

NPN SILICON RF POWER TRANSISTOR

DESCRIPTION:

The **ASI 2SC2782** is a 12.5 V epitaxial silicon NPN transistor. Designed primarily for VHF power amplifier application up to 175 MHz band.

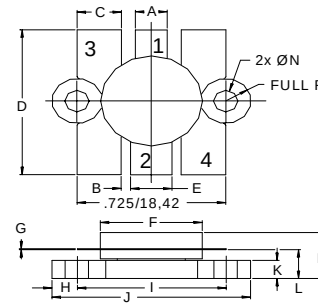
FEATURES:

- 175 MHz 12.5 V
- $P_G = 6.4$ dB at 80 W/175 MHz
- **Omnigold™** Metalization System
- Common Emitter configuration

MAXIMUM RATINGS

I_C	20 A
V_{CBO}	36 V
V_{CEO}	16 V
V_{EBO}	4.0 V
P_{DISS}	220 W @ $T_C = 25^\circ C$
T_J	$-65^\circ C$ to $+175^\circ C$
T_{STG}	$-65^\circ C$ to $+175^\circ C$
θ_{JC}	0.68 $^\circ C/W$

PACKAGE STYLE .500 6L FLG



DIM	MINIMUM inches / mm	MAXIMUM inches / mm
A	.150 / 3.43	.160 / 4.06
B	.045 / 1.14	
C	.210 / 5.33	.220 / 5.59
D	.835 / 21.21	.865 / 21.97
E	.200 / 5.08	.210 / 5.33
F	.490 / 12.45	.510 / 12.95
G	.003 / 0.08	.007 / 0.18
H	.125 / 3.18	
I	.725 / 18.42	
J	.970 / 24.64	.980 / 24.89
K	.090 / 2.29	.105 / 2.67
L	.150 / 3.81	.170 / 4.32
M	.285 / 7.24	
N	.120 / 3.05	.135 / 3.43

1 = Collector 2 = Base 3&4 = Emitter

CHARACTERISTICS $T_C = 25^\circ C$

SYMBOL	TEST CONDITIONS	MINIMUM	TYPICAL	MAXIMUM	UNITS
BV_{CEO}	$I_C = 50$ mA	16			V
BV_{CBO}	$I_C = 20$ mA	36			V
BV_{EBO}	$I_E = 1.0$ mA	4.0			V
h_{FE}	$V_{CE} = 5.0$ V $I_C = 10$ A	10		100	---
C_{OB}	$V_{CB} = 12.5$ V $f = 1.0$ MHz			390	pF
PG	$V_{CC} = 12.5$ V $P_{OUT} = 80$ W $f = 175$ MHz	6.4	6.8		dB
η_C	$P_{IN} = 18$ W	60	70		%
Z_{IN}	$V_{CC} = 12.5$ V $P_{OUT} = 80$ W $f = 175$ MHz	---	$1.0 + j1.5$	---	Ω
Z_{CL}	$V_{CC} = 12.5$ V $P_{OUT} = 80$ W $f = 175$ MHz	---	$1.2 + j1.8$	---	Ω