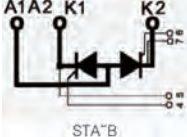
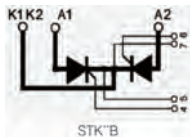
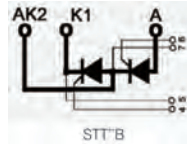


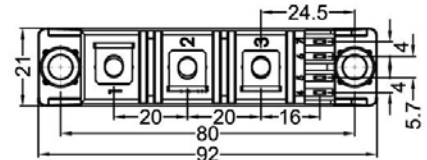
STT70GKXXB

Thyristor-Thyristor Modules



| Type | V_{RSM} V_{DSM} V | V_{RRM} V_{DRM} V |
|------------|-----------------------------|-----------------------------|
| STT70GK08B | 900 | 800 |
| STT70GK12B | 1300 | 1200 |
| STT70GK14B | 1500 | 1400 |
| STT70GK16B | 1700 | 1600 |
| STT70GK18B | 1900 | 1800 |
| STT70GK20B | 2100 | 2000 |
| STT70GK22B | 2300 | 2200 |
| STT70GK24B | 2500 | 2400 |

Dimensions in mm (1mm=0.0394")



| Symbol | Test Conditions | Maximum Ratings | Unit |
|--|--|----------------------------------|------------------|
| I_{TRMS} , I_{FRMS} I_{TAVM} , I_{FAVM} | $T_V = T_{VJM}$ $T_C = 85^\circ\text{C}$; 180° sine | 180 70 | A |
| I_{TSM} , I_{FSM} | $T_V = 45^\circ\text{C}$ $V_R = 0$ $t = 10\text{ms}$ (50Hz), sine $t = 8.3\text{ms}$ (60Hz), sine $T_V = T_{VJM}$ $V_R = 0$ $t = 10\text{ms}$ (50Hz), sine $t = 8.3\text{ms}$ (60Hz), sine | 1600 1700 1450 1550 | A |
| $\int i^2 dt$ | $T_V = 45^\circ\text{C}$ $V_R = 0$ $t = 10\text{ms}$ (50Hz), sine $t = 8.3\text{ms}$ (60Hz), sine $T_V = T_{VJM}$ $V_R = 0$ $t = 10\text{ms}$ (50Hz), sine $t = 8.3\text{ms}$ (60Hz), sine | 13500 12600 10600 10250 | A ² s |
| $(di/dt)_{cr}$ | $T_V = T_{VJM}$ $f = 50\text{Hz}$, $t_p = 200\mu\text{s}$ $V_D = 2/3V_{DRM}$ $I_G = 0.45\text{A}$ $di_G/dt = 0.45\text{A}/\mu\text{s}$ repetitive, $I_T = 250\text{A}$ non repetitive, $I_T = I_{TAVM}$ | 150 500 | A/ μs |
| $(dv/dt)_{cr}$ | $T_V = T_{VJM}$; $R_{GK} = \infty$; method 1 (linear voltage rise) $V_{DR} = 2/3V_{DRM}$ | 1000 | V/ μs |
| P_{GM} | $T_V = T_{VJM}$ $I_T = I_{TAVM}$ $t_p = 30\mu\text{s}$ $t_p = 300\mu\text{s}$ | 10 5 | W |
| P_{GAV} | | 0.5 | W |
| V_{RGM} | | 10 | V |
| T_V T_{VJM} T_{stg} | | -40...+125 125 -40...+125 | °C |
| V_{ISOL} | 50/60Hz, RMS $I_{ISOL} \leq 1\text{mA}$ $t = 1\text{min}$ $t = 1\text{s}$ | 3000 3600 | V~ |
| M_d | Mounting torque (M5) Terminal connection torque (M5) | 2.5-4.0/22-35 2.5-4.0/22-35 | Nm/lb.in. |
| Weight | Typical | 110 | g |



STT70GKXXB

Thyristor-Thyristor Modules

| Symbol | Test Conditions | Characteristic Values | Unit |
|--------------------|---|-----------------------|-----------|
| I_{RRM}, I_{DRM} | $T_{VJ}=T_{VJM}; V_R=V_{RRM}; V_D=V_{DRM}$ | 5 | mA |
| V_T, V_F | $I_T, I_F=210A; T_{VJ}=25^{\circ}C$ | 1.65 | V |
| V_{TO} | For power-loss calculations only ($T_{VJ}=125^{\circ}C$) | 0.85 | V |
| r_T | | 3.2 | $m\Omega$ |
| V_{GT} | $V_D=6V;$ $T_{VJ}=25^{\circ}C$ $T_{VJ}=-40^{\circ}C$ | 1.5 1.6 | V |
| I_{GT} | $V_D=6V;$ $T_{VJ}=25^{\circ}C$ $T_{VJ}=-40^{\circ}C$ | 100 200 | mA |
| V_{GD} | $T_{VJ}=T_{VJM}; V_D=2/3V_{DRM}$ | 0.2 | V |
| I_{GD} | | 10 | mA |
| I_L | $T_{VJ}=25^{\circ}C; t_p=10\mu s; V_D=6V$ $I_G=0.45A; di_G/dt=0.45A/\mu s$ | 450 | mA |
| I_H | $T_{VJ}=25^{\circ}C; V_D=6V; R_{GK}=\infty$ | 200 | mA |
| t_{gd} | $T_{VJ}=25^{\circ}C; V_D=1/2V_{DRM}$ $I_G=0.45A; di_G/dt=0.45A/\mu s$ | 2 | μs |
| t_q | $T_{VJ}=T_{VJM}; I_T=150A; t_p=200\mu s; -di/dt=10A/\mu s$ $V_R=100V; dv/dt=20V/\mu s; V_D=2/3V_{DRM}$ | 185 | μs |
| Q_s | $T_{VJ}=T_{VJM}; I_T, I_F=50A; -di/dt=6A/\mu s$ | 170 | μC |
| I_{RM} | | 45 | A |
| R_{thJC} | per thyristor/diode; DC current per module | 0.3 0.15 | K/W |
| R_{thJK} | per thyristor/diode; DC current per module | 0.5 0.25 | K/W |
| d_s | Creeping distance on surface | 12.7 | mm |
| d_a | Strike distance through air | 9.6 | mm |
| a | Maximum allowable acceleration | 50 | m/s^2 |

FEATURES

- * International standard package
- * Copper base plate
- * Glass passivated chips
- * Isolation voltage 3600 V~
- * UL file NO.E310749
- * RoHS compliant

APPLICATIONS

- * DC motor control
- * Softstart AC motor controller
- * Light, heat and temperature control

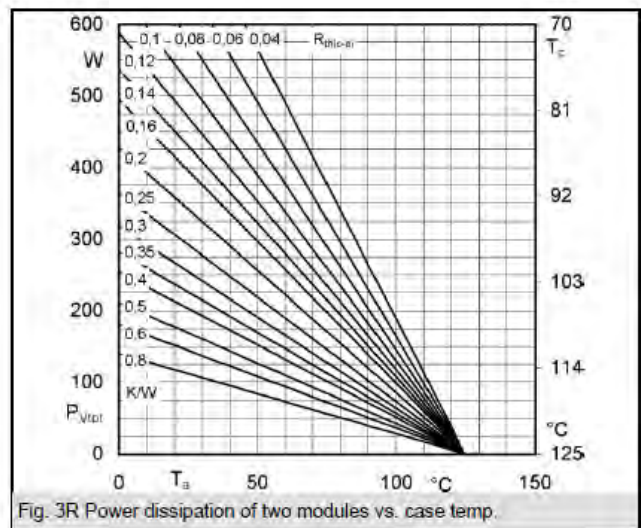
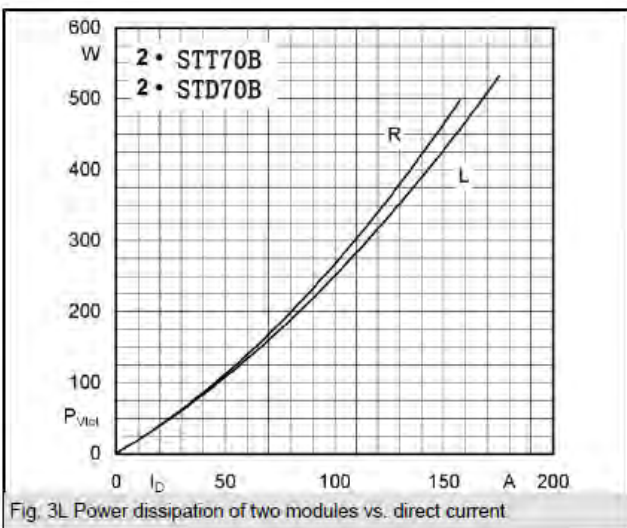
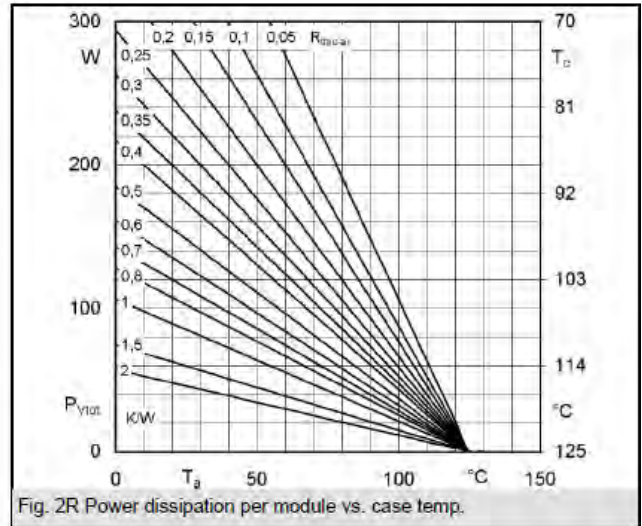
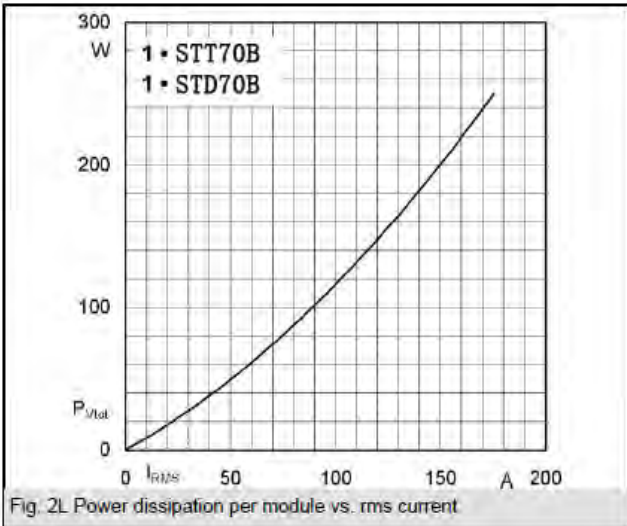
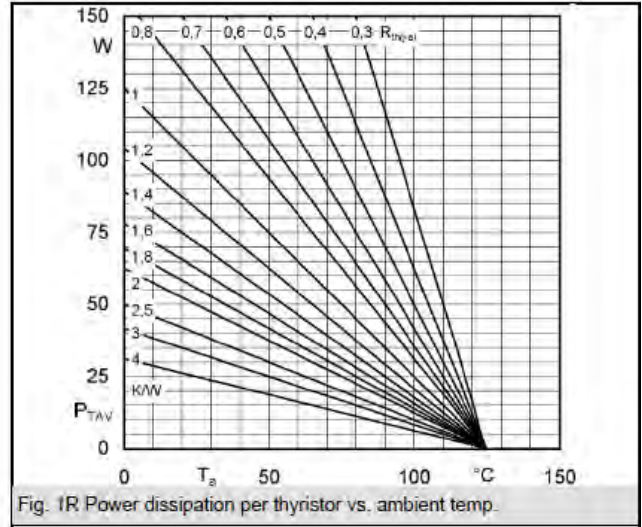
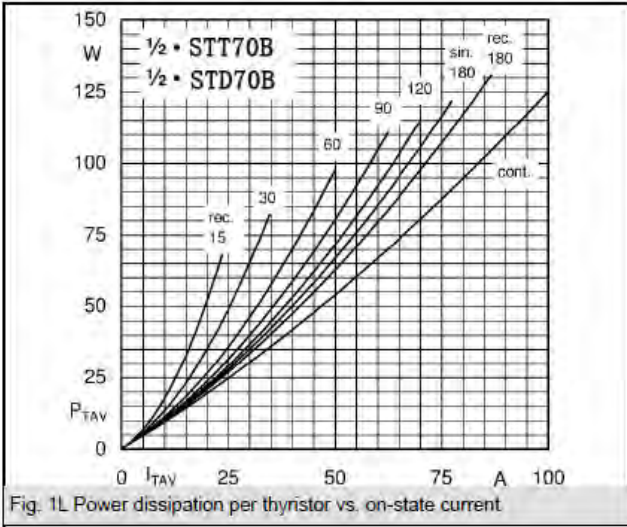
ADVANTAGES

- * Space and weight savings
- * Simple mounting with two screws
- * Improved temperature and power cycling
- * Reduced protection circuits



STT70GKXXB

Thyristor-Thyristor Modules



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