# NPN SILICON RF POWER TRANSISTOR

## DESCRIPTION:

The **TPV590** is a Common Emitter Device Designed for Class A High Linearity Amplifier Applications in TV Band IV-V Transmitters.

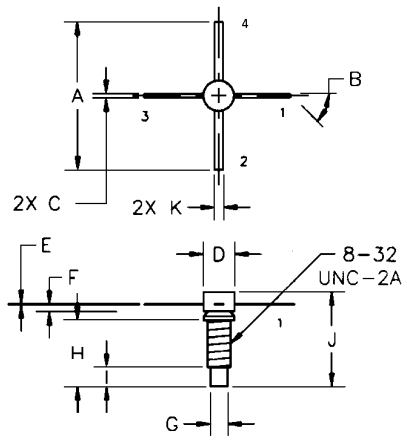
## FEATURES INCLUDE:

- Gold Metallization
- Emitter Ballasting
- High Gain

## MAXIMUM RATINGS

| | |
|---|---|
| $I_C$ | 300 mA |
| $V_{CBO}$ | 45 V |
| $P_{DISS}$ | 5.3 W @ $T_C$ = 25 °C |
| $T_J$ | -65 °C to +200 °C |
| $T_{STG}$ | -65 °Cto +200 °C |
| $\theta_{JC}$ | 33 °C/W |

## PACKAGE STYLE 205 4L STUD




1 = COLLECTOR 2 & 4 = EMITTER
3 = BASE

| DIM | MILLIMETER | TOL | INCHES | TOL |
|---|---|---|---|---|
| A | 25.40 | .38 | 1.000 | .015 |
| B | 45° | 5° | 45° | 5° |
| C | 0.76 | .13 | .030 | .005 |
| D | 5.18 DIA | .13 | .204 DIA | .005 |
| E | 1.19 | .13 | .047 | .005 |
| F | 0.13 | .02 | .005 | .001 |
| G | 2.92 | .13 | .115 | .005 |
| H | 12.83 | .38 | .505 | .015 |
| I | 3.30 | .13 | .130 | .005 |
| J | 16.18 | REF | .637 | REF |
| K | 1.52 | .13 | .060 | .005 |

## CHARACTERISTICS $T_C$ = 25 °C

| SYMBOL | TEST CONDITIONS | MINIMUM | TYPICAL | MAXIMUM | UNITS |
|---|---|---|---|---|---|
| $BV_{CBO}$ | $I_C$ = 1.0mA | 45 | | | V |
| $BV_{CER}$ | $I_C$ = 10 mA $R_{BE}$ = 10 Ω | 45 | | | V |
| $BV_{EBO}$ | $I_E$ = 1.0 mA | 3.5 | | | V |
| $h_{FE}$ | $V_{CE}$ = 5 V $I_C$ = 100 mA | 20 | | | --- |
| $C_{OB}$ | $V_{CB}$ = 28 V f = 1.0 MHz | | 2.0 | 3.0 | pF |
| $P_G$ | $V_{CE}$ = 20 V $I_C$ = 150 mA $P_{OUT}$ = 0.5 W f = 860 MHz | 13 | 14 | | dB |
| $IMD_3$ | $V_{CE}$ = 20 V $I_C$ = 150 mA Pref = 0.5 W Vision = -8dB Chroma = -16dB Sound =-10 dB | -58 | | | dBc |