

NPN SILICON RF POWER TRANSISTOR

DESCRIPTION:

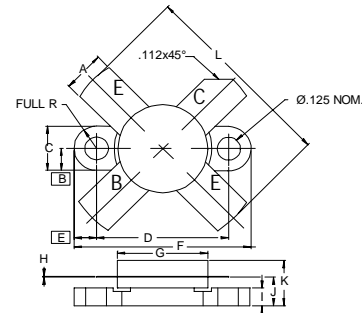
The **ASI HF100-28** is a class A silicon NPN planar transistor, designed for SSB communications. Diffused ballasting provide High VSRW Capability under rated operating conditions.

FEATURES:

- $P_G = 15$ dB min. at 100 W/30 MHz
- High linear power output
- $IMD_3 = -30$ dBc max. at 100 W_(PEP)
- **Omnigold™** Metalization System
- 28 V CE operation

MAXIMUM RATINGS

I_C	20 A
V_{CB0}	65 V
V_{CEO}	36 V
V_{EBO}	4.0 V
P_{DISS}	270 W @ $T_C = 25^\circ C$
T_J	-65 °C to +200 °C
T_{STG}	-65 °C to +150 °C
θ_{JC}	0.65 °C/W

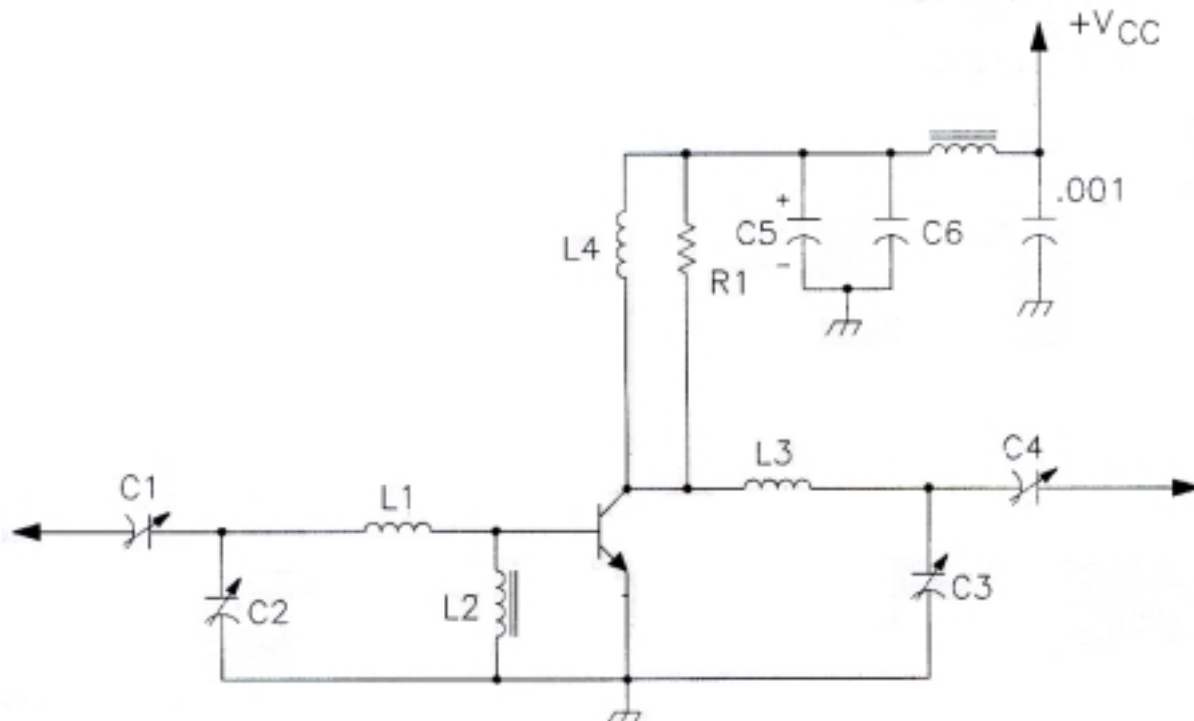
PACKAGE STYLE .500 4L FLG


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: ASI10608
CHARACTERISTICS $T_C = 25^\circ C$

SYMBOL	TEST CONDITIONS	MINIMUM	TYPICAL	MAXIMUM	UNITS
BV_{CEO}	$I_C = 100$ mA	35			V
BV_{CES}	$I_C = 100$ mA	65			V
BV_{CBO}	$I_C = 100$ mA	65			V
BV_{EBO}	$I_E = 10$ mA	4.0			V
I_{CES}	$V_{CE} = 30$ V			15	mA
h_{FE}	$V_{CE} = 5.0$ V $I_C = 5.0$ A	10		200	---
C_{ob}	$V_{CB} = 30$ V $f = 1.0$ MHz	---		285	pF
G_P	$V_{CE} = 28$ V $P_{IN} = 3.16$ W $P_{PUT} = 100$ W	15	16		dB
IMD_3	$f_1 = 30.000$ MHz $I_{CQ} = 100$ mA $f_2 = 30.001$ MHz		-34	-30	dBc

TEST CIRCUIT



- | | | | |
|-------|-----------------------------------|-------|--|
| C1 | : 24 - 200pF Arco 425 | L1 | : 4 Turns, #16 AWG, Tinned, 0.40" I.D. |
| C2,C4 | : 50 - 380pF Arco 465 | L2,L5 | : 1 Turn, #22 AWG, Tinned, formed with VK-200 #4B Ferroxcube |
| C3 | : 9 - 180pF Arco 463 | L4 | : 17 Turns, #18 Enameled Wire Wrapped Around R1 |
| C5 | : 10 μ F, Electrolytic, 35Vdc | R1 | : 390 Ω Resistor (2 Watt) |
| C6 | : 0.01 μ F, 100V, Ceramic | | |

SAFE OPERATING AREA

