

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 °C
T_J	-65 °C to +200 °C
T_{STG}	-65 °C to +150 °C
θ_{JC}	1.75 °C/W

PACKAGE STYLE .380" 4L FLG

DIM	MINIMUM inches / mm	MAXIMUM inches / mm
A	.220 / 5.59	.230 / 5.84
B	.785 / 19.94	
C	.720 / 18.29	.730 / 18.54
D	.970 / 24.64	.980 / 24.89
E		.385 / 9.78
F	.004 / 0.10	.006 / 0.15
G	.085 / 2.16	.105 / 2.67
H	.160 / 4.06	.180 / 4.57
I		.280 / 7.11
J	.240 / 6.10	.255 / 6.48

CHARACTERISTICS T_C = 25 °C

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