

SANYO

No.1873A

DRD3

Silicon Diffused Junction Type

3.0A Reverse Blocking Thyristor**Features**

- Glass passivation for high reliability
- Peak OFF-state (reverse) voltage : -100 to -600 V
- Average ON-state current : 3A
- TO220 package

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

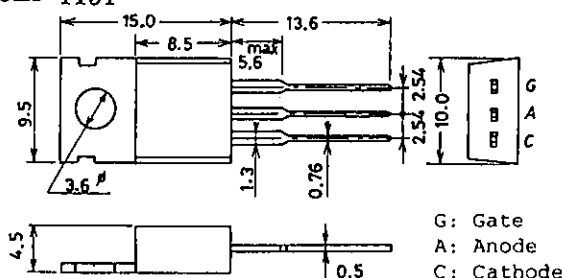
			DRD3B	DRD3C	DRD3E	DRD3G	unit
Repetitive Peak OFF-State Voltage	V_{DRM}	$R_{\text{GK}} = 1\text{k}\Omega$	100	200	400	600	V
Non-Repetitive Peak Reverse Voltage	V_{RSM}	$R_{\text{GK}} = 1\text{k}\Omega$	-150	-300	-500	-720	V
Reverse Voltage							
Repetitive Peak Reverse Voltage	V_{RRM}	$R_{\text{GK}} = 1\text{k}\Omega$	-100	-200	-400	-600	V
Average ON-State Current	$I_{\text{T(AV)}}$	$T_a = 30^\circ\text{C}$, single-phase half-wave	$\rightarrow$	$\rightarrow$	$\rightarrow$	3	A
RMS ON-State Current	$I_{\text{T(RMS)}}$		$\rightarrow$	$\rightarrow$	$\rightarrow$	4.5	A
Surge ON-State Current	I_{TSM}	Sine half-wave 1 cycle, 50Hz	$\rightarrow$	$\rightarrow$	$\rightarrow$	60	A
Amperes Squared-Seconds	$f t^2 T \cdot dt$	$1\text{ms} \leq t \leq 10\text{ms}$	$\rightarrow$	$\rightarrow$	$\rightarrow$	18	A ² s
Peak Gate Power Dissipation	P_{GM}	$f \geq 50\text{Hz}$, duty $\leq 10\%$	$\rightarrow$	$\rightarrow$	$\rightarrow$	5	W
Average Gate Power Dissipation	$P_{\text{G(AV)}}$		$\rightarrow$	$\rightarrow$	$\rightarrow$	0.5	W
Peak Gate Forward Current	I_{FGM}	$f \geq 50\text{Hz}$, duty $\leq 10\%$	$\rightarrow$	$\rightarrow$	$\rightarrow$	3	A
Peak Gate Reverse Voltage	V_{RGM}		$\rightarrow$	$\rightarrow$	$\rightarrow$	-5	V
Junction Temperature	T_j		$\rightarrow$	$\rightarrow$	$\rightarrow$	110	$^\circ\text{C}$
Storage Temperature	T_{stg}		$\rightarrow$	$\rightarrow$	-40 to +110	$^\circ\text{C}$	
Weight			$\rightarrow$	$\rightarrow$	$\rightarrow$	2	g

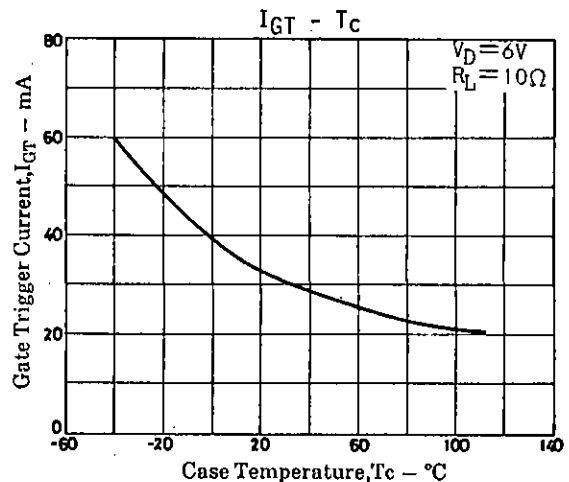
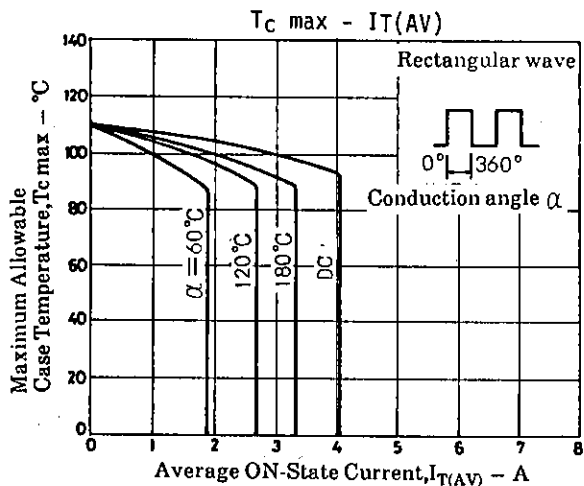
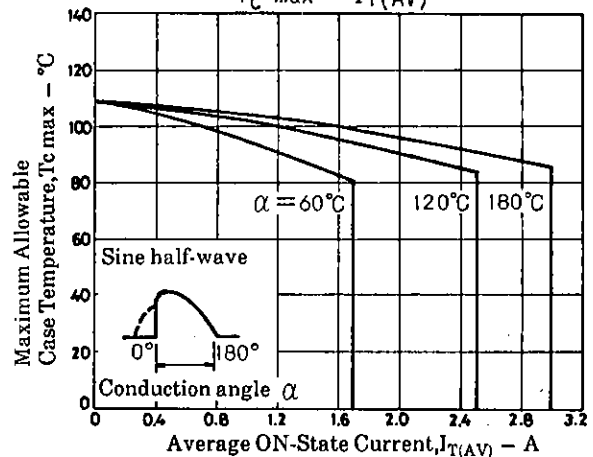
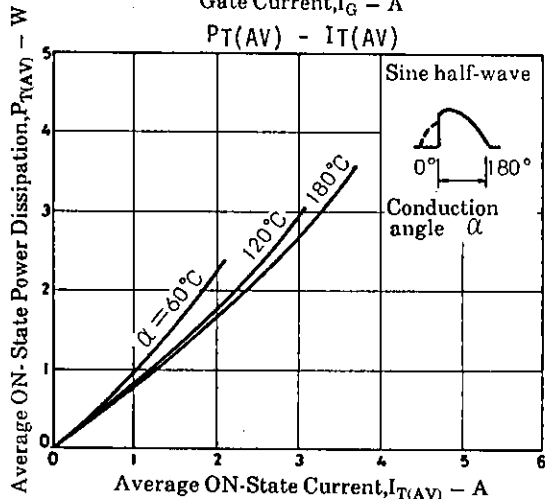
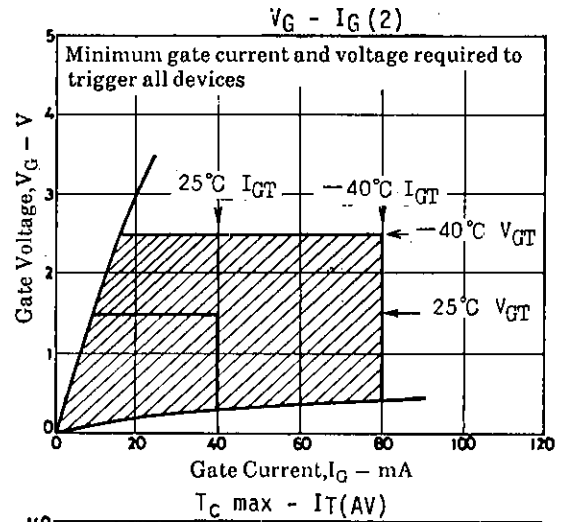
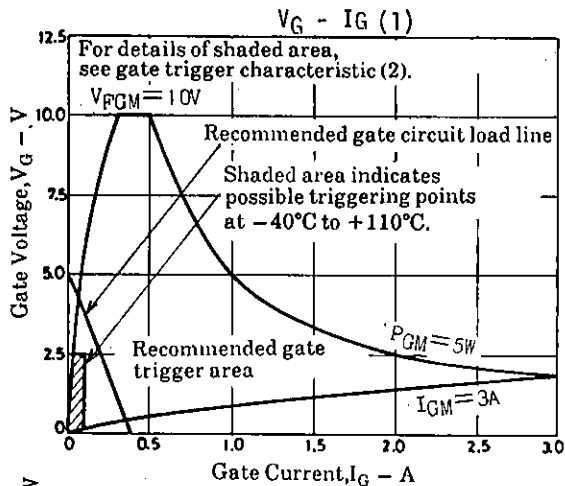
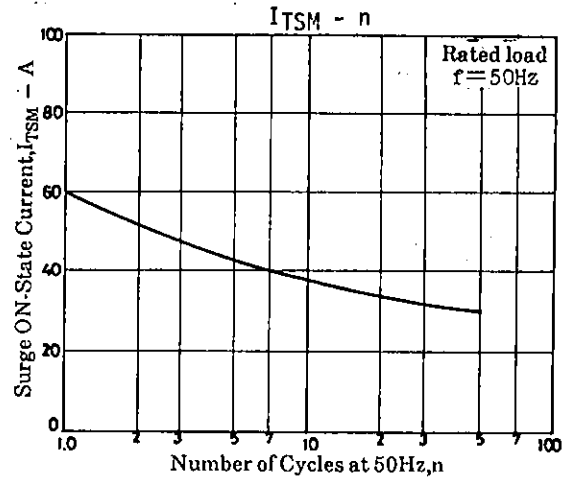
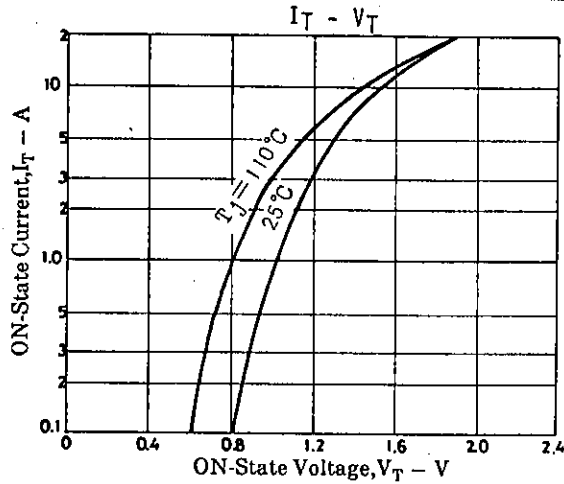
Electrical Characteristics at $T_a = 25^\circ\text{C}$

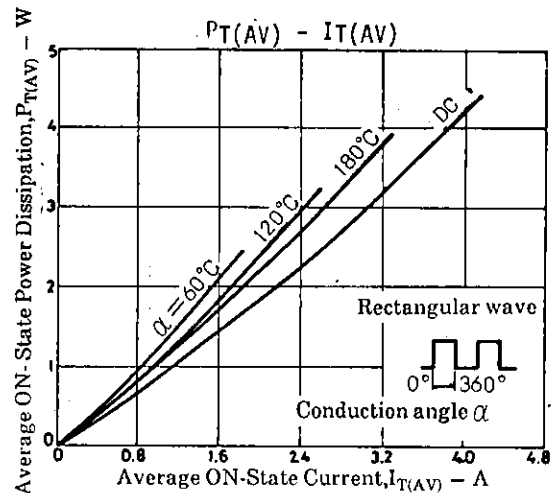
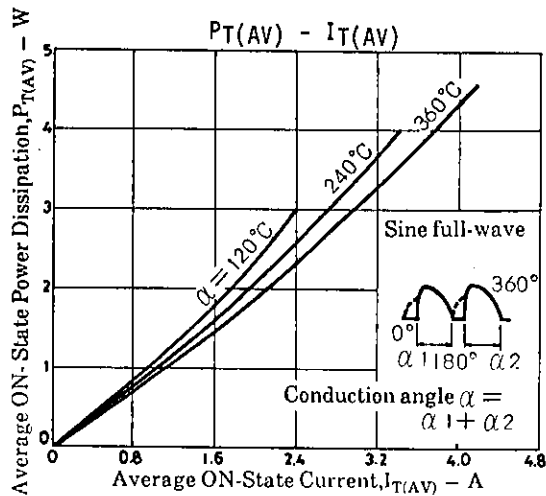
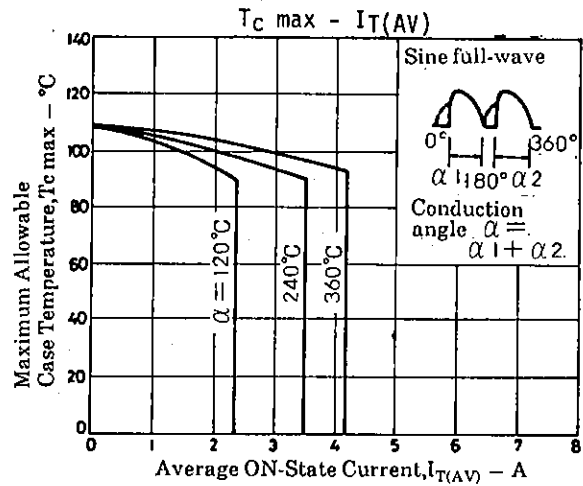
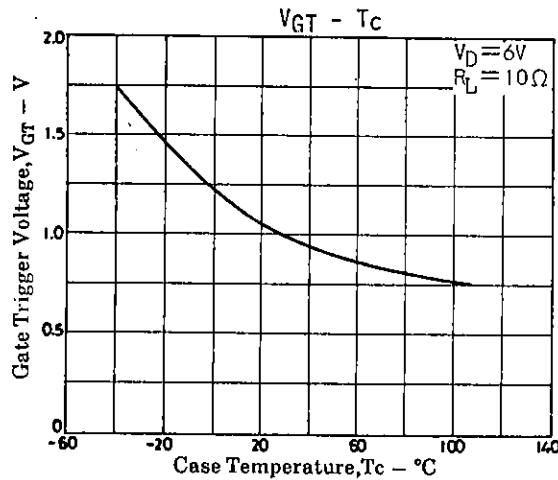
			min	typ	max	unit
Repetitive Peak OFF-State Current	I_{DRM}	$T_j = 110^\circ\text{C}$, $V_D = V_{\text{DRM}}$, $R_{\text{GK}} = 1\text{k}\Omega$			0.5	mA
Repetitive Peak Reverse Current	I_{RRM}	$T_j = 110^\circ\text{C}$, $V_R = V_{\text{RRM}}$, $R_{\text{GK}} = 1\text{k}\Omega$			-0.5	mA
Peak ON-State Voltage	V_{TM}	$I_{\text{TM}} = 12\text{A}$			1.6	V
Critical Rate of Rise of OFF-State Voltage	dv/dt	$T_j = 110^\circ\text{C}$, $V_D = V_{\text{DRM}}$, $R_{\text{GK}} = 1\text{k}\Omega$	100			V/s
Holding Current	I_{H}	$R_L = 100\Omega$, $R_{\text{GK}} = 1\text{k}\Omega$		60		mA
Gate Trigger Current	I_{GT}	$V_D = 6\text{V}$, $R_L = 100\Omega$, $R_{\text{GK}} = 1\text{k}\Omega$			15	mA
Gate Trigger Voltage	V_{GT}	$V_D = 6\text{V}$, $R_L = 100\Omega$, $R_{\text{GK}} = 1\text{k}\Omega$			1.5	V
Gate Nontrigger Voltage	V_{GD}	$T_a = 110^\circ\text{C}$, $V_D = V_{\text{DRM}}$, $R_{\text{GK}} = 1\text{k}\Omega$	0.2			V
Thermal Resistance	$R_{\text{th(j-c)}}$				3.2	$^\circ\text{C/W}$

Package Dimensions 1151

(unit: mm)







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