

NPN SILICON RF POWER TRANSISTOR

DESCRIPTION:

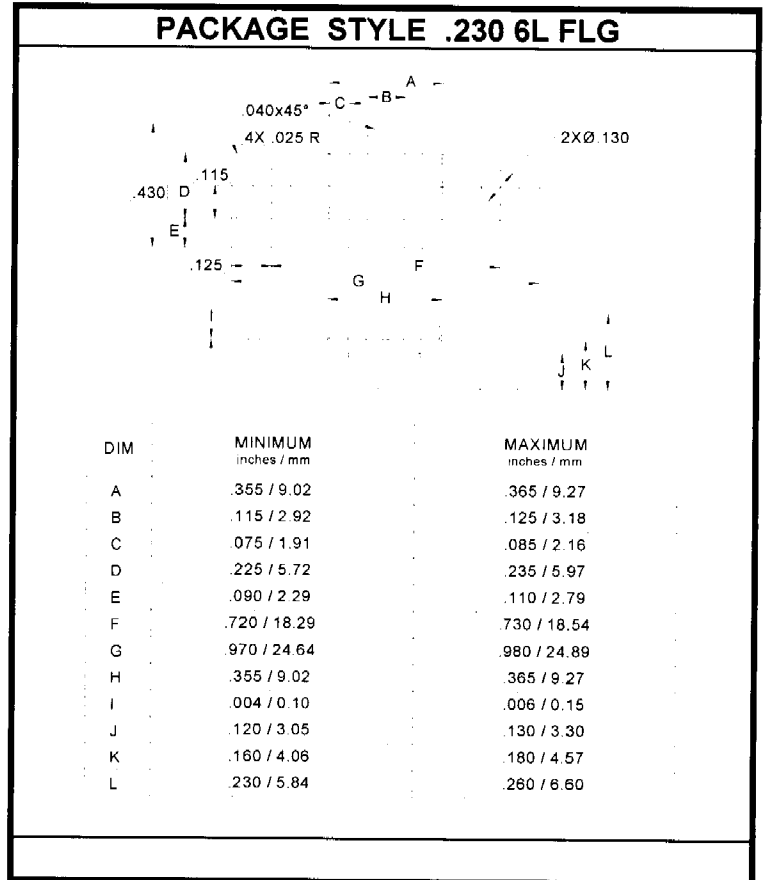
MRF894 is a gold metalized epitaxial silicon NPN transistor, using diffused ballast resistors for high linearity Class-AB operation for cellular base station application.

FEATURES:

- Internal Input Matching Network
- $P_G = 7.5$ dB at 30 W/960 MHz
- **Omnigold™** Metalization System
- $\eta_c = 55\%$ Typ.
- = Load mismatch capability 20:1

MAXIMUM RATINGS

I_C	7.5 A
V_{CBO}	48V
V_{CEO}	25 V
V_{EBO}	3.5 V
P_{DISS}	88 W @ $T_C = 25^\circ C$
T_J	-65 °C to +200 °C
T_{STG}	-65 °C to +150 °C
θ_{JC}	2.0 °C/W



CHARACTERISTICS $T_C = 25^\circ C$

SYMBOL	TEST CONDITIONS	MINIMUM	TYPICAL	MAXIMUM	UNITS
BV_{CBO}	$I_C = 100$ Ma	48	55	---	V
BV_{CER}	$I_C = 40$ mA $R_{BE} = 150 \Omega$	30	40	---	V
BV_{CEO}	$I_C = 40$ mA	25	28	---	
BV_{EBO}	$I_E = 10$ mA	3.5	5.0	---	V
I_{CBO}	$V_{CE} = 24$ V	10	---	---	mA
h_{FE}	$V_{CE} = 20$ V $I_C = 2.0$ A	15	40	100	---
C_{OB}	$V_{CB} = 25$ V $f = 1.0$ MHz		42	50	pF
P_G	$V_{CE} = 25$ V $I_{CQ} = 60$ mA $f = 860$ MHz	7.5	9.0	---	dB
IMD_3	$P_{OUT} = 30$ W $f_1 = 860.0$ MHz $f_2 = 860.1$ MHz		-35	---	dBc
η_c			55		%

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