

# NPN SILICON RF POWER TRANSISTOR

**DESCRIPTION:**

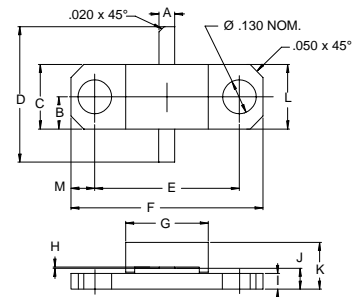
The **ASI ASAT20** is Designed for General Purpose Class C Operation up to 1.7 GHz.

**FEATURES:**

- Internal Input Matching Network
- $P_G = 8.0$  dB at 20 W/1.7 GHz
- **Omnigold™** Metalization System / Nitride Passivation
- Common Base Class C

**MAXIMUM RATINGS**

$I_C$	3.2 A
$V_{CBO}$	50 V
$V_{CEO}$	28 V
$V_{EBO}$	3.5 V
$P_{DISS}$	40 W @ $T_C = 25$ °C
$T_J$	-65 °C to +200 °C
$T_{STG}$	-65 °C to +150 °C
$\theta_{JC}$	4.0 °C/W

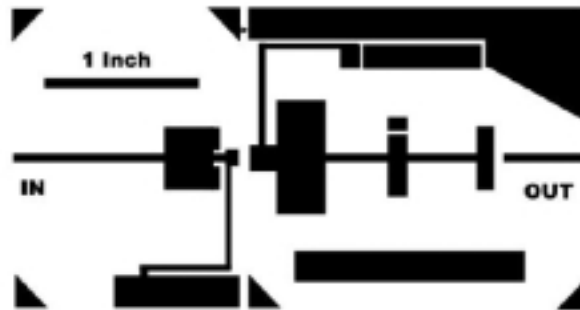
**PACKAGE STYLE .250 2L FLG(A)**


DIM	MINIMUM inches / mm	MAXIMUM inches / mm
A	.055 / 1.40	.065 / 1.65
B	.124 / 3.15	
C	.243 / 6.17	.253 / 6.43
D	.635 / 16.13	.665 / 16.89
E	.555 / 14.10	.565 / 14.35
F	.739 / 18.77	.749 / 19.02
G	.315 / 8.00	.325 / 8.26
H	.002 / 0.05	.006 / 0.15
I	.055 / 1.40	.065 / 1.65
J	.075 / 1.91	.095 / 2.41
K		.190 / 4.83
L	.245 / 6.22	.255 / 6.48
M	.092 / 2.34	

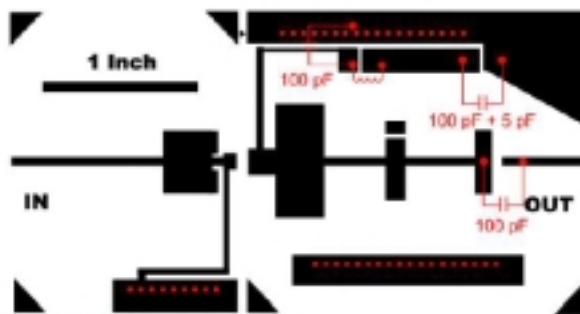
**ORDER CODE: ASI10519**
**CHARACTERISTICS**  $T_C = 25$  °C

SYMBOL	TEST CONDITIONS			MINIMUM	TYPICAL	MAXIMUM	UNITS
$BV_{CBO}$	$I_C = 5.0$ mA			45			V
$BV_{CEO}$	$I_C = 5.0$ mA			12			V
$BV_{EBO}$	$I_E = 5.0$ mA			3.0			V
$h_{FE}$	$V_{CE} = 5.0$ V	$I_C = 800$ mA		10		100	---
$C_{OB}$	$V_{CB} = 28$ V	$f = 1.0$ MHz			24		pF
$P_G$ $\eta_c$	$V_{CE} = 28$ V $I_C = 3.2$ A	$P_{OUT} = 20$ W	$f = 1.40$ GHz	7.6	8.0	8.2 50	dB %

Test Board Layout



Test Board Components



Substrate: 16 mil thick teflon fiberglass  
 \*\*\* Ground connection thru substrate

