

# NPN SILICON RF POWER TRANSISTOR

**DESCRIPTION:**

The **ASI HF50-12F** is a 12.5 V Class C epitaxial silicon NPN transistor designed primarily for land mobile transmitter applications. This device utilizes emitter ballasting, is extremely suitable and capable of withstanding high VSRW under operating conditions.

**FEATURES:**

- $P_G = 16$  dB min. at 50 W/30 MHz
- $IMD_3 = -30$  dBc max. at 50 W<sub>(PEP)</sub>
- **Omnigold™** Metalization System

**MAXIMUM RATINGS**

$I_C$	12.0 A
$V_{CBO}$	45 V
$V_{CEO}$	18 V
$V_{EBO}$	3.5 V
$P_{DISS}$	183 W @ $T_C = 25^\circ C$
$T_J$	-65 °C to +200 °C
$T_{STG}$	-65 °C to +150 °C
$\theta_{JC}$	1.05 °C/W

**PACKAGE STYLE .380 4L FLG**

DIM	MINIMUM inches / mm	MAXIMUM inches / mm
A	.220 / 5.59	.230 / 5.84
B	.785 / 19.94	
C	.720 / 18.29	.730 / 18.54
D	.970 / 24.64	.980 / 24.89
E		.385 / 9.78
F	.004 / 0.10	.006 / 0.15
G	.085 / 2.16	.105 / 2.67
H	.160 / 4.06	.180 / 4.57
I		.280 / 7.11
J	.240 / 6.10	.255 / 6.48

**ORDER CODE: ASI10596**

**CHARACTERISTICS**  $T_C = 25^\circ C$ 

SYMBOL	TEST CONDITIONS	MINIMUM	TYPICAL	MAXIMUM	UNITS
$BV_{CBO}$	$I_C = 50$ mA	45			V
$BV_{CES}$	$I_C = 100$ mA	40			V
$BV_{CEO}$	$I_C = 50$ mA	18			V
$BV_{EBO}$	$I_E = 10$ mA	3.5			V
$I_{CES}$	$V_{CE} = 15$ V			10	mA
$h_{FE}$	$V_{CE} = 5.0$ V $I_C = 5.0$ A	10		---	---



<b>C<sub>OB</sub></b>	V <sub>CB</sub> = 12.5 V	f = 1.0 MHz			300	<b>pF</b>
<b>G<sub>P</sub></b>	V <sub>CE</sub> = 12.5 V	P <sub>IN</sub> = 5.0 W	f = 30 MHz	10		<b>dB</b>
<b>η<sub>C</sub></b>	P <sub>OUT</sub> = 50 W(PEP)				55	<b>%</b>