



TPV376

# NPN SILICON RF POWER TRANSISTOR

## DESCRIPTION:

The **ASI TPV376** is a Common Emitter Device Designed for High Linearity Class A Television Band III (170-230 MHz) Applications.

## FEATURES INCLUDE:

- Gold Metalization
- Emitter Ballasting

## MAXIMUM RATINGS

|               |                                             |
|---------------|---------------------------------------------|
| $I_C$         | 16 A                                        |
| $V_{CB}$      | 60 V                                        |
| $P_{DISS}$    | 150 W @ $T_C = 25^\circ\text{C}$            |
| $T_J$         | $-65^\circ\text{C}$ to $+200^\circ\text{C}$ |
| $T_{STG}$     | $-65^\circ\text{C}$ to $+150^\circ\text{C}$ |
| $\theta_{JC}$ | $1.2^\circ\text{C/W}$                       |

| PACKAGE STYLE .550 4L STUD(1/4) |                      |                      |
|---------------------------------|----------------------|----------------------|
|                                 | MINIMUM<br>Inches/mm | MAXIMUM<br>Inches/mm |
|                                 | A                    | .220/5.59            |
|                                 | B                    | 1.050/26.67          |
|                                 | C                    | .545/13.84           |
|                                 | D                    | .495/12.57           |
|                                 | E                    | .003/0.08            |
|                                 | F                    | .830/21.08           |
|                                 | G                    | .185/4.70            |
|                                 | H                    | .497/12.62           |
|                                 |                      |                      |

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

| SYMBOL            | TEST CONDITIONS                                                              |                                                                                              |                                        | MINIMUM                        | TYPICAL | MAXIMUM | UNITS |
|-------------------|------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|----------------------------------------|--------------------------------|---------|---------|-------|
| BV <sub>CEO</sub> | I <sub>C</sub> = 100 mA                                                      |                                                                                              |                                        | 30                             |         |         | V     |
| BV <sub>CER</sub> | I <sub>C</sub> = 100 mA                                                      | R <sub>BE</sub> = 10 Ω                                                                       |                                        | 60                             |         |         | V     |
| BV <sub>CBO</sub> | I <sub>C</sub> = 100 mA                                                      |                                                                                              |                                        | 60                             |         |         | V     |
| BV <sub>EBO</sub> | I <sub>E</sub> = 20 mA                                                       |                                                                                              |                                        | 4.0                            |         |         | V     |
| h <sub>FE</sub>   | V <sub>CE</sub> = 5.0 V                                                      | I <sub>C</sub> = 1.0 A                                                                       |                                        | 10                             |         | 120     | ---   |
| C <sub>ob</sub>   | V <sub>CB</sub> = 30 V                                                       | f = 1.0 MHz                                                                                  |                                        |                                |         | 150     | pF    |
| P <sub>out</sub>  | V <sub>CE</sub> = 28 V                                                       | I <sub>C</sub> = 3.5 A                                                                       | f = 225 MHz                            | 20                             |         |         | W     |
| y                 | V <sub>CE</sub> = 28 V<br>LOAD VSWR = ∞:1                                    | I <sub>E</sub> = 3.5 A                                                                       | P <sub>PREF</sub> =20 W<br>f = 225 MHz | NO DEGRADATION IN OUTPUT POWER |         |         |       |
| IMD <sub>1</sub>  | P <sub>ref</sub> = 30 W<br>SOUND CARRIER = -7.0 dB<br>V <sub>CE</sub> = 28 V | VISION CARRIER = -8.0 dB<br>SIDE BAND SIG. = -16 dB<br>I <sub>E</sub> = 3.5 A<br>f = 225 MHz |                                        |                                |         | -53     | dB    |

