# NPN SILICON RF POWER TRANSISTOR

## DESCRIPTION:

The **MRAL2023-12** is a Common Base Device Designed for Class C Amplifier Applications in L-Band FM Microwave Links.

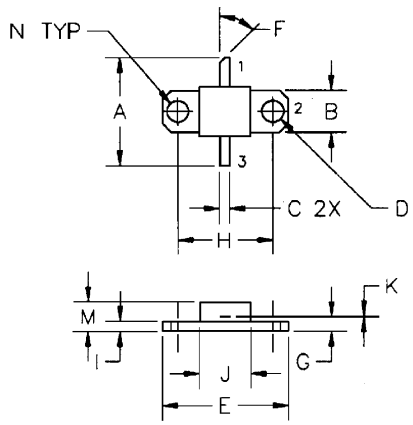
## FEATURES INCLUDE:

- Gold Metalization
- Emitter Ballasting
- Input/Output Matching

## MAXIMUM RATINGS

| | |
|---|---|
| $I_C$ | 2.5 A |
| $V_{CES}$ | 40 V |
| $P_{DISS}$ | 38 W @ $T_C$ = 25 $^{O}$C |
| $T_J$ | -65 $^{O}$C to +200 $^{O}$C |
| $T_{STG}$ | -65 $^{O}$C to +150 $^{O}$C |
| $\theta_{JC}$ | 4.5 $^{O}$C/W |

**PACKAGE STYLE .250 2L FLG (C)**




1 = COLLECTOR 2 = BASE
3 = EMITTER

## CHARACTERISTICS $T_C$ = 25 $^{O}$C

| SYMBOL | TEST CONDITIONS | MINIMUM | TYPICAL | MAXIMUM | UNITS |
|---|---|---|---|---|---|
| $BV_{CES}$ | $I_C$ = 100 mA | 40 | | | V |
| $BV_{EBO}$ | $I_E$ = 5.0 mA | 3.5 | | | V |
| $I_{CBO}$ | $V_{CB}$ = 22 V | | | 2.5 | mA |
| $h_{FE}$ | $V_{CE}$ = 5.0 V $I_C$ = 1.0 A | 10 | | | --- |
| $C_{OB}$ | $V_{CB}$ = 22 V f = 1.0 MHz | | 20 | | pF |
| $P_G$<br>$\eta_C$ | $V_{CE}$ = 22 V f = 2000 - 2300 MHz $P_{OUT}$ = 12.0 W | 6.8 | 7.0<br>45 | | dB<br>% |



*Specifications are subject to change without notice.*