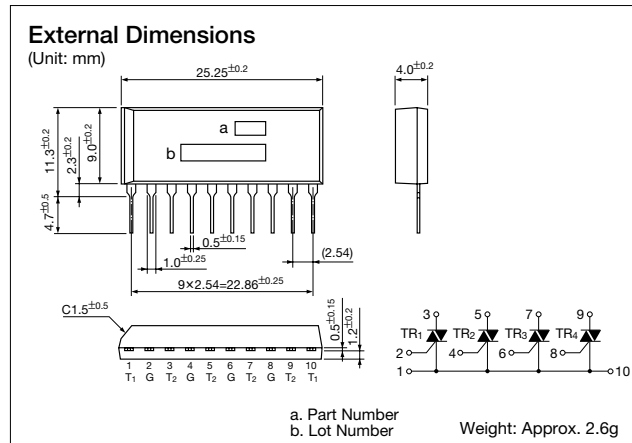


1A 4 circuits Triac Array

STA221A

Features

- 1A 4 Triacs combined one package
- Repetitive peak off-state voltage: $V_{DRM}=400V$
- RMS on-state current: $I_{T(RMS)}=1A$
- Gate trigger current: $I_{GT}=3mA$ max (MODE I, II, III)



Absolute Maximum Ratings

| Parameter | Symbol | Ratings | Unit | Conditions |
|-----------------------------------|--------------|-------------|------|---|
| Repetitive peak off-state voltage | V_{DRM} | 400 | V | -40°C to +125°C |
| RMS on-state current | $I_{T(RMS)}$ | 1.0 | A | Conduction angle 360°, $T_c=97^\circ C$ |
| Surge on-state current | I_{TSM} | 10 | A | 50Hz full-cycle sinewave, Peak value, Non-repetitive, $T_j=125^\circ C$ |
| Peak forward gate voltage | V_{GM} | 6 | V | $f \geq 50Hz$, duty $\leq 10\%$ |
| Peak forward gate current | I_{GM} | 0.5 | A | $f \geq 50Hz$, duty $\leq 10\%$ |
| Peak gate power loss | P_{GM} | 1.0 | W | $f \geq 50Hz$, duty $\leq 10\%$ |
| Average gate power loss | $P_{G(AV)}$ | 0.1 | W | |
| Junction temperature | T_j | -40 to +125 | °C | |
| Storage temperature | T_{stg} | -40 to +125 | °C | |

Electrical Characteristics

| Parameter | Symbol | Ratings | | | Unit | Conditions | |
|--------------------------|-----------------|---------|-----|------|------|--|-----------------|
| | | min | typ | max | | | |
| Off-state current | I_{DRM} | | 0.1 | 1.0 | mA | $V_D=V_{DRM}$, $R_{GK}=\infty$, $T_j=125^\circ C$ | |
| | | | | 0.1 | | $V_D=V_{DRM}$, $R_{GK}=\infty$, $T_j=25^\circ C$ | |
| On-state voltage | V_{TM} | | | 1.6 | V | $I_{TM}=1.6A$, $T_c=25^\circ C$ | |
| Gate trigger voltage | V _{GT} | I | | 1.7 | V | $V_D=6V$, $R_L=10\Omega$, $T_c=25^\circ C$ | T_2^+ , G^+ |
| | | II | | 0.7 | | | T_2^+ , G^- |
| | | III | | 0.8 | | | T_2^-, G^- |
| | | IV | | 2.0 | | | T_2^-, G^+ |
| Gate trigger current | I _{GT} | I | | 2.0 | mA | $V_D=6V$, $R_L=10\Omega$, $T_c=25^\circ C$ | T_2^+ , G^+ |
| | | II | | 1.8 | | | T_2^+ , G^- |
| | | III | | 2.3 | | | T_2^-, G^- |
| | | IV | | 13.0 | | | T_2^-, G^+ |
| Gate non-trigger voltage | V_{GD} | 0.1 | | | V | $V_D=1/2 \times V_{DRM}$, $T_j=125^\circ C$ | |
| Thermal resistance | I_H | | | 20 | °C/W | Junction to Lead, 1 element operation | |
| | R_{th} | | | 80 | | junction to operating environment, 1 element operation | |