

PHASE CONTROL THYRISTOR

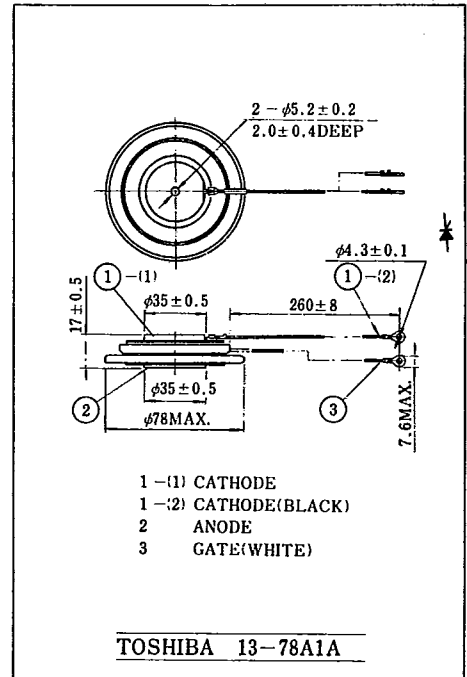
SF800U26

1600V 800A

Unit in mm

MAXIMUM RATINGS

| CHARACTERISTIC | SYMBOL | RATING | UNIT |
|-----------------------------------------------------------------------|--------------|-------------------|-------------|
| Repetitive Peak Off-State Voltage and Repetitive Peak Reverse Voltage | SF800J26 | 600 | V |
| | SF800L26 | 800 | |
| | SF800N26 | 1000 | |
| | SF800R26 | 1300 | |
| | SF800U26 | 1600 | |
| Non-Repetitive Peak Reverse Voltage (Non-Rep <5ms) | SF800J26 | 720 | V |
| | SF800L26 | 900 | |
| | SF800N26 | 1100 | |
| | SF800R26 | 1450 | |
| | SF800U26 | 1750 | |
| R.M.S On-State Current | $I_{T(RMS)}$ | 1260 | A |
| Average On-State Current (Half Sine Waveform) | $I_{T(AV)}$ | 800 | A |
| Peak One Cycle On-State Surge Current (Non-Repetitive) | I_{TSM} | 13200(60Hz) | A |
| | | 12000(50Hz) | |
| I^2t Limit Value | I^2t | 500×10^3 | A^2s |
| Critical Rate of Rise of On-State Current (Notel) | di/dt | 200 | $A/\mu s$ |
| Peak Gate Power Dissipation | P_{GM} | 20 | W |
| Average Gate Power Dissipation | $P_{G(AV)}$ | 4 | W |
| Peak Forward Gate Current | I_{GM} | 4 | A |
| Peak Forward Gate Voltage | V_{FGM} | 20 | V |
| Peak Reverse Gate Voltage | V_{RGM} | - 5 | V |
| Junction Temperature | T_j | -40~125 | $^{\circ}C$ |
| Storage Temperature Range | T_{stg} | -40~125 | $^{\circ}C$ |
| Mounting Force Required | | 1500 ± 150 | kg |



Note: $V_{DM}=0.5$ Rated, $T_c=120^{\circ}C$, Gate Supply ($V_G=15V$, $R_G=8\Omega$, $t_r \leq 1\mu s$)

ELECTRICAL CHARACTERISTICS

| CHARACTERISTIC | SYMBOL | CONDITION | MIN. | TYP. | MAX. | UNIT | |
|-----------------------------------------------------------------------|-------------------------|----------------------------------------------------------------------------------------------------|--------------------|------|------|---------------|----|
| Repetitive Peak Off-State Current and Repetitive Peak Reverse Current | I_{DRM} and I_{RRM} | $V_{DRM}=V_{RRM}=\text{Rated}$, $T_j=125^{\circ}C$ | - | - | 35 | mA | |
| | | | | | | | |
| Peak On-State Voltage | V_{TM} | $I_{TM}=2500A$, $T_c=25^{\circ}C$ | - | - | 2.15 | V | |
| Gate Trigger Voltage | V_{GT} | $V_D=6V$, $R_L=6\Omega$ | $T_c=-40^{\circ}C$ | - | 5.0 | V | |
| | | | $T_c=25^{\circ}C$ | - | 4.0 | | |
| | | | $T_c=-40^{\circ}C$ | - | 460 | | mA |
| | | | $T_c=25^{\circ}C$ | - | 320 | | |
| Gate Non-Trigger Voltage | V_{GD} | $V_D=0.5$ Rated, $T_c=125^{\circ}C$ | 0.2 | - | - | V | |
| Gate Non-Trigger Current | I_{GD} | | 5 | - | - | mA | |
| Delay Time | t_d | $V_D=0.5$ Rated, $T_c=25^{\circ}C$, Gate Supply ($V_G=15V$, $R_G=8\Omega$, $t_r \leq 1\mu s$) | - | - | 5 | μs | |
| Turn-On Time | t_{gt} | Gate Supply ($V_G=15V$, $R_G=8\Omega$, $t_r \leq 1\mu s$) | - | - | 10 | μs | |
| Critical Rate of Rise of Off-State Voltage | dv/dt | $V_{DRM}=0.67$ Rated, $T_j=125^{\circ}C$, Gate Open Exponential rise | 500 | - | - | $V/\mu s$ | |
| Holding Current | I_H | $T_c=25^{\circ}C$, $R_L=6\Omega$ | - | - | 300 | mA | |
| Thermal Resistance * | $R_{th(j-f)}$ | DC | - | - | 0.04 | $^{\circ}C/W$ | |

* Junction to Fin

