

NPN SILICON RF POWER TRANSISTOR

DESCRIPTION:

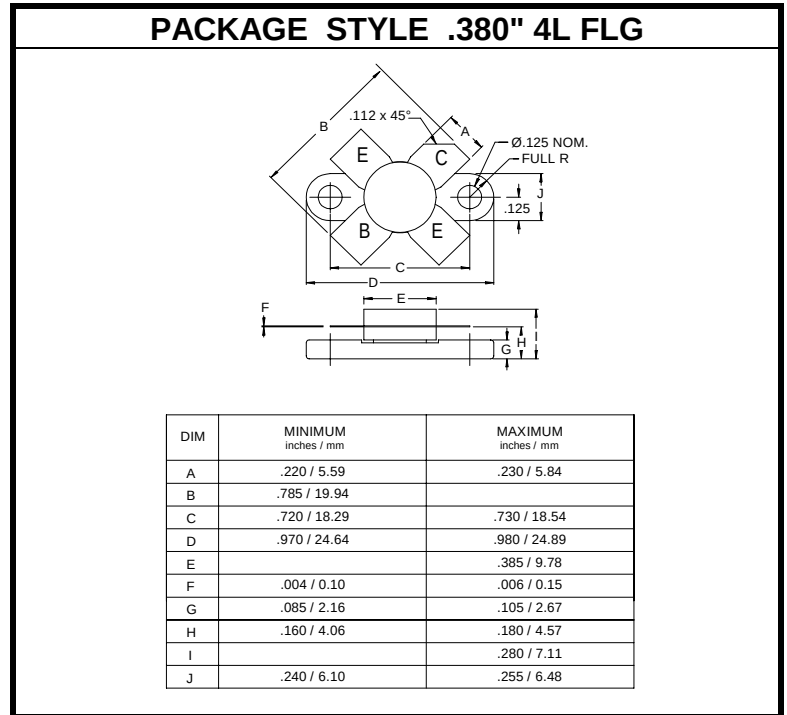
The **MRF1946** is Designed for
12.5 V 175 MHz Large-Signal Power
Amplifier Applications.

FEATURES INCLUDE:

- High Common Emitter Power Gain
- Output Power = 30 W

MAXIMUM RATINGS

I_C	8.0 A
V_{CE}	16 V
V_{CB}	36 V
P_{DISS}	100 W @ $T_C = 25^\circ\text{C}$
T_J	-65°C to $+200^\circ\text{C}$
T_{STG}	-65°C to $+150^\circ\text{C}$
θ_{JC}	1.75 $^\circ\text{C/W}$



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

SYMBOL	TEST CONDITIONS	MINIMUM	TYPICAL	MAXIMUM	UNITS
BV_{CES}	$I_C = 25\text{ mA}$ $V_{BE} = 0$	36			V
BV_{CEO}	$I_C = 25\text{ mA}$ $I_B = 0$	16			V
BV_{EBO}	$I_E = 5.0\text{ mA}$ $I_C = 0\text{ mA}$	4.0			V
I_{CES}	$V_{CE} = 15\text{ V}$ $V_{BE} = 0$			5.0	mA
h_{FE}	$I_C = 1.0\text{ A}$ $V_{CE} = 5.0\text{ V}$	40	75	150	---
C_{ob}	$V_{CB} = 15\text{ V}$ $I_E = 0\text{ mA}$ $f = 1.0\text{ MHz}$		75	100	pF
G_{PE} η	$V_{CC} = 12.5\text{ V}$ $P_{out} = 30\text{ W}$ $f = 175\text{ MHz}$	12 60			DB %
Ψ	$V_{CC} = 15.5\text{ V}$ $PIN = 2.0\text{ dB Overdrive}$ Load VSWR = 30:1 ALL PHASE ANGLES	No Degradation in Power Output			