

DIE NO. **MRFC8003** — NPN  
 LINE SOURCE — RF502.147



This die provides performance equal to or better than that of the following device types:

**MRF8003**

Designed for use in citizen-band amplifiers up to 30 MHz. High breakdown voltages allow a high percentage of up-modulation in AM circuits.

- $P_{out} = 0.4$  watts @  $f = 30$  MHz

**METALLIZATION —**  
 Top ..... Al  
 Back ..... Au

**BACKSIDE GOLD ..... 3000Å**

**DIE THICKNESS ..... 6 ± 2 mils**

**BONDING PAD SIZE —**  
 Emitter ..... 4.8 x 7.5 mils  
 Base ..... 4.8 x 8.5 mils

**GLASSIVATION —** The die active area, except for bond windows, is covered with Glassivation to protect from contaminants and accidental bonding.

**ELECTRICAL CHARACTERISTICS** ( $T_A = 25^\circ\text{C}$ , Note 1)

Parameter	Test Conditions	Min	Max	Unit
$BV_{CEO}$	$I_C = 10$ mAdc	30	—	Vdc
$BV_{CES}$	$I_C = 0.1$ mAdc	50	—	Vdc
$BV_{EBO}$	$I_E = 0.5$ mAdc	3.0	—	Vdc
$I_{CBO}$	$V_{CB} = 12$ Vdc	—	0.1	mAdc
$h_{FE}$	$I_C = 100$ mAdc, $V_{CE} = 10$ Vdc	20	150	—

- NOTES: 1. Because of the limitations of probe testing, only dc parameters are tested. These parameters must be measured using pulse techniques: pulse width  $\leq 300$   $\mu\text{s}$ , duty cycle  $\leq 2\%$ .  
 2. Detailed device characteristics are available from your Motorola sales representative.