

SANYO

No.1913B

DRE3

Silicon Diffused Junction Type

3.0A Reverse Blocking Thyristor**Features**

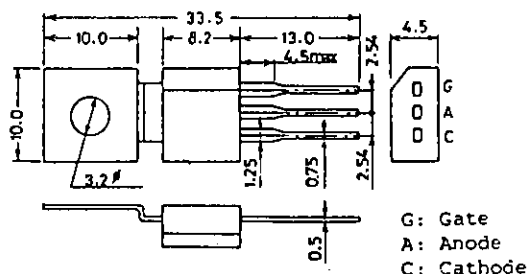
- Glass passivation for high reliability
- Peak OFF-state (reverse) voltage : -100 to -600V
- Average ON-state current : 3A
- TO-202 package

Absolute Maximum Ratings at Ta = 25°C

			DRE3B	DRE3C	DRE3E	DRE3G	unit
Repetitive Peak OFF-State Voltage	V_{DRM}	$R_{GK} = 330\Omega$	100	200	400	600	V
Non-Repetitive Peak Reverse Voltage	V_{RSM}	$R_{GK} = 330\Omega$	-150	-300	-500	-720	V
Repetitive Peak Reverse Voltage	V_{RRM}	$R_{GK} = 330\Omega$	-100	-200	-400	-600	V
Average ON-State Current	$I_{T(AV)}$	$T_c = 90^\circ\text{C}$, single-phase half-wave	→	→	→	3	A
RMS ON-State Current	$I_{T(RMS)}$	→	→	→	→	4.7	A
Surge ON-State Current	I_{TSM}	Sine half-wave 1 cycle, 50Hz	→	→	→	60	A
Amperes Squared-Seconds	$f_i^2 T \cdot dt$	$1\text{ms} \leq t \leq 10\text{ms}$	→	→	→	20	A ² S
Peak Gate Power Dissipation	P_{GM}	$f \geq 50\text{Hz}$, duty $\leq 10\%$	→	→	→	0.5	W
Average Gate Power Dissipation	$P_{G(AV)}$	→	→	→	→	0.05	W
Peak Gate Forward Current	I_{FGM}	$f \geq 50\text{Hz}$, duty $\leq 10\%$	→	→	→	0.2	A
Peak Gate Reverse Voltage	V_{RGM}	→	→	→	→	-5	V
Junction Temperature	T_j	→	→	→	→	125	°C
Storage Temperature	T_{stg}	→	→	→	→	-40 to +125	°C
Weight		→	→	→	→	1.5	g

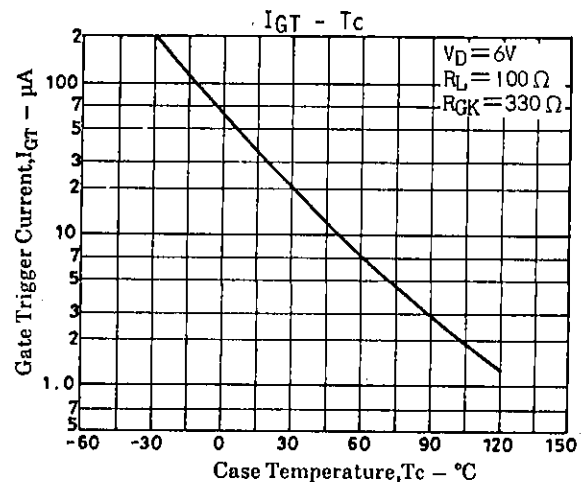
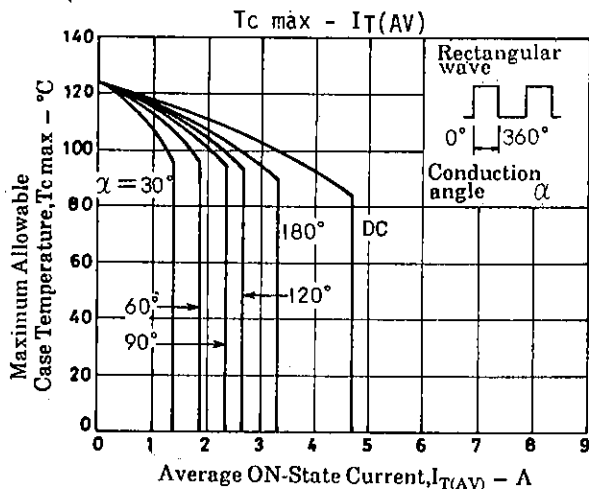
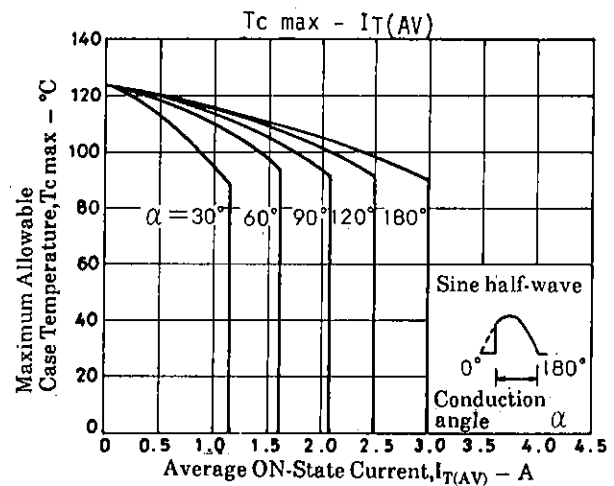
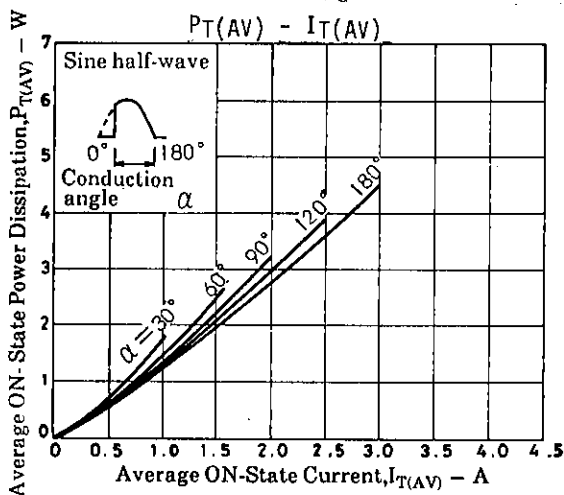
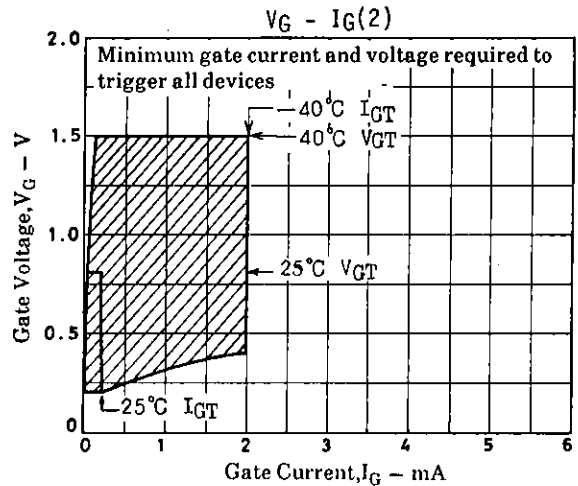
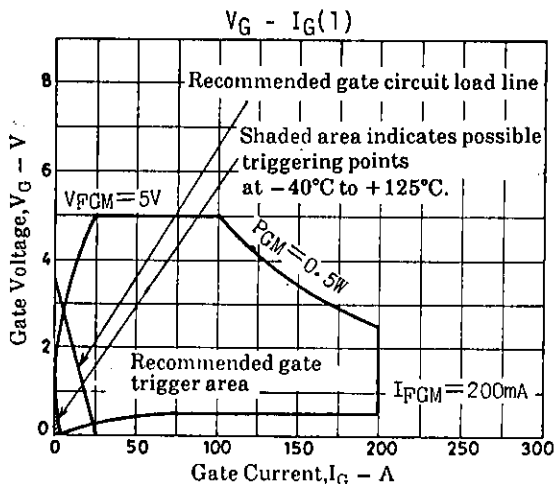
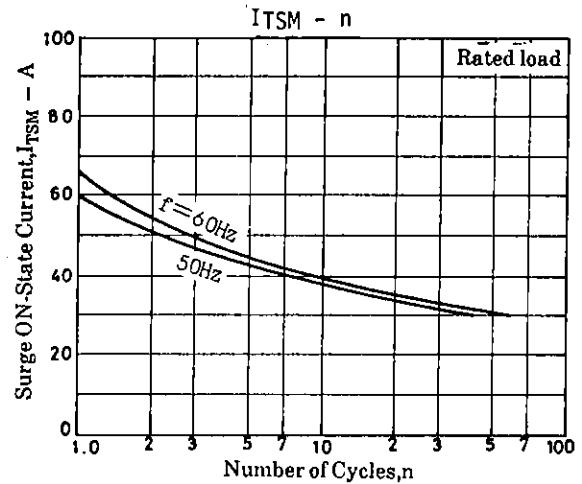
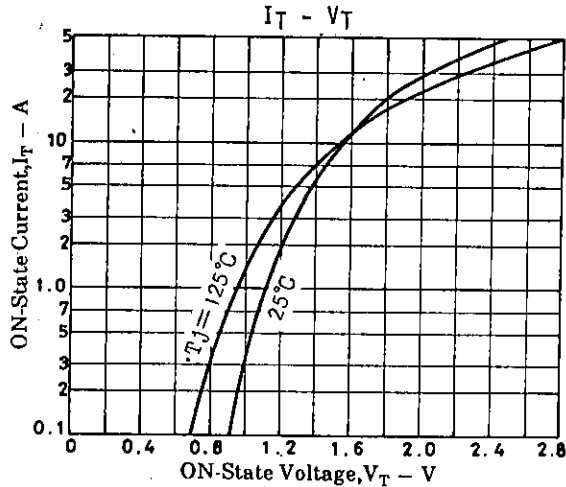
Electrical Characteristics at Ta = 25°C

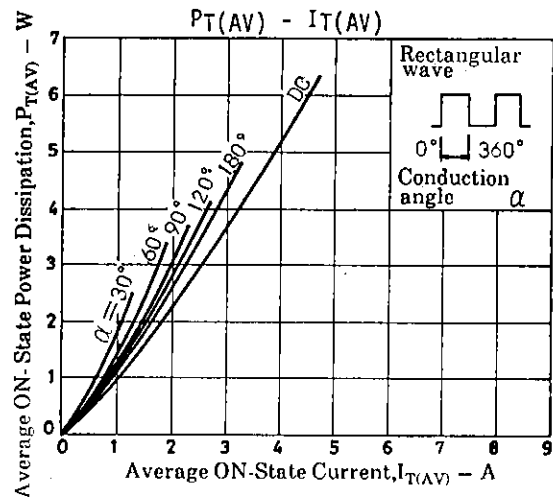
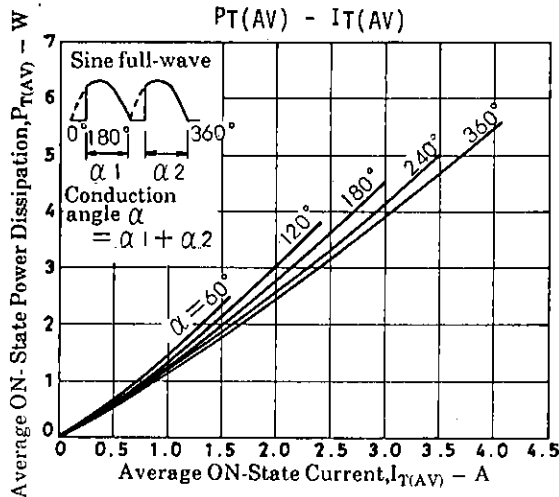
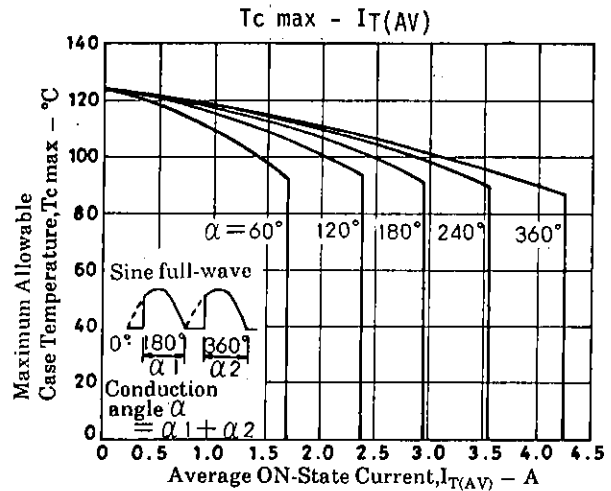
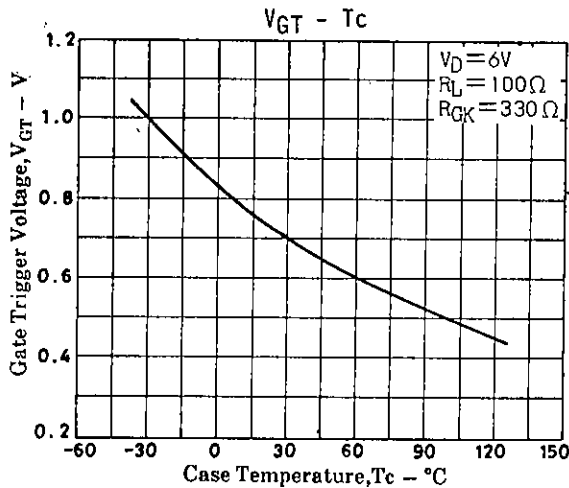
			min	typ	max	unit
Repetitive Peak OFF-State Current	I_{DRM}	$T_j = 125^\circ\text{C}$, $V_D = V_{DRM}$, $R_{GK} = 330\Omega$			2	mA
Repetitive Peak Reverse Current	I_{RRM}	$T_j = 125^\circ\text{C}$, $V_D = V_{RRM}$, $R_{GK} = 330\Omega$			2	mA
Peak ON-State Voltage	V_{TM}	$I_{TM} = 12\text{A}$			1.6	V
Critical Rate of Rise of OFF-State Voltage	dv/dt	$T_c = 75^\circ\text{C}$, $V_D = 2/3 V_{DRM}$, $R_{GK} = 330\Omega$		50		V/ μs
Holding Current	I_H	$R_L = 100\Omega$, $R_{GK} = 330\Omega$		4		mA
Gate Trigger Current	I_{GT}	$V_D = 6\text{V}$, $R_L = 100\Omega$, $R_{GK} = 330\Omega$			200	μA
Gate Trigger Voltage	V_{GT}	$V_D = 6\text{V}$, $R_L = 100\Omega$, $R_{GK} = 330\Omega$			0.8	V
Gate Nontrigger Voltage	V_{GD}	$T_c = 125^\circ\text{C}$, $V_D = 2/3 V_{DRM}$, $R_{GK} = 330\Omega$	0.2			V
Thermal Resistance	$R_{th(j-c)}$				6.0	°C/W

Package Dimensions 1150
(unit: mm)**SANYO Electric Co., Ltd. Semiconductor Business Headquarters**

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3019TA, TS No.1913-1/3





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