Ordering number: EN4731

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 Ta = 25°C

			DTN8E		DTN8G	unit
Repetitive Peak OFF-State Voltage	V_{DRM}		400		600	V
RMS ON-State Current	$I_{T(RMS)}$	Single-phase full-wave, Tc = 83°C	→		8	A
Surge ON-State Current	I_{TSM}	Peak 1 cycle, 50Hz	→		80	A
Amperes Squared-Seconds	$Si^2T \cdot dt$	1ms ≦ t ≦ 10ms	→		32	A^2S
Critical Rate of Rise of ON-State Current	diT/dt		→		50	A/μs
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	Tj		→		125	°C
Storage Temperature	Tstg		→		−40 to +125	°C
Weight			→		1.7	g

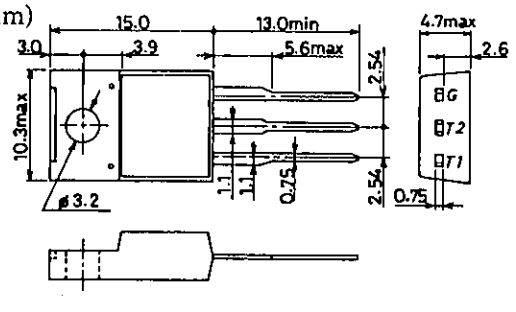
Electrical Characteristics at Ta = 25°C

			min	typ	max	unit
Repetitive Peak ON-State Current	I_{DRM}	$V_D = V_{DRM}$			20	μA
Peak ON-State Voltage	V_{TM}	$I_{TM} = 12A$			1.5	V
Critical Rate of Rise of Commutating OFF-State Voltage	(dv/dt)c	$V_D = 400V$, Tj = 125°C	4			V/μs
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}	Tc = 125°C, $V_D = V_{DRM}$	0.2			V
Thermal Resistance	Rth(j-c)	AC			3.6	°C/W

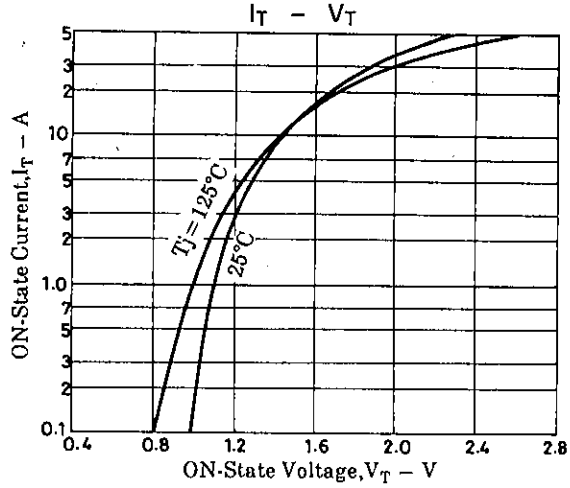
※ : The gate trigger modes are shown below.

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

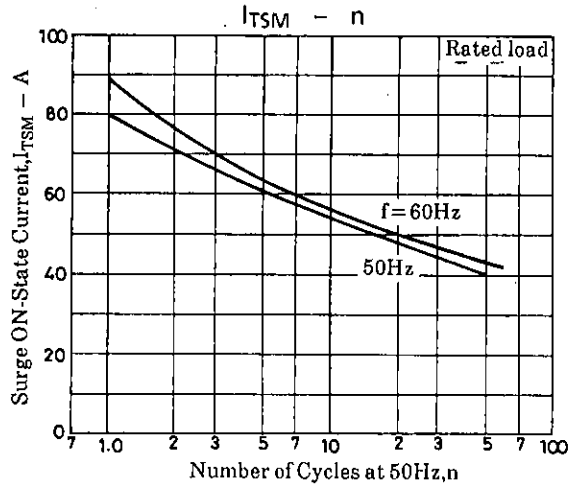
Package Dimensions 1263
(unit : mm)



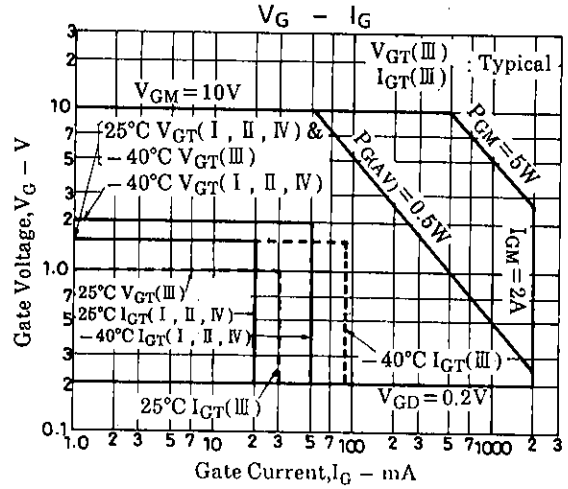
$I_T - V_T$



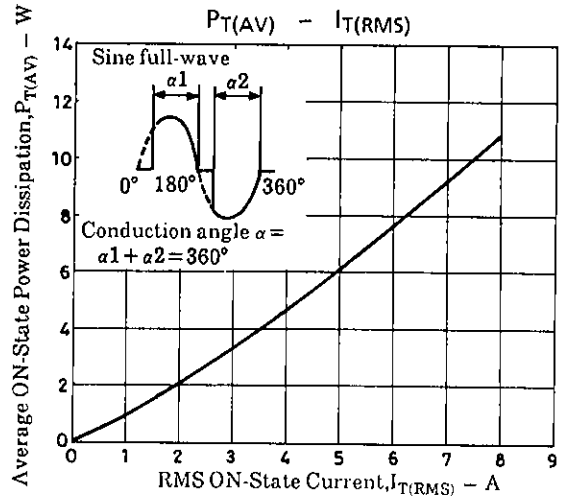
$I_{TSM} - n$



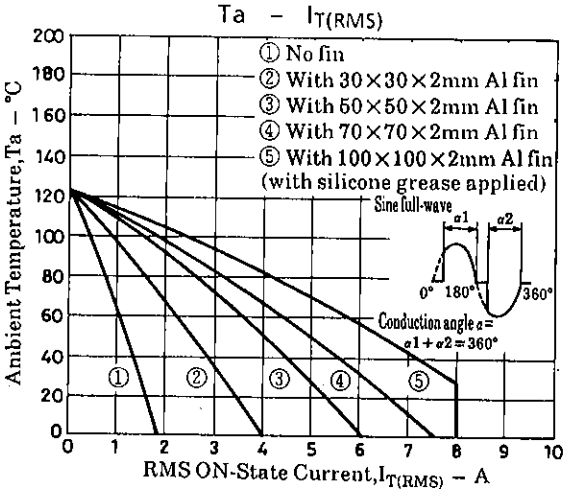
$V_G - I_G$



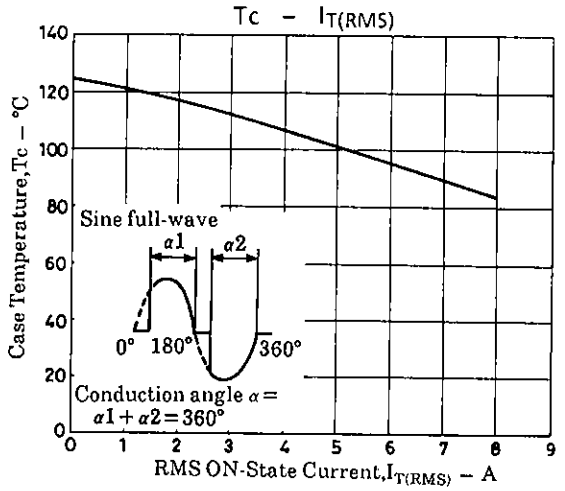
$P_{T(AV)} - I_{T(RMS)}$



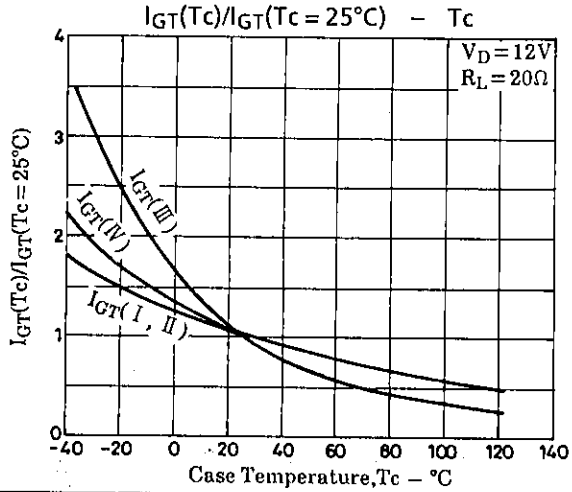
Ta – $I_{T(RMS)}$



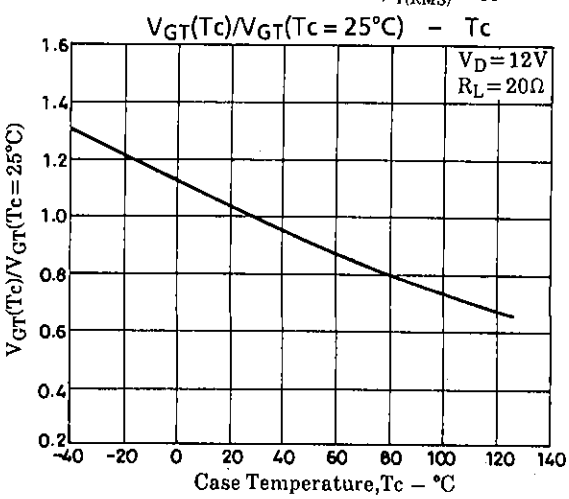
Tc – $I_{T(RMS)}$

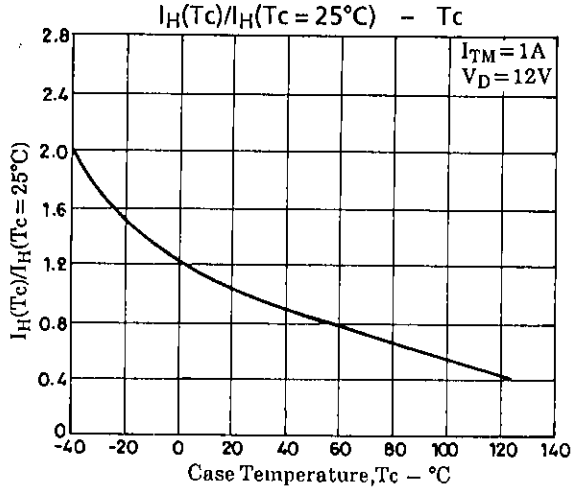


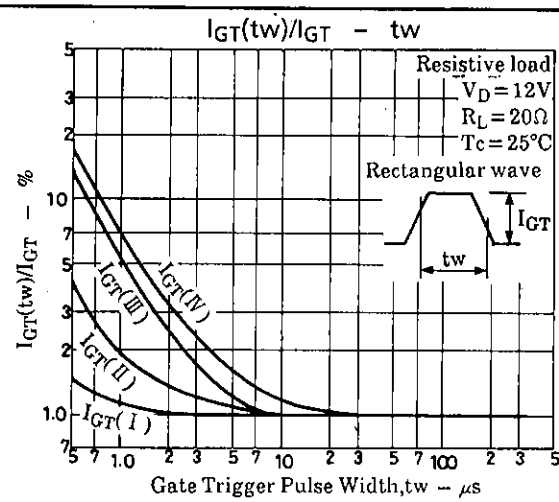
$I_{GT}(Tc)/I_{GT}(Tc = 25°C)$ – Tc

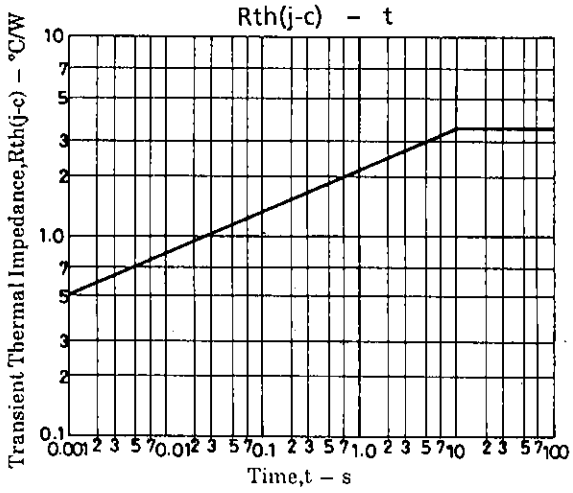


$V_{GT}(Tc)/V_{GT}(Tc = 25°C)$ – Tc









■ No products described or contained herein are intended for use in surgical implants, life-support systems, aerospace equipment, nuclear power control systems, vehicles, disaster/crime-prevention equipment and the like, the failure of which may directly or indirectly cause injury, death or property loss.

■ Anyone purchasing any products described or contained herein for an above-mentioned use shall:
① Accept full responsibility and indemnify and defend SANYO ELECTRIC CO., LTD., its affiliates, subsidiaries and distributors and all their officers and employees, jointly and severally, against any and all claims and litigation and all damages, cost and expenses associated with such use:
② Not impose any responsibility for any fault or negligence which may be cited in any such claim or litigation on SANYO ELECTRIC CO., LTD., its affiliates, subsidiaries and distributors or any of their officers and employees jointly or severally.

■ Information (including circuit diagrams and circuit parameters) herein is for example only; it is not guaranteed for volume production. SANYO believes information herein is accurate and reliable, but no guarantees are made or implied regarding its use or any infringements of intellectual property rights or other rights of third parties.