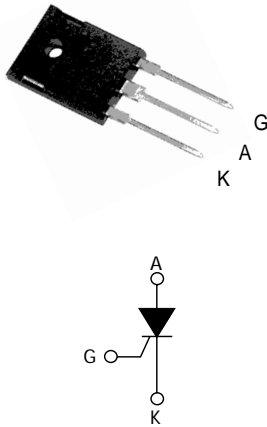


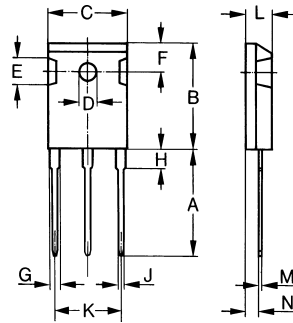
STYN1055 thru STYN1855

www.DataSheet4U.com

Discrete Thyristors(SCRs)



Dimensions TO-247AD



| Dim. | Millimeter | | Inches | |
|------|------------|-------|--------|-------|
| | Min. | Max. | Min. | Max. |
| A | 19.81 | 20.32 | 0.780 | 0.800 |
| B | 20.80 | 21.46 | 0.819 | 0.845 |
| C | 15.75 | 16.26 | 0.610 | 0.640 |
| D | 3.55 | 3.65 | 0.140 | 0.144 |
| E | 4.32 | 5.49 | 0.170 | 0.216 |
| F | 5.4 | 6.2 | 0.212 | 0.244 |
| G | 1.65 | 2.13 | 0.065 | 0.084 |
| H | - | 4.5 | - | 0.177 |
| J | 1.0 | 1.4 | 0.040 | 0.055 |
| K | 10.8 | 11.0 | 0.426 | 0.433 |
| L | 4.7 | 5.3 | 0.185 | 0.209 |
| M | 0.4 | 0.8 | 0.016 | 0.031 |
| N | 1.5 | 2.49 | 0.087 | 0.102 |

| Symbol | Test Conditions | Maximum Ratings | Unit |
|------------------------------------|---|---------------------------------------|-------------|
| I_{TRMS} I_{TAVM} | $T_{VJ}=T_{VJM}$ $T_C=85^{\circ}C$; 180° sine | 55 35 | A |
| I_{TSM} | $T_{VJ}=45^{\circ}C$ $V_R=0$ $t=10ms$ (50Hz), sine $t=8.3ms$ (60Hz), sine | 300 320 | A |
| | $T_{VJ}=T_{VJM}$ $V_R=0$ $t=10ms$ (50Hz), sine $t=8.3ms$ (60Hz), sine | 270 290 | |
| i^2t | $T_{VJ}=45^{\circ}C$ $V_R=0$ $t=10ms$ (50Hz), sine $t=8.3ms$ (60Hz), sine | 450 440 | A^2s |
| | $T_{VJ}=T_{VJM}$ $V_R=0$ $t=10ms$ (50Hz), sine $t=8.3ms$ (60Hz), sine | 365 355 | |
| $(di/dt)_{cr}$ | $T_{VJ}=T_{VJM}$ $f=50Hz$, $t_p=200\mu s$ $V_D=2/3V_{DRM}$ $I_G=0.3A$ $di/dt=0.3A/\mu s$ | repetitive, $I_T=40A$ 150 | A/ μs |
| | | non repetitive, $I_T=I_{TAVM}$ 500 | |
| $(dv/dt)_{cr}$ | $T_{VJ}=T_{VJM}$; $R_{GK}=\infty$; method 1 (linear voltage rise) | $V_{DR}=2/3V_{DRM}$ 1000 | V/ μs |
| P_{GM} | $T_{VJ}=T_{VJM}$ $I_T=I_{TAVM}$ | $t_p=30\mu s$ $t_p=300\mu s$ | W |
| P_{GAV} | | 0.5 | W |
| V_{RGM} | | 10 | V |
| T_{VJ} T_{VJM} T_{stg} | | -40...+125 125 -40...+125 | $^{\circ}C$ |
| M_d F_c | Mounting torque (M3) Mounting force with clip | 0.8...1.2 20...120 | Nm N |
| Weight | | 6 | g |

STYN1055 thru STYN1855 www.DataSheet4U.com

Discrete SCRs (Thyristors)

| Symbol | Test Conditions | Characteristic Values | Unit |
|-------------------------------------|--|-----------------------|------------------|
| I_R, I_D | $T_{VJ}=T_{VJM}; V_R=V_{RRM}; V_D=V_{DRM}$ | 5 | mA |
| V_T | $I_T=25A; T_{VJ}=25^{\circ}C$ | 1.6 | V |
| V_{TO} | For power-loss calculations only ($T_{VJ}=125^{\circ}C$) | 0.9 | V |
| r_T | | 15 | m Ω |
| V_{GT} | $V_D=6V; T_{VJ}=25^{\circ}C$ $T_{VJ}=-40^{\circ}C$ | 1.0 1.2 | V |
| I_{GT} | $V_D=6V; T_{VJ}=25^{\circ}C$ $T_{VJ}=-40^{\circ}C$ $T_{VJ}=125^{\circ}C$ | 65 80 50 | mA |
| V_{GD} | $T_{VJ}=T_{VJM}; V_D=2/3V_{DRM}$ | 0.2 | V |
| I_{GD} | | 5 | mA |
| I_L | $T_{VJ}=25^{\circ}C; t_p=10\mu s;$ $I_G=0.3A; di_G/dt=0.3A/\mu s$ | 150 | mA |
| I_H | $T_{VJ}=25^{\circ}C; V_D=6V; R_{GK}=\infty$ | 100 | mA |
| t_{gd} | $T_{VJ}=25^{\circ}C; V_D=1/2V_{DRM}$ $I_G=0.3A; di_G/dt=0.3A/\mu s$ | 2 | μs |
| R_{thJC} | DC current | 0.62 | K/W |
| R_{thJH} | DC current | 0.82 | K/W |
| a | Max. acceleration, 50 Hz | 50 | m/s ² |

Sirectifier®