

# NPN SILICON RF POWER TRANSISTOR

**DESCRIPTION:**

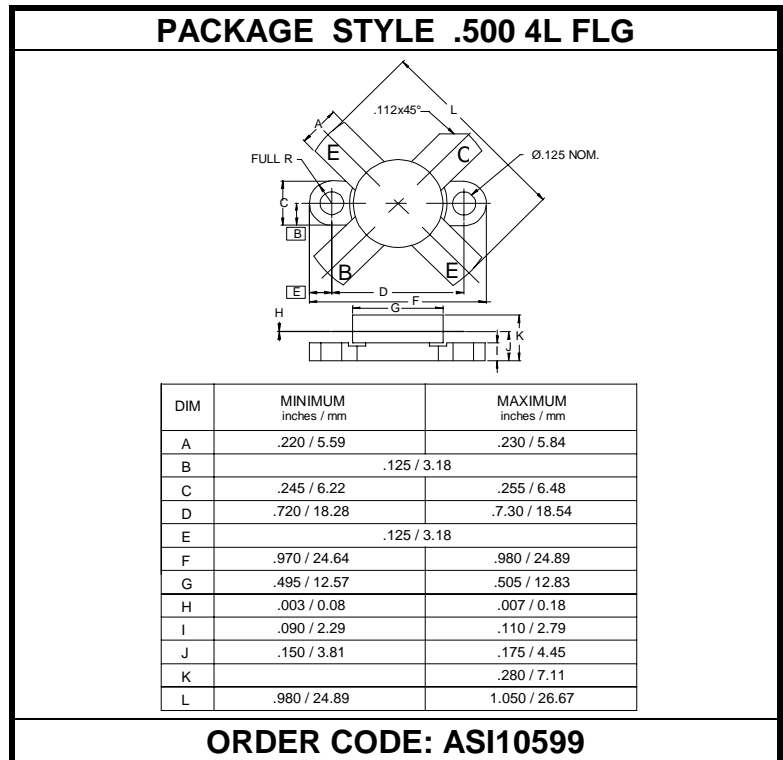
The **ASI HF100-12** is a 12.5 V Class-C epitaxial planar transistor designed primarily for HF communications. This device utilizes state of the art diffused Emitter Ballasting to achieve extreme ruggedness under severe operating conditions.

**FEATURES:**

- $P_G = 13$  Typ. min. at 100 W/30 MHz
- $IMD_3 = -30$  dBc max. at 100 W<sub>(PEP)</sub>
- **Omnigold™** Metalization System

**MAXIMUM RATINGS**

$I_C$	20 A
$V_{CBO}$	36 V
$V_{CEO}$	18 V
$V_{EBO}$	4.0 V
$P_{DISS}$	290 W @ $T_C = 25$ °C
$T_J$	-65 °C to +200 °C
$T_{STG}$	-65 °C to +150 °C
$\theta_{JC}$	0.6 °C/W


**CHARACTERISTICS**  $T_C = 25$  °C

SYMBOL	TEST CONDITIONS	MINIMUM	TYPICAL	MAXIMUM	UNITS
$BV_{CBO}$	$I_C = 100$ mA	36			V
$BV_{CES}$	$I_C = 100$ mA	36			V
$BV_{CEO}$	$I_C = 100$ mA	18			V
$BV_{EBO}$	$I_E = 10$ mA	4.0			V
$I_{CES}$	$V_{CE} = 15$ V			20	mA
$h_{FE}$	$V_{CE} = 5.0$ V $I_C = 5.0$ A	10		200	---
$C_{OB}$	$V_{CB} = 12.5$ V $f = 1.0$ MHz		400		pF



<b>G<sub>P</sub></b>	V <sub>CE</sub> = 12.5 V	I <sub>CQ</sub> = 150 mA	f = 30 MHz	11	13		<b>dB</b>
<b>IMD<sub>3</sub></b>	V <sub>CE</sub> = 12.5 V	I <sub>CQ</sub> = 150 mA	P <sub>OUT</sub> = 100 W			-30	<b>dBc</b>