

NPN SILICON RF POWER TRANSISTOR

DESCRIPTION:

The **ASI HF220-28** is 28 V epitaxial planar transistor, designed for SSB and VHF communications. The device utilizes emitter ballasting for improved ruggedness and reliability.

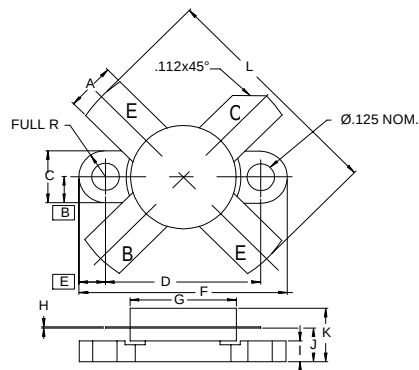
FEATURES:

- $P_G = 12$ dB min. at 220 W/30 MHz
- $IMD_3 = -30$ dBc max. at 220 W(PEP)
- **Omnigold™** Metalization System
- 30 MHz @ 28 V operations
- $IMD -30$ dBc

MAXIMUM RATINGS

I_C	16 A
V_{CBO}	70 V
V_{CEO}	35 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}	0.6 $^\circ C/W$

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: ASI10609

CHARACTERISTICS $T_C = 25^\circ C$

SYMBOL	TEST CONDITIONS	MINIMUM	TYPICAL	MAXIMUM	UNITS
BV_{CEO}	$I_C = 200$ mA	35			V
BV_{CES}	$I_C = 100$ mA	70			V
BV_{EBO}	$I_E = 20$ mA	4.0			V
I_{CEO}	$V_{CE} = 30$ V			5.0	mA
I_{CES}	$V_{CE} = 35$ V			5.0	mA
h_{FE}	$V_{CE} = 5.0$ V $I_C = 7.0$ A	15		60	---
C_{OB}	$V_{CB} = 28$ V $f = 1.0$ MHz	---	450	---	pF

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

G_p IMD_3 η_c	$V_{CE} = 28\text{ V}$ $F_1 = 30.000\text{ MHz}$	$I_{CQ} = 750\text{ mA}$ $f_2 = 30.001\text{ MHz}$	$P_{OUT} = 220\text{ W}$	12 40	---	-30	dB dBc %
Load Mismatch	$V_{CE} = 28\text{ V}$	$I_{CQ} = 750\text{ mA}$	$P_{OUT} = 220\text{ W}$	---	$\infty:1$	---	VSWR

IMPEDANCE DATA

FREQ	$Z_{IN} (\Omega)$	$Z_{CL} (\Omega)$
30 MHz	$1.15 + j0.41$	$1.25 + j1.92$