

**SANYO**

No.4731

**DTN8**

Silicon Diffused Junction Type

**8A Bidirectional Thyristor****Features**

- AC power control
- Peak OFF-state voltage : 400, 600V
- RMS ON-state current : 8A

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

Absolute Maximum Ratings at Ta = 25°C			DTN8E	DTN8G	unit
Repetitive Peak OFF-State Voltage	V <sub>DRM</sub>	Single-phase full-wave, Tc = 83°C Peak 1 cycle, 50Hz 1ms ≤ t ≤ 10ms	400	600	V
RMS ON-State Current	I <sub>T(RMS)</sub>		→	8	A
Surge ON-State Current	I <sub>TSM</sub>		→	80	A
Amperes Squared-Seconds	Si <sup>2</sup> T·dt		→	32	A <sup>2</sup> S
Critical Rate of Rise of ON-State Current	diT/dt		→	50	A/μs
Peak Gate Power Dissipation	P <sub>GM</sub>		→	5	W
Average Gate Power Dissipation	P <sub>G(AV)</sub>		→	0.5	W
Peak Gate Forward Current	I <sub>GM</sub>		→	±2	A
Peak Gate Forward Voltage	V <sub>GM</sub>		→	±10	V
Junction Temperature	T <sub>j</sub>	→	125	°C	
Storage Temperature	T <sub>stg</sub>	→	−40 to +125	°C	
Weight		→	1.7	g	

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

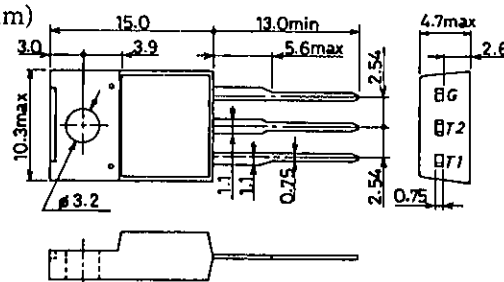
			min	typ	max	unit
Repetitive Peak ON-State Current	$I_{\text{DRM}}$	$V_D = V_{\text{DRM}}$			20	$\mu\text{A}$
Peak ON-State Voltage	$V_{\text{TM}}$	$I_{\text{TM}} = 12\text{A}$			1.5	V
Critical Rate of Rise of Commutating OFF-State Voltage	$(dv/dt)_c$	$V_D = 400\text{V}, T_j = 125^\circ\text{C}$	4			$\text{V}/\mu\text{s}$
Holding Current	$I_{\text{H}}$	$I_{\text{TM}} = 1\text{A}, V_D = 12\text{V}$			50	mA
Gate Trigger Current * (I)	$I_{\text{GT}}$	$V_D = 12\text{V}, R_L = 20\Omega$			20	mA
" (II)	$I_{\text{GT}}$	$V_D = 12\text{V}, R_L = 20\Omega$			20	mA
" (III)	$I_{\text{GT}}$	$V_D = 12\text{V}, R_L = 20\Omega$		30		mA
" (IV)	$I_{\text{GT}}$	$V_D = 12\text{V}, R_L = 20\Omega$			20	mA
Gate Trigger Voltage * (I)	$V_{\text{GT}}$	$V_D = 12\text{V}, R_L = 20\Omega$			1.5	V
" (II)	$V_{\text{GT}}$	$V_D = 12\text{V}, R_L = 20\Omega$			1.5	V
" (III)	$V_{\text{GT}}$	$V_D = 12\text{V}, R_L = 20\Omega$		1.0		V
" (IV)	$V_{\text{GT}}$	$V_D = 12\text{V}, R_L = 20\Omega$			1.5	V
Gate Nontrigger Voltage	$V_{\text{GD}}$	$T_c = 125^\circ\text{C}, V_D = V_{\text{DRM}}$	0.2			V
Thermal Resistance	$R_{\text{th(j-c)}}$	AC			3.6	$^\circ\text{C}/\text{W}$

\* : The gate trigger modes are shown below.

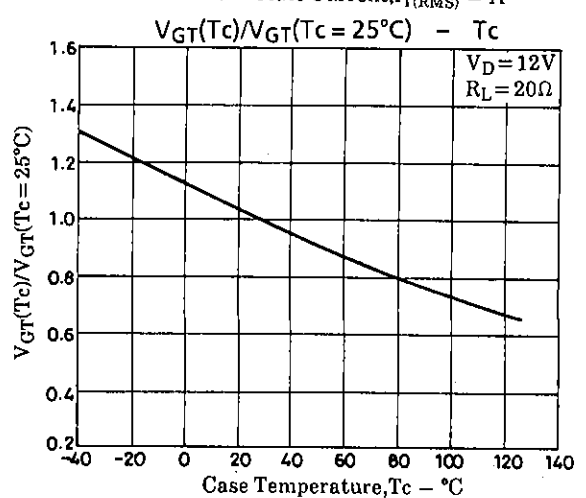
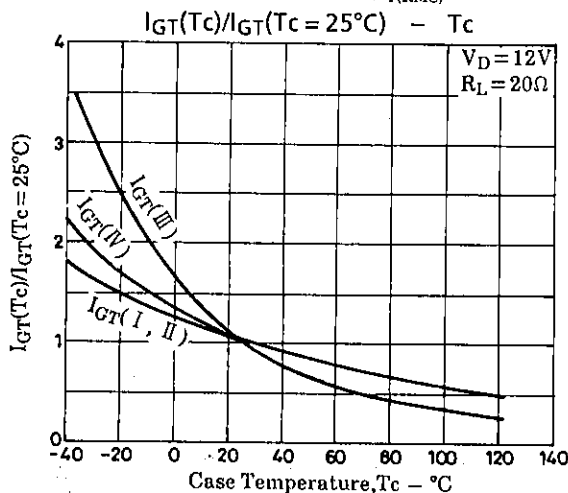
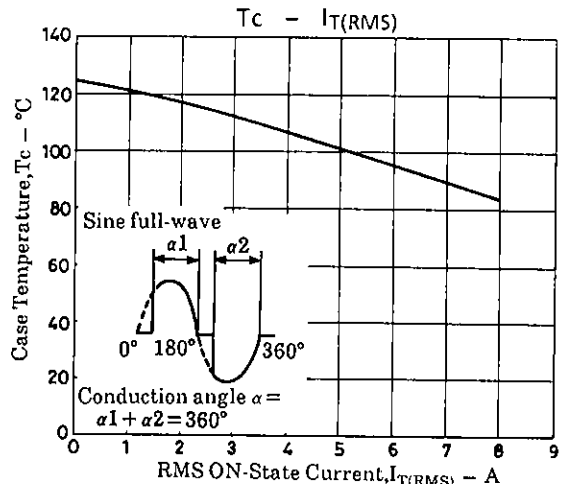
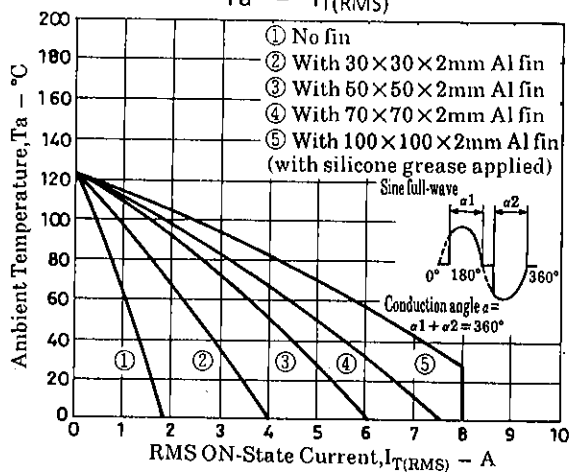
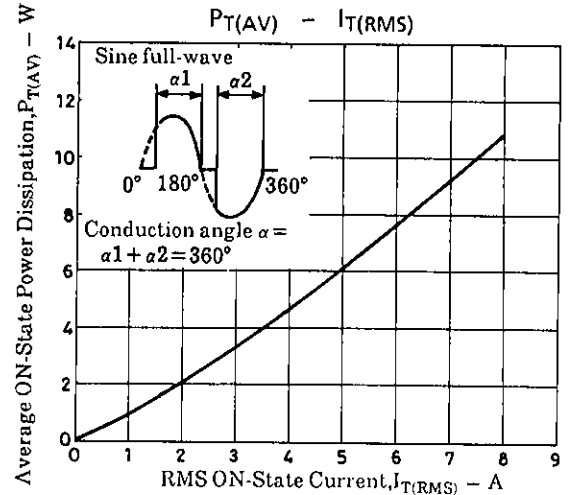
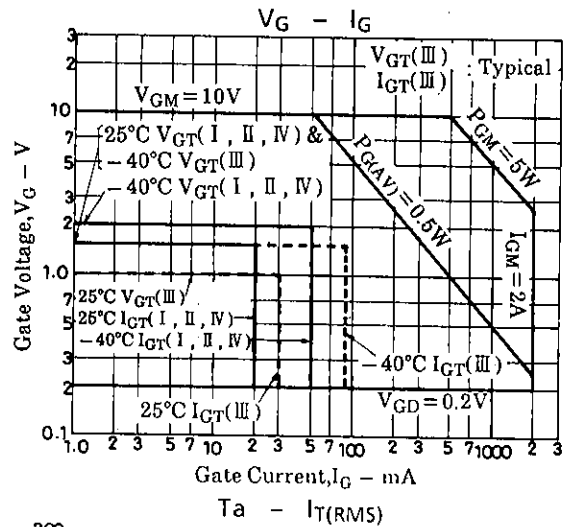
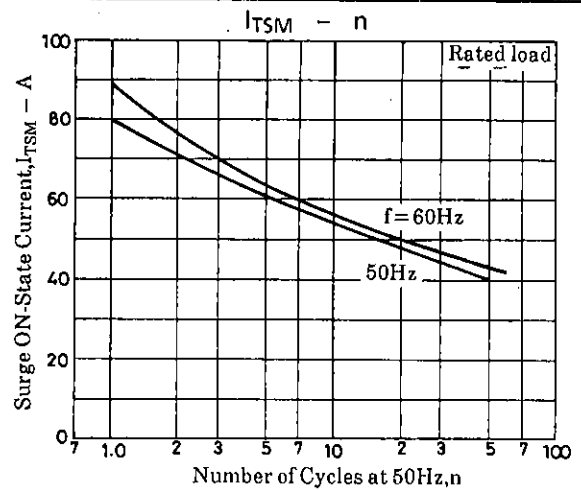
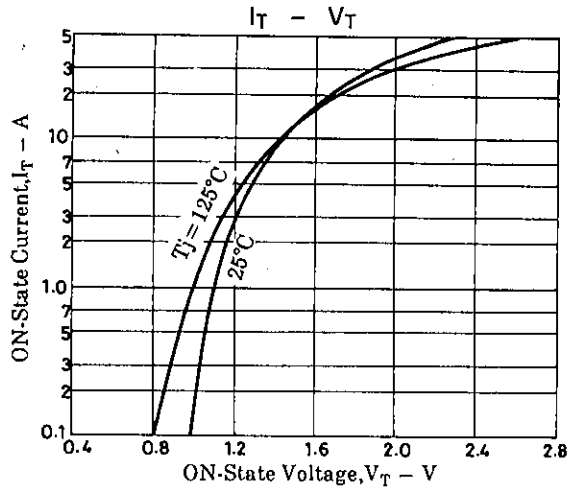
Trigger mode	T2	T1	G
I	+	-	+
II	+	-	-
III	-	+	+
IV	-	+	-

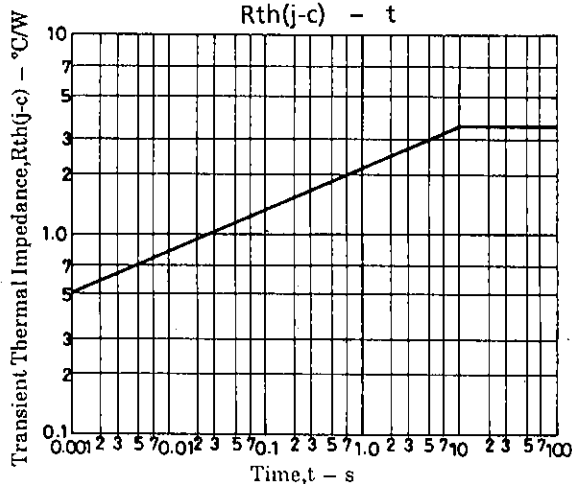
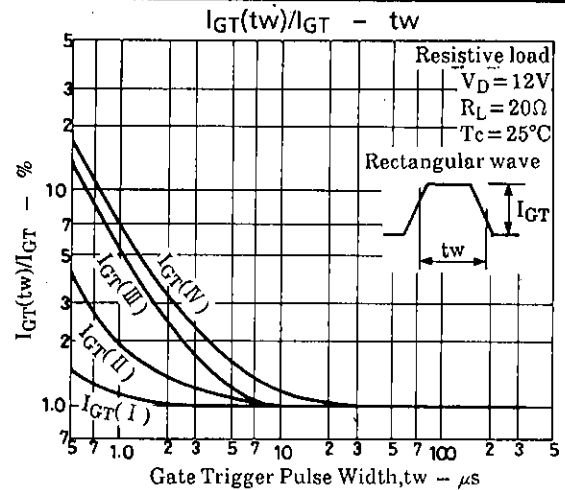
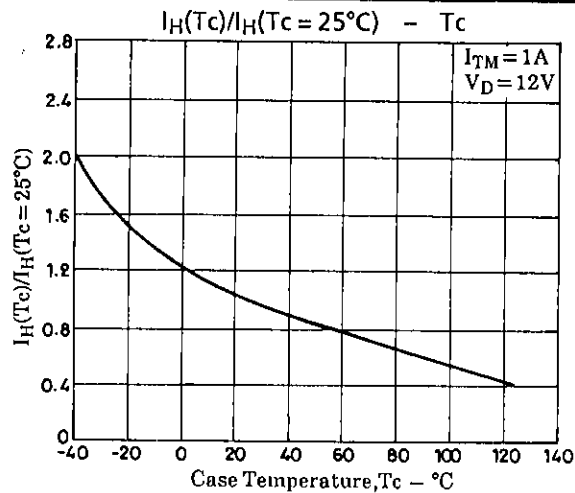
**Package Dimensions 1263**

(unit : mm)

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