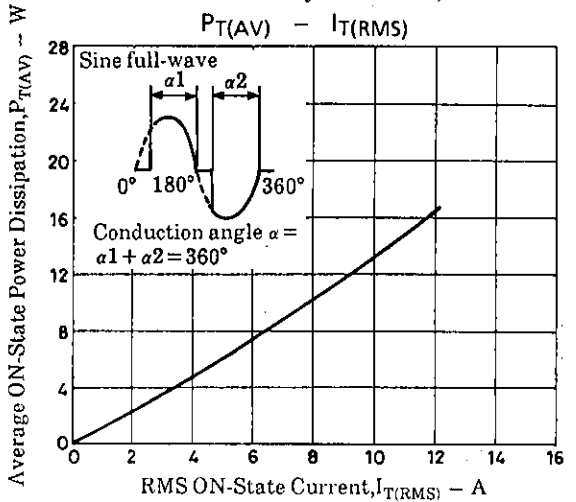
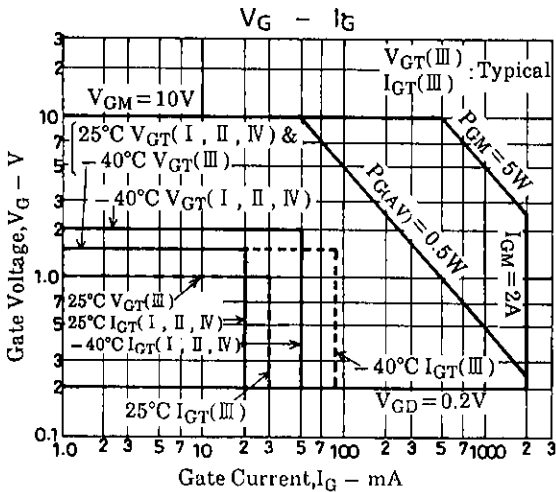
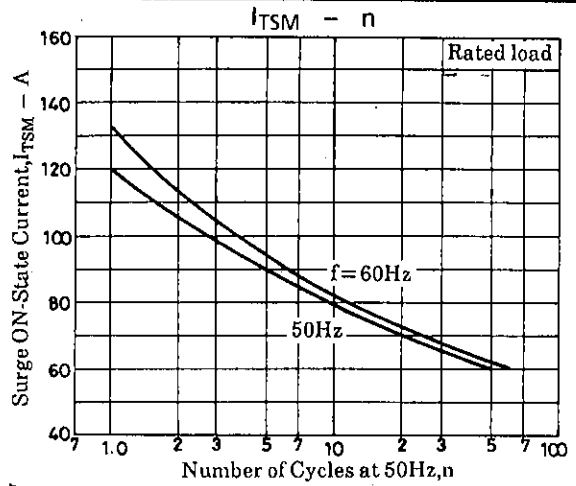
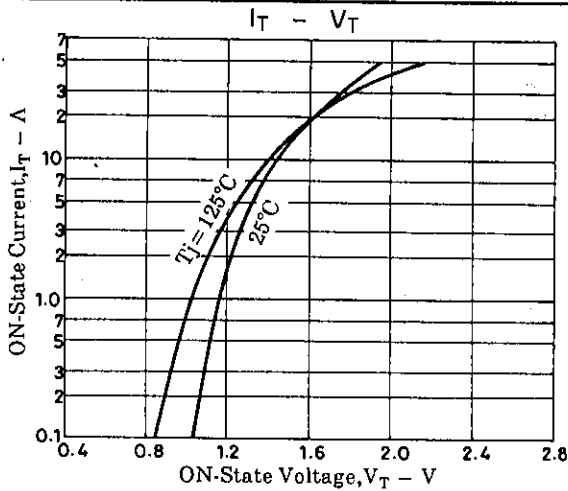
			min	typ	max	unit
Repetitive Peak OFF-State Current	I_{DRM}	$V_D = V_{DRM}$			20	μ A
Peak ON-State Voltage	V_{TM}	$I_{TM} = 17A$			1.5	V
Critical Rate of Rise of Commutating OFF-State Voltage		$V_D = 400V, T_j = 125^\circ C$	4			V/ μ s
Holding Current	I_H	$I_{TM} = 1A, V_D = 12V$			50	mA
Gate Trigger Current * (I)	I_{GT}	$V_D = 12V, R_L = 20\Omega$			20	mA
" (II)	I_{GT}	$V_D = 12V, R_L = 20\Omega$			20	mA
" (III)	I_{GT}	$V_D = 12V, R_L = 20\Omega$		30		mA
" (IV)	I_{GT}	$V_D = 12V, R_L = 20\Omega$			20	mA
Gate Trigger Voltage * (I)	V_{GT}	$V_D = 12V, R_L = 20\Omega$			1.5	V
" (II)	V_{GT}	$V_D = 12V, R_L = 20\Omega$			1.5	V
" (III)	V_{GT}	$V_D = 12V, R_L = 20\Omega$		1.0		V
" (IV)	V_{GT}	$V_D = 12V, R_L = 20\Omega$			1.5	V
Gate Nontrigger Voltage	V_{GD}	$T_c = 125^\circ C, V_D = V_{DRM}$	0.2			V
Thermal Resistance	$R_{th(j-c)}$	AC			3.0	°C/W

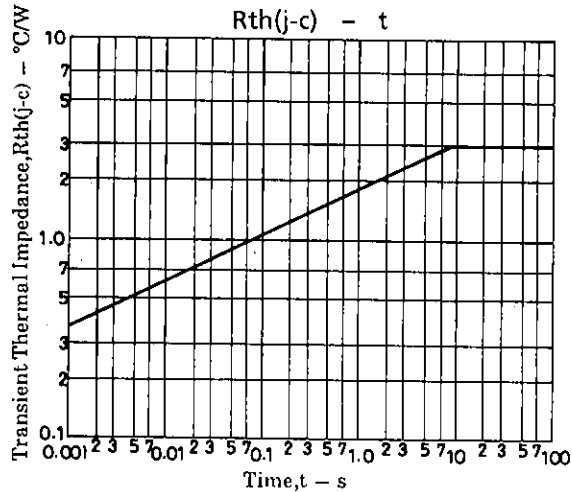
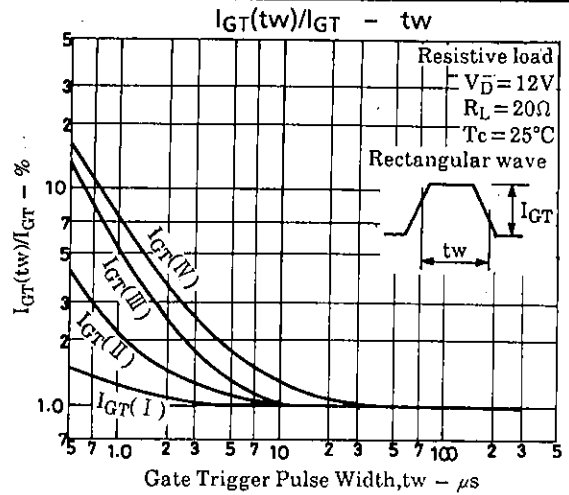
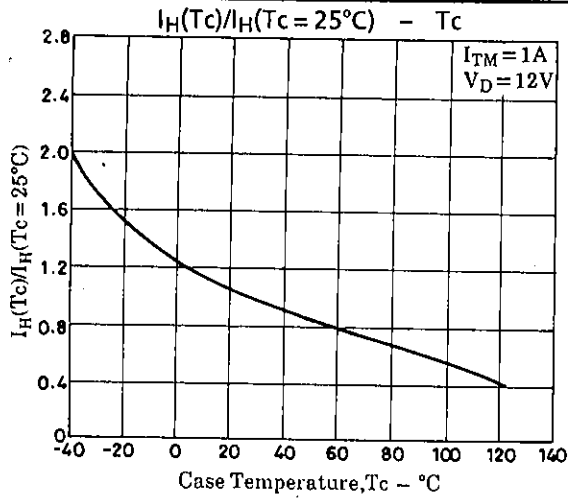
* : The gate trigger modes are shown below.

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

Package Dimensions 1263







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