

SANYO**DRA03T**

Silicon Planar Type

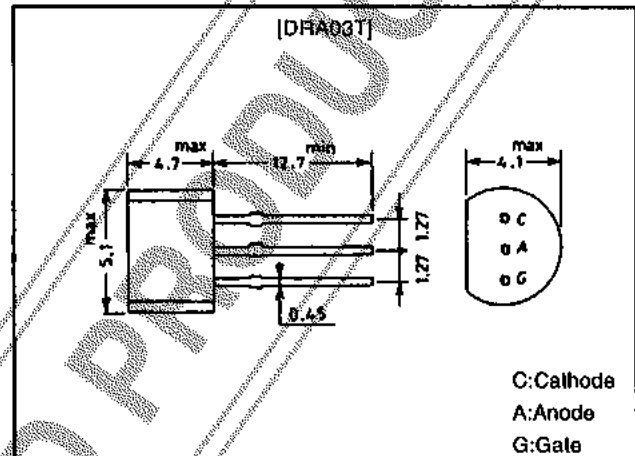
0.3A Reverse Blocking Thyristor**Features**

- Low-power switching and control.
- Small size and light weight.
- Peak OFF-state (reverse) voltage : 100 to 600V.
- Average ON-state current : 0.3A.
- TO-92 package.

Package Dimensions

unit:mm

1096A

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

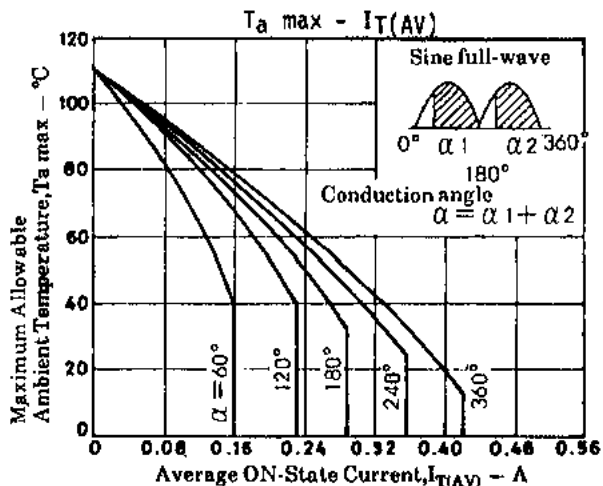
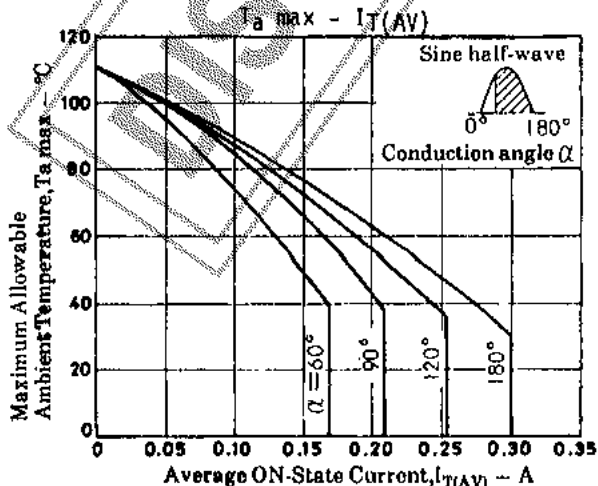
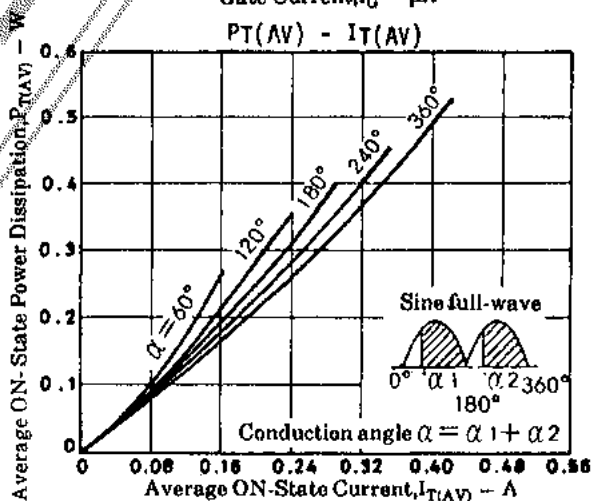
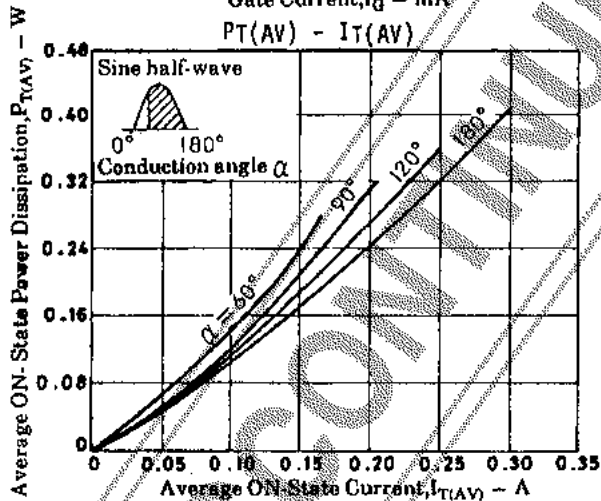
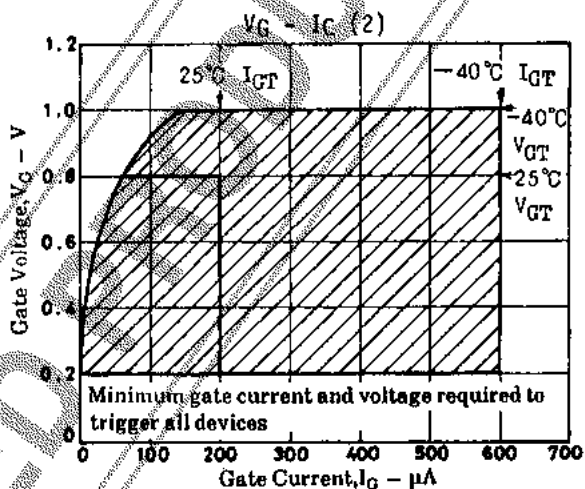
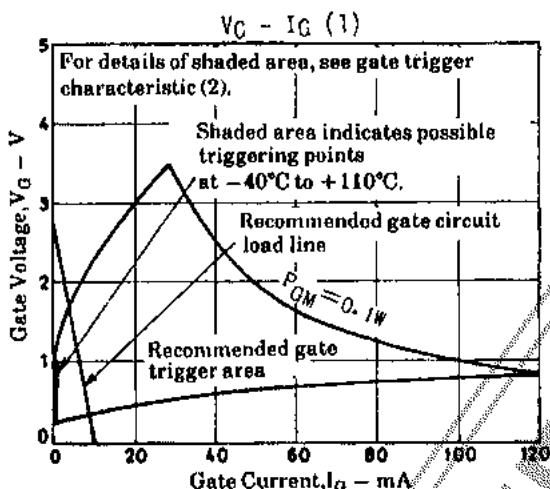
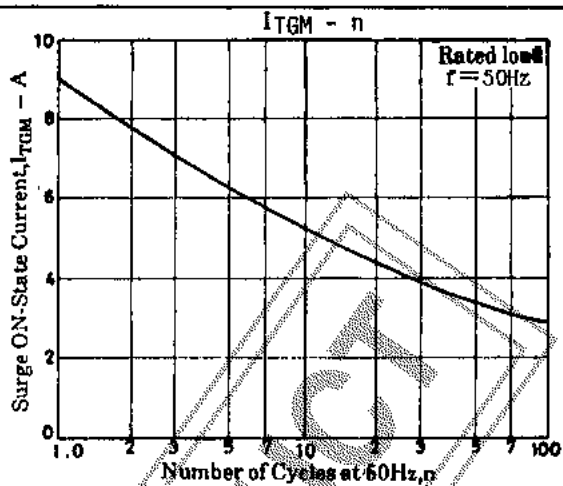
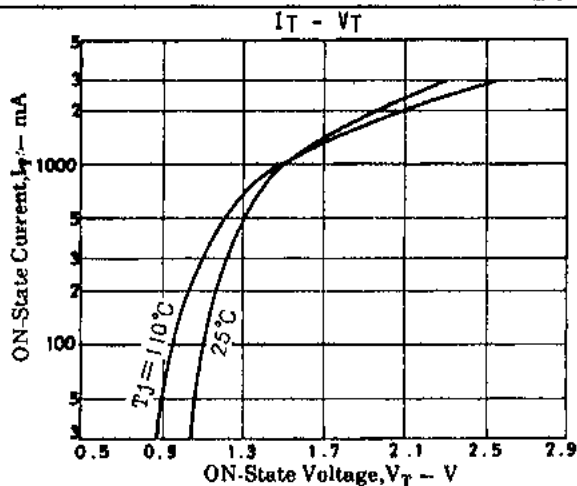
| Parameter | Symbol | Conditions | DRA03TB | DRA03TC | DRA03TE | DRA03TG | Unit |
|-------------------------------------|---------------|--|---------|---------|---------|-------------|------------------|
| Repetitive Peak OFF-State Voltage | V_{DRM} | $R_{GK}=1k\Omega$ | 100 | 200 | 400 | 600 | V |
| Non-Repetitive Peak Reverse Voltage | V_{RRM} | $R_{GK}=1\Omega$ | 150 | 300 | 500 | 720 | V |
| Repetitive Peak Reverse Voltage | V_{RRM} | $R_{GK}=1k\Omega$ | 100 | 200 | 400 | 600 | V |
| Average ON-State Current | $I_T(AV)$ | $T_a=30^\circ\text{C}$, single phase half-wave | → | → | → | 0.3 | A |
| RMS ON-State Current | $I_T(RMS)$ | | → | → | → | 0.45 | A |
| Surge ON-State Current | I_{TSM} | Sine half-wave, 1 cycle, 50Hz | → | → | → | 9 | A |
| Ampere Squared-Seconds | $\int I^2 dt$ | 1ms≤t≤10ms | → | → | → | 0.4 | A ² S |
| Peak Gate Power Dissipation | P_{GM} | f≥50Hz, duty≤10% | → | → | → | 0.1 | W |
| Average Gate Power Dissipation | $P_{G(AV)}$ | | → | → | → | 0.01 | W |
| Peak Gate Forward Current | I_{FGM} | f≥50Hz, duty≤10% | → | → | → | 0.125 | A |
| Peak Gate Forward Voltage | V_{FGM} | f≥50Hz, duty≤10% | → | → | → | 3.5 | V |
| Peak Gate Reverse Voltage | V_{RGM} | | → | → | → | 5 | V |
| Junction Temperature | T_j | | → | → | → | 110 | °C |
| Storage Temperature | T_{stg} | | → | → | → | -40 to +125 | °C |
| Weight | | | → | → | → | 0.2 | g |

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

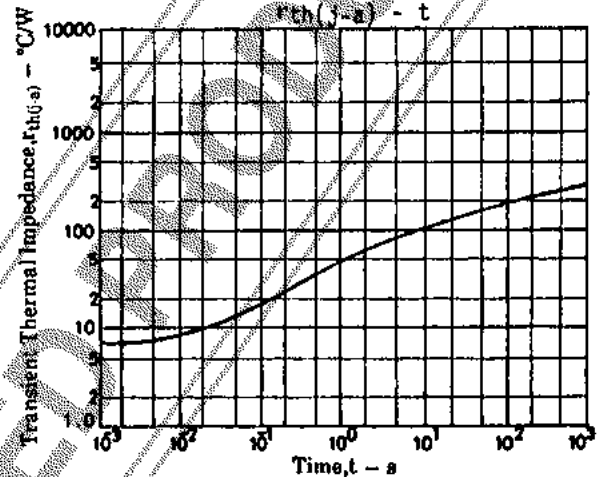
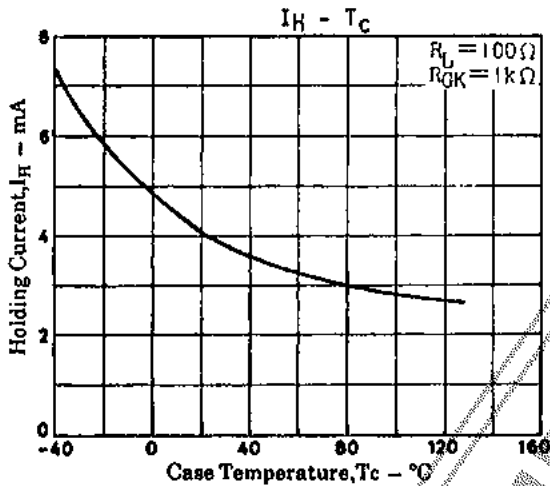
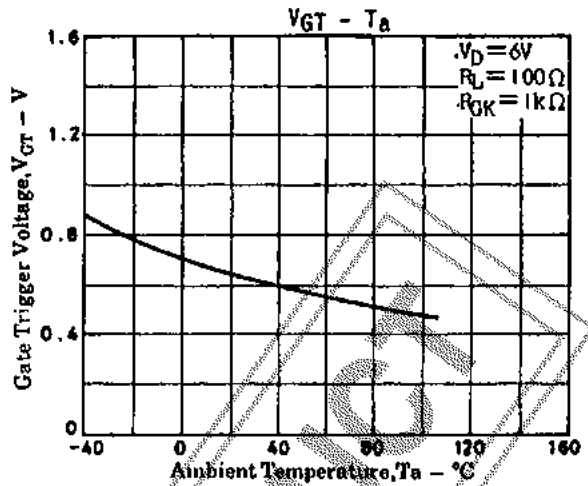
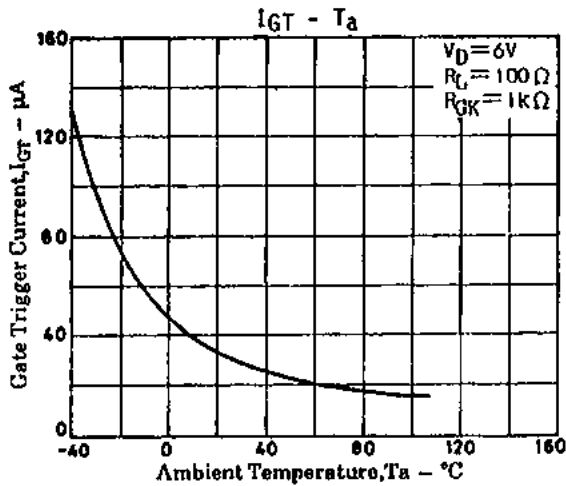
| Parameter | Symbol | Conditions | Ratings | | | Unit |
|-----------------------------------|---------------|---|---------|-----|-----|------|
| | | | min | typ | max | |
| Repetitive Peak OFF-State Current | I_{DRM} | $T_j=110^\circ\text{C}$, $V_D=V_{DRM}$, $R_{GK}=1k\Omega$ | | | 0.1 | mA |
| Repetitive Peak Reverse Current | I_{RRM} | $T_j=110^\circ\text{C}$, $V_R=V_{RRM}$, $R_{GK}=1k\Omega$ | | | 0.1 | mA |
| ON-State Voltage | V_T | $I_T=2\text{A}$ | | | 2.0 | V |
| Holding Current | I_H | $R_L=100\Omega$, $R_{GK}=1k\Omega$ | | 4.0 | | mA |
| Gate Trigger Current | I_{GT} | $V_D=6\text{V}$, $R_L=100\Omega$, $R_{GK}=1k\Omega$ | | | 0.2 | mA |
| Gate Trigger Voltage | V_{GT} | $V_D=6\text{V}$, $R_L=100\Omega$, $R_{GK}=1k\Omega$ | | | 0.8 | V |
| Gate Nontrigger Voltage | V_{GD} | $T_a=110^\circ\text{C}$, $V_D=6\text{V}$, $R_{GK}=1k\Omega$ | 0.2 | | | V |
| Thermal Resistance | $R_{th(j-c)}$ | | | | 250 | °C/W |

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