

# NPN SILICON RF POWER TRANSISTOR

**DESCRIPTION:**

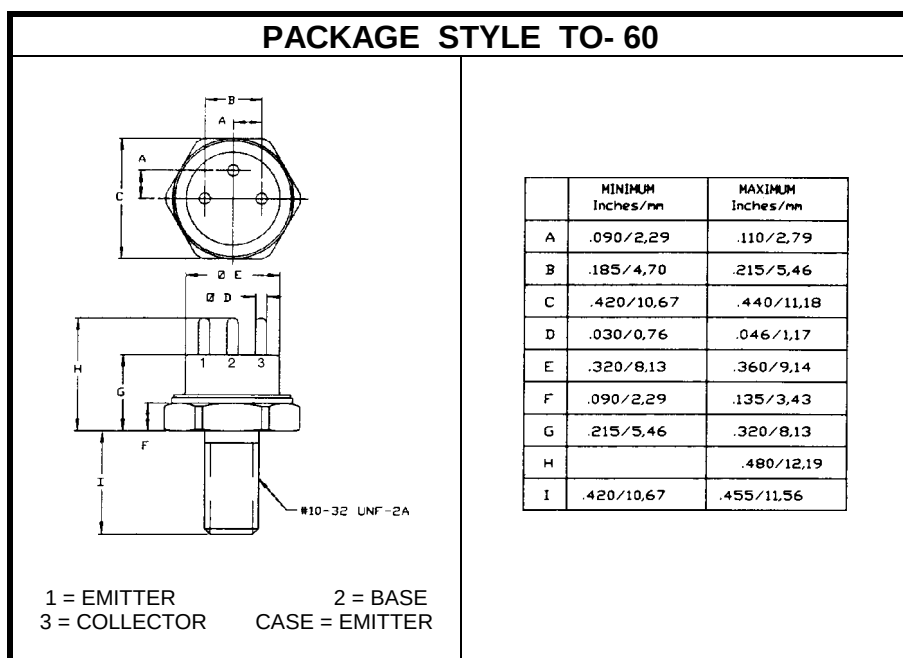
The **ASI PT3642** is Designed for Class A,B,C Amplifier, Oscillator and Driver Applications Covering 130 to 400MHz.

### FEATURES INCLUDE:

- Emitter Ballasted
- Common Emitter Package

## MAXIMUM RATINGS

|                         |                               |
|-------------------------|-------------------------------|
| <b>I<sub>C</sub></b>    | 3.0 A                         |
| <b>V<sub>CE</sub></b>   | 40 V                          |
| <b>P<sub>DISS</sub></b> | 23 W @ T <sub>C</sub> = 25 °C |
| <b>T<sub>J</sub></b>    | -65 °C to +200 °C             |
| <b>T<sub>STG</sub></b>  | -65 °C to +200 °C             |
| <b>θ<sub>JC</sub></b>   | 7.6 °C/W                      |



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

| SYMBOL                         | TEST CONDITIONS                                                      | MINIMUM           | TYPICAL | MAXIMUM | UNITS         |
|--------------------------------|----------------------------------------------------------------------|-------------------|---------|---------|---------------|
| $BV_{CEO}$                     | $I_C = 200 \text{ mA}$                                               | 40                |         |         | V             |
| $BV_{CEX}$                     | $I_C = 200 \text{ mA}$ $V_{BE} = -1.5 \text{ V}$                     | 65                |         |         | V             |
| $BV_{CBO}$                     | $I_C = 500 \mu\text{A}$                                              | 65                |         |         | V             |
| $I_{CEO}$                      | $V_{CE} = 30 \text{ V}$                                              |                   |         | 250     | $\mu\text{A}$ |
| $I_{EBO}$                      | $V_{EB} = 4.0 \text{ V}$                                             |                   |         | 250     | $\mu\text{A}$ |
| $h_{FE}$                       | $V_{CE} = 5.0 \text{ V}$ $I_C = 1.0 \text{ A}$                       | 5.0               |         |         | ---           |
| $C_{ob}$                       | $V_{CB} = 30 \text{ V}$ $f = 1.0 \text{ MHz}$                        |                   |         | 20      | pF            |
| $f_t$                          | $V_{CE} = 28 \text{ V}$ $I_C = 150 \text{ mA}$ $f = 100 \text{ MHz}$ |                   | 400     |         | MHz           |
| $P_{out}$<br>$G_P$<br>$\eta_C$ | $V_{CE} = 28 \text{ V}$ $f = 175 \text{ MHz}$                        | 13.5<br>5.8<br>70 |         |         | W<br>dB<br>%  |

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*Specifications are subject to change without notice.*