

NPN SILICON RF POWER TRANSISTOR

DESCRIPTION:

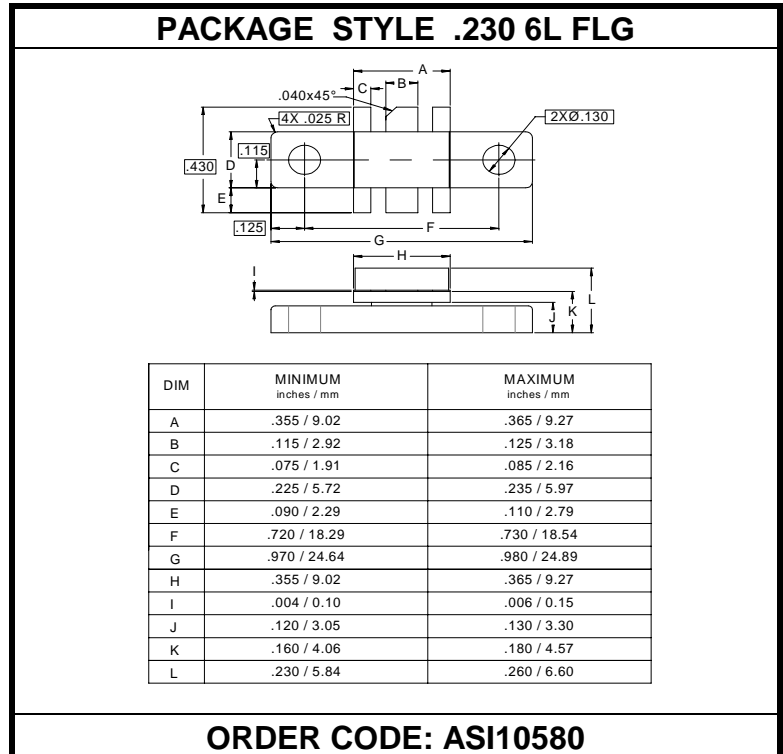
The **ASI CBSL6** is a gold metalized epitaxial silicon NPN transistor, designed for high linearity Class-AB cellular base station applications. It also operates in Class-C.

FEATURES:

- Internal Input Matching Network
- 850-960MHz
- $P_G = 10$ dB at 6.0 W/960 MHz
- **Omnigold™** Metalization System

MAXIMUM RATINGS

I_C	2.4 A
V_{CBO}	50 V
V_{CES}	35 V
V_{EBO}	3.5 V
P_{DISS}	53 W @ $T_C = 25$ °C
T_J	-65 °C to +200 °C
T_{STG}	-65 °C to +150 °C
θ_{JC}	3.3 °C/W



CHARACTERISTICS $T_C = 25$ °C

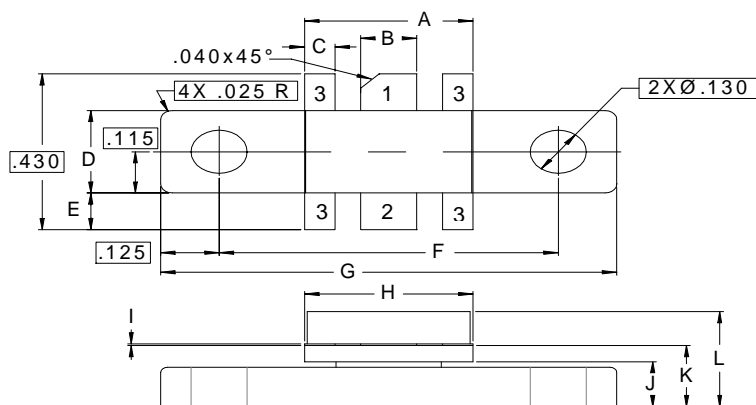
SYMBOL	TEST CONDITIONS	MINIMUM	TYPICAL	MAXIMUM	UNITS
BV_{CEO}	$I_C = 5.0$ mA	24			V
BV_{CBO}	$I_C = 5.0$ mA	50			V
BV_{EBO}	$I_E = 5.0$ mA	3.5			V
I_{CEO}	$V_{CE} = 24$ V			1.0	mA
I_{CBO}	$V_{CB} = 24$ V			1.0	mA
h_{FE}	$V_{CE} = 10$ V $I_C = 0.1$ A	20		100	---
C_{OB}	$V_{CB} = 24$ V $f = 1.0$ MHz		7.5	8.5	pF

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

SYMBOL	TEST CONDITIONS			MINIMUM	TYPICAL	MAXIMUM	UNITS
P_G	$V_{CC} = 24\text{ V}$	$I_{CQ} = 25\text{ mA}$	$f = 850\text{-}960\text{ MHz}$	10	12	---	dB
η_c	$P_{OUT} = 6.0\text{ W}$	$P_{IN} = 0.6\text{ W}$			50		%

IMPEDANCE DATA

FREQ	$Z_{IN}(\Omega)$	$Z_{CL}(\Omega)$
850 MHz	$2.6 + j5.4$	$9.5 + j1305$
900 MHz	$303 + j6.1$	$909 + j15.0$
950 MHz	$4.6 + j5.9$	$806 + j13.0$



DIM	MINIMUM inches / mm	MAXIMUM inches / mm
A	.355 / 9.02	.365 / 9.27
B	.115 / 2.92	.125 / 3.18
C	.075 / 1.91	.085 / 2.16
D	.225 / 5.72	.235 / 5.97
E	.090 / 2.29	.110 / 2.79
F	.720 / 18.29	.730 / 18.54
G	.970 / 24.64	.980 / 24.89
H	.355 / 9.02	.365 / 9.27
I	.004 / 0.10	.006 / 0.15
J	.120 / 3.05	.130 / 3.30
K	.160 / 4.06	.180 / 4.57
L	.230 / 5.84	.260 / 6.60

1 = Collector 2 = Base 3 = Emitter