

# NPN SILICON RF POWER TRANSISTOR

**DESCRIPTION:**

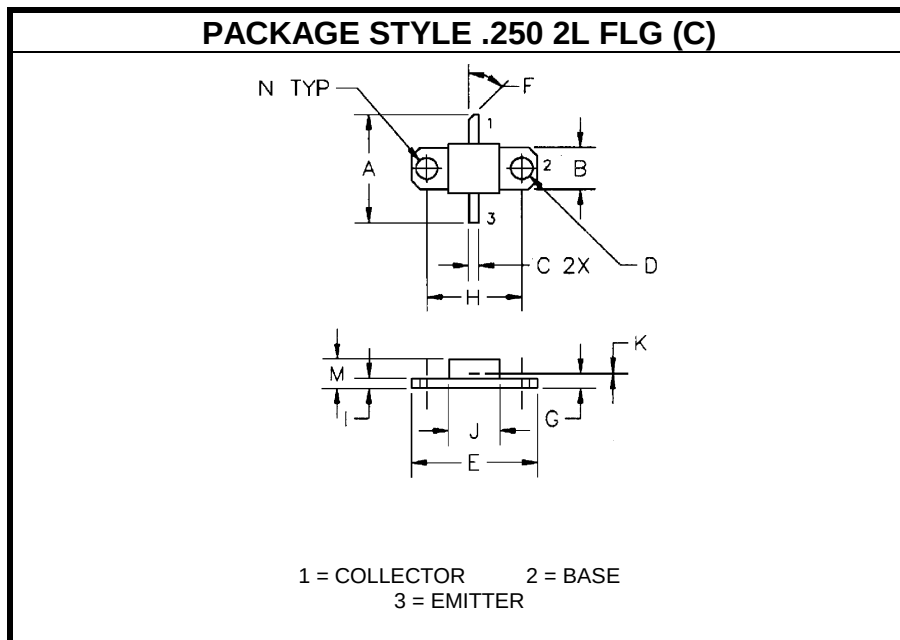
The **ASI MRAL2023-6** is a Common Base Device Designed for class C Amplifier Applications in L-Band FM Microwave Links.

### FEATURES INCLUDE:

- Gold Metallization
- Emitter Ballasting
- Input Matching

## MAXIMUM RATINGS

|                         |                               |
|-------------------------|-------------------------------|
| <b>I<sub>C</sub></b>    | 1.25 A                        |
| <b>V<sub>CES</sub></b>  | 40 V                          |
| <b>P<sub>DISS</sub></b> | 21 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 +150 °C             |
| <b>θ<sub>JC</sub></b>   | 8.0 °C/W                      |



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

| <b>SYMBOL</b>           | <b>TEST CONDITIONS</b>                                                     | <b>MINIMUM</b> | <b>TYPICAL</b> | <b>MAXIMUM</b> | <b>UNITS</b> |
|-------------------------|----------------------------------------------------------------------------|----------------|----------------|----------------|--------------|
| <b>BV<sub>CES</sub></b> | I <sub>C</sub> = 50 mA                                                     | 40             |                |                | <b>V</b>     |
| <b>BV<sub>EBO</sub></b> | I <sub>E</sub> = 1.0 mA                                                    | 3.5            |                |                | <b>V</b>     |
| <b>I<sub>CBO</sub></b>  | V <sub>CB</sub> = 22 V                                                     |                |                | 1.25           | <b>mA</b>    |
| <b>h<sub>FE</sub></b>   | V <sub>CE</sub> = 5.0 V    I <sub>C</sub> = 500 mA                         | 10             |                | 90             | <b>---</b>   |
| <b>C<sub>OB</sub></b>   | V <sub>CB</sub> = 22 V                                  f = 1.0 MHz        |                |                | 10             | <b>pF</b>    |
| <b>P<sub>G</sub></b>    | V <sub>CE</sub> = 22 V    P <sub>OUT</sub> = 6.0 W    f = 2000 to 2300 MHz | 6.8            |                |                | <b>dB</b>    |
| <b>η<sub>c</sub></b>    |                                                                            | 40             |                |                | <b>%</b>     |