

# NPN SILICON RF POWER TRANSISTOR

## DESCRIPTION:

The **ASI TPV596A** is designed for MATV amplifiers up to 860 MHz and 500 mW band V TV transposer stages.

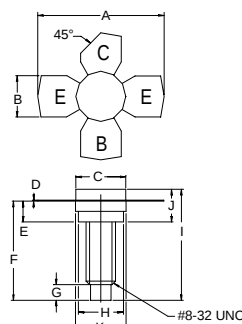
## FEATURES:

- Difused emitter ballast resistors
- $P_G = 12$  dB at 0.5 W/ 860 MHz
- **Omnigold™** Metalization System

## MAXIMUM RATINGS

|               |                                   |
|---------------|-----------------------------------|
| $I_C$         | 0.7 A                             |
| $V_{CBO}$     | 45 V                              |
| $V_{CEO}$     | 24 V                              |
| $V_{EBO}$     | 3.5 V                             |
| $P_{DISS}$    | 8.75 W @ $T_C = 25^\circ\text{C}$ |
| $T_J$         | -65 °C to +200 °C                 |
| $T_{STG}$     | -65 °C to +200 °C                 |
| $\theta_{JC}$ | 20 °C/W                           |

## PACKAGE STYLE .280 4L STUD



| DIM | MINIMUM<br>inches / mm | MAXIMUM<br>inches / mm |
|-----|------------------------|------------------------|
| A   | 1.010 / 25.65          | 1.055 / 26.80          |
| B   | .220 / 5.59            | .230 / 5.84            |
| C   | .270 / 6.86            | .285 / 7.24            |
| D   | .003 / 0.08            | .007 / 0.18            |
| E   | .117 / 2.97            | .137 / 3.48            |
| F   | .572 / 14.53           |                        |
| G   | .130 / 3.30            |                        |
| H   | .245 / 6.22            | .255 / 6.48            |
| I   | .640 / 16.26           |                        |
| J   | .175 / 4.45            | .217 / 5.51            |
| K   | .275 / 6.99            | .285 / 7.24            |

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

| SYMBOL     | TEST CONDITIONS   |                  | MINIMUM | TYPICAL | MAXIMUM | UNITS |
|------------|-------------------|------------------|---------|---------|---------|-------|
| $BV_{CBO}$ | $I_C = 1.0$ mA    |                  | 45      |         |         | V     |
| $BV_{CEO}$ | $I_C = 20$ mA     |                  | 24      |         |         | V     |
| $BV_{EBO}$ | $I_E = 4.0$ mA    |                  | 3.5     |         |         | V     |
| $I_{CBO}$  | $V_{CB} = 28$ V   |                  |         |         | 1.0     | mA    |
| $h_{FE}$   | $V_{CE} = 5.0$ V  | $I_C = 100$ mA   | 15      |         | 120     | ---   |
| $C_{OB}$   | $V_{CB} = 28$ V   | $f = 1.0$ MHz    |         |         | 5.0     | pF    |
| $P_G$      | $V_{CE} = 20$ V   | $I_E = 220$ mA   | 11.5    | 12      |         | dB    |
| $IMD_1$    | $P_{OUT} = 0.5$ W | $P_{IN} = 50$ mW |         |         | -58     | dB    |