

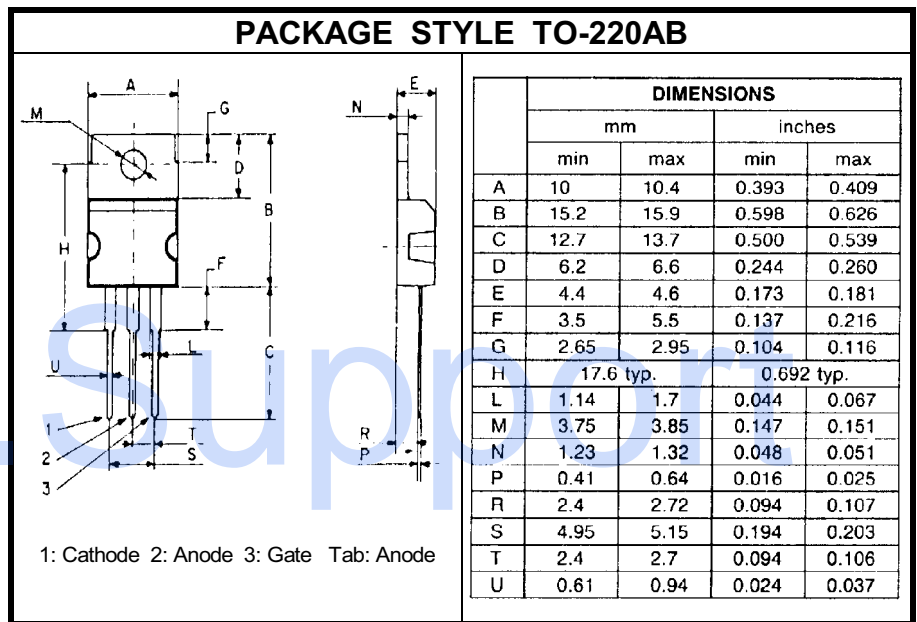
SILICON CONTROLLED RECTIFIER (SCR)

DESCRIPTION:

The **2n6509** is a Medium Current SCR for General Purpose Power Control Applications.

MAXIMUM RATINGS

| | |
|---------------|--|
| I_T | 25 A (RMS) @ $T_C = 85^\circ\text{C}$ 16 A (AVG) @ $T_C = 25^\circ\text{C}$ |
| V_{CE} | 800 V |
| P_{DISS} | $P_{GM} = 20\text{ W}$ $P_{G(AVG)} = 0.5\text{ W}$ |
| T_J | -40°C to $+125^\circ\text{C}$ |
| T_{STG} | -40°C to $+150^\circ\text{C}$ |
| θ_{JC} | 1.50 $^\circ\text{C/W}$ |


CHARACTERISTICS $T_C = 25^\circ\text{C}$

| SYMBOL | TEST CONDITIONS | MINIMUM | TYPICAL | MAXIMUM | UNITS |
|-------------------|--|---------|---------|---------|------------------------|
| I_{DRM}/I_{RRM} | $V_{DRM}/V_{RRM} = 800\text{ V}$ | | | 10 | μA |
| I_{DRM}/I_{RRM} | $V_{DRM}/V_{RRM} = 800\text{ V}$ | | | 2.0 | mA |
| I_{GT} | $V_D = 12\text{ V}$ $R_L = 100\ \Omega$ | | | 40 | mA |
| | | | | 75 | mA |
| V_{GT} | $V_D = 12\text{ V}$ $R_L = 100\ \Omega$ | | | 1.50 | V |
| V_{GD} | $V_D = 800\text{ V}$ $R_L = 100\ \Omega$ | 0.2 | | | V |
| I_H | $V_D = 12\text{ V}$ | | | 40 | mA |
| V_{TM} | $I_{TM} = 50\text{ A (PEAK)}$ | | | 1.80 | V |
| t_{gt} | $I_{TM} = 25\text{ A}$, $I_{GT} = 50\text{ mA}$ | | | 2.0 | μS |
| t_q | $I_{TM} = 25\text{ A}$, $I_R = 25\text{ A}$ | | | 15 | μS |
| | | | | 35 | μS |
| dv/dt | $V_{DRM} = 800\text{ V}$ GATE OPEN EXPONENTIAL WAVEFORM | | 50 | | $\text{V}/\mu\text{S}$ |