

NPN SILICON RF POWER TRANSISTOR

DESCRIPTION:

The **MRF1946A** is Designed for 12.5 V 175 MHz Large-Signal Power Amplifier Applications.

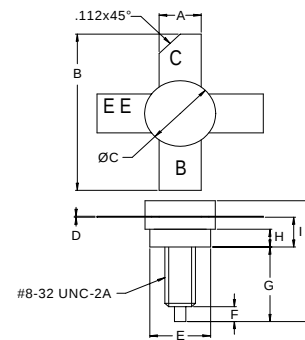
FEATURES INCLUDE:

- 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 @ $T_C = 25\text{ }^{\circ}\text{C}$
T_J	-65 $^{\circ}\text{C}$ to +200 $^{\circ}\text{C}$
T_{STG}	-65 $^{\circ}\text{C}$ to +150 $^{\circ}\text{C}$
θ_{JC}	1.75 $^{\circ}\text{C/W}$

PACKAGE STYLE .380" 4L STUD



DIM	MINIMUM inches / mm	MAXIMUM inches / mm
A	.220 / 5.59	.230 / 5.84
B	.980 / 24.89	
C	.370 / 9.40	.385 / 9.78
D	.004 / 0.10	.007 / 0.18
E	.320 / 8.13	.330 / 8.38
F	.100 / 2.54	.130 / 3.30
G	.450 / 11.43	.490 / 12.45
H	.090 / 2.29	.100 / 2.54
I	.155 / 3.94	.175 / 4.45
J		.750 / 19.05

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

SYMBOL	TEST CONDITIONS	MINIMUM	TYPICAL	MAXIMUM	UNITS
BV_{CES}	$I_C = 25\text{ mA}$	36			V
BV_{CEO}	$I_C = 25\text{ mA}$	16			V
BV_{EBO}	$I_E = 5.0\text{ mA}$	4.0			V
I_{CES}	$V_{CE} = 15\text{ V}$			5.0	mA
h_{FE}	$V_{CE} = 5.0\text{ V}$ $I_C = 1.0\text{ A}$	40	75	150	---
C_{ob}	$V_{CB} = 15\text{ V}$ $f = 1.0\text{ MHz}$		75	100	pF
G_{PE} η	$V_{CC} = 12.5\text{ V}$ $P_{out} = 30\text{ W}$ $f = 175\text{ MHz}$	10 60	11 70		DB %
ψ	$V_{CC} = 15.5\text{ V}$ $P_{IN} = 2.0\text{ dB Overdrive}$ Load VSWR = 30:1 ALL PHASE ANGLES	No Degradation in Power Output			