

NPN SILICON RF POWER TRANSISTOR

DESCRIPTION:

The **HF220-50** is a 50 V epitaxial silicon NPN transistor, designed for SSB communications.

FEATURES:

- $P_G = 13$ dB Typical at 220 W/30 MHz
- $IMD_3 = -30$ dBc Max. at 220 W_(PEP)
- **Omnigold™** Metalization System
- 50 V operation

MAXIMUM RATINGS

I_C	12 A
V_{CBO}	110 V
V_{CEO}	55 V
V_{EBO}	4.0 V
P_{DISS}	320 W @ $T_C = 25^\circ C$
T_J	$-65^\circ C$ to $+200^\circ C$
T_{STG}	$-65^\circ C$ to $+150^\circ C$
θ_{JC}	$0.7^\circ C/W$

PACKAGE STYLE .500 4L FLG

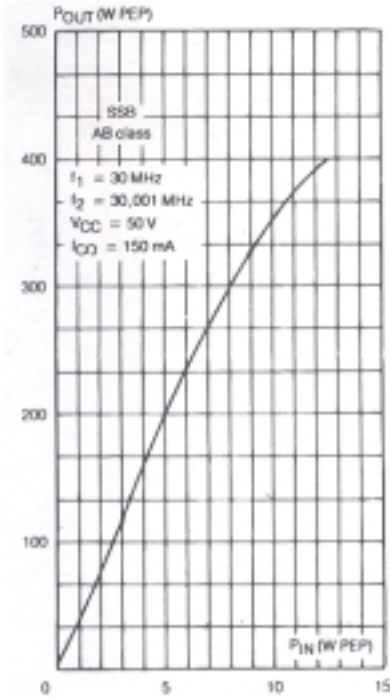
DIM	MINIMUM inches / mm	MAXIMUM inches / mm
A	.220 / 5.59	.230 / 5.84
B		.125 / 3.18
C	.245 / 6.22	.255 / 6.48
D	.720 / 18.28	.730 / 18.54
E		.125 / 3.18
F	.970 / 24.64	.980 / 24.89
G	.495 / 12.57	.505 / 12.83
H	.003 / 0.08	.007 / 0.18
I	.090 / 2.29	.110 / 2.79
J	.150 / 3.81	.175 / 4.45
K		.280 / 7.11
L	.980 / 24.89	1.050 / 26.67

ORDER CODE: ASI10614

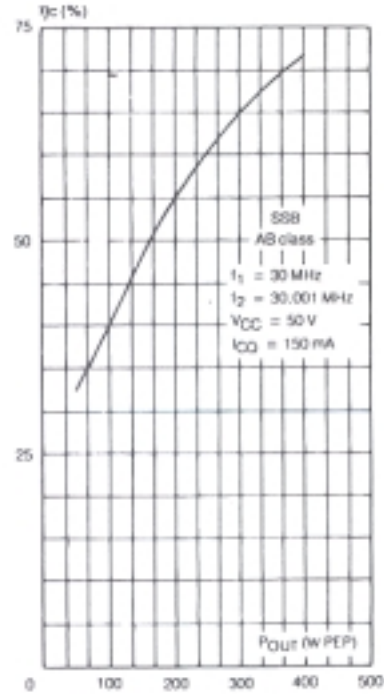
CHARACTERISTICS $T_C = 25^\circ C$

SYMBOL	TEST CONDITIONS	MINIMUM	TYPICAL	MAXIMUM	UNITS
BV_{CBO}	$I_C = 200$ mA	110			V
BV_{CEO}	$I_C = 200$ mA	55			V
BV_{EBO}	$I_E = 20$ mA	4.0			V
I_{CEO}	$V_{CE} = 30$ V			5	mA
I_{CES}	$V_{CE} = 55$ V			10	mA
h_{FE}	$V_{CE} = 6$ V $I_C = 10$ A	15		80	---
C_{ob}	$V_{CB} = 50$ V $f = 1.0$ MHz			390	pF
G_P		13			dB
IMD_3	$V_{CE} = 50$ V $I_{CQ} = 150$ mA $P_{OUT} = 220$ W _(PEP)			-30	dBc
η_C	$f_1 = 30.000$ MHz $f_2 = 30.001$ MHz	40			%

POWER OUTPUT PEP vs POWER INPUT



COLLECTOR EFFICIENCY vs POWER OUTPUT PEP



INTERMODULATION DISTORTION vs POWER OUTPUT PEP

