

NPN SILICON RF POWER TRANSISTOR

DESCRIPTION:

The **ASI AJT150** is a common base RF power transistor primarily designed for pulsed avionics applications such as, mode-s TCAS and JTIDS.

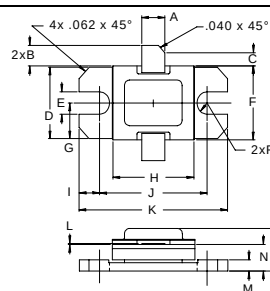
FEATURES:

- 960-1215 MHz
- Internal Input/Output Matching Network
- $P_G = 7.5$ dB at 150 W/ 1215 MHz
- **Omnigold™** Metalization System
- CB configuration, 35V DC operation

MAXIMUM RATINGS

I_C	16.5 A
V_{CE}	35 V
P_{DISS}	300 W
T_J	-65 °C to +200 °C
T_{STG}	-65 °C to +150 °C
θ_{JC}	0.57 °C/W

PACKAGE STYLE .400 2L FLG (A)



DIM	MINIMUM inches / mm	MAXIMUM inches / mm
A	.135 / 3.43	.145 / 3.68
B	.100 / 2.54	.120 / 3.05
C	.050 / 1.27	
D	.376 / 9.55	.396 / 10.06
E	.110 / 2.79	.130 / 3.30
F	.395 / 10.03	.407 / 10.34
G	.193 / 4.90	
H	.490 / 12.45	.510 / 12.95
I	.100 / 2.54	
J	.690 / 17.53	.710 / 18.03
K	.890 / 22.61	.910 / 23.11
L	.003 / 0.08	.006 / 0.18
M	.052 / 1.32	.072 / 1.83
N	.118 / 3.00	.131 / 3.33
P		.230 / 5.84

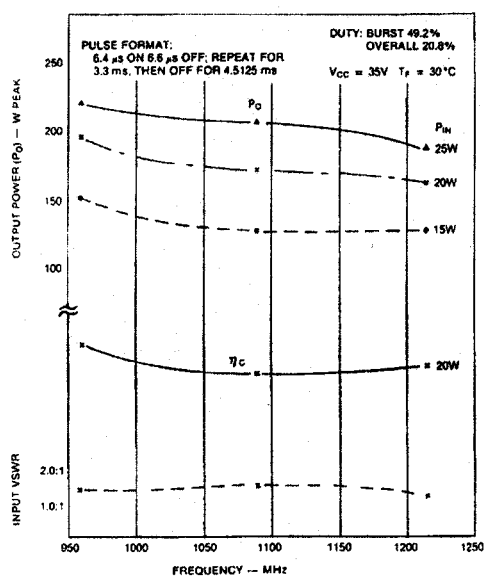
ORDER CODE: ASI10548

CHARACTERISTICS $T_C = 25$ °C

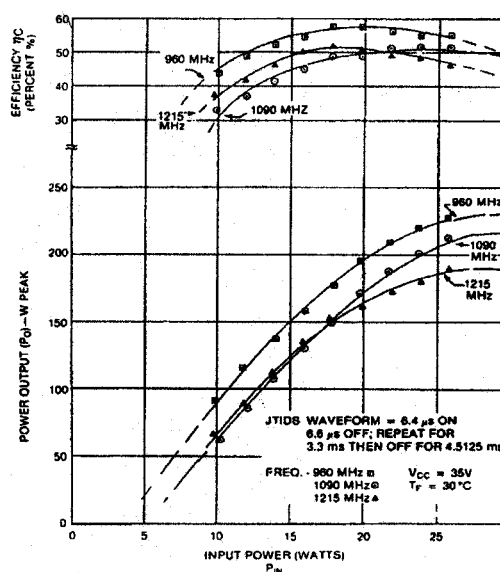
SYMBOL	TEST CONDITIONS	MINIMUM	TYPICAL	MAXIMUM	UNITS
BV_{CBO}	$I_C = 60$ mA	55			V
BV_{CES}	$I_C = 100$ mA $R_{BE} = 10 \Omega$	55			V
BV_{EBO}	$I_E = 10$ mA	3.5			V
I_{CES}	$V_{BE} = 35$ V			25	mA
h_{FE}	$V_{CE} = 5.0$ V $I_C = 5.0$ A	20		200	---
P_G η_c	$V_{CC} = 35$ V $P_{OUT} = 150$ W $f = 960 - 1215$ MHz $P_{IN} = 26.7$ V	7.5 40			dB %

TYPICAL PERFORMANCE

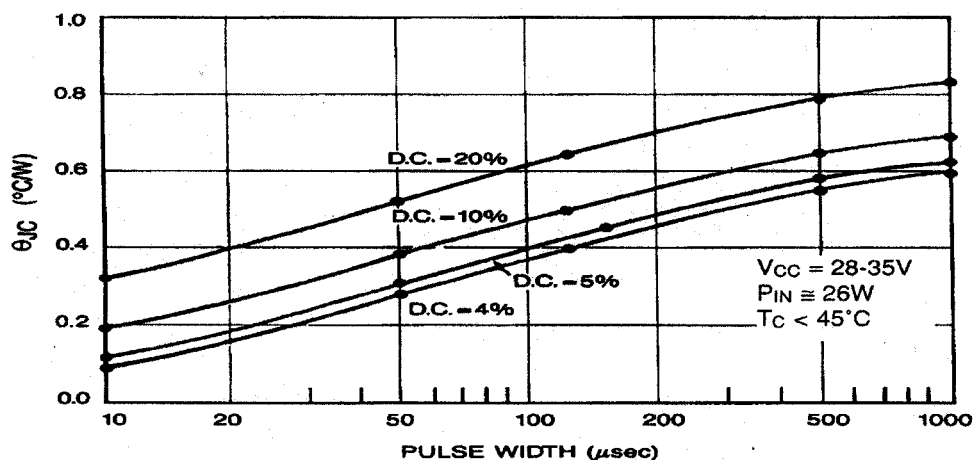
TYPICAL POWER INPUT, POWER OUTPUT & COLLECTOR EFFICIENCY vs FREQUENCY



POWER OUTPUT & COLLECTOR EFFICIENCY vs POWER INPUT



MAXIMUM THERMAL RESISTANCE vs PULSE WIDTH & DUTY CYCLE



IMPEDANCE DATA:

FREQUENCY	Z_{IN}	Z_{CL}
960 MHz	$2.1 + j3.8$	$3.8 - j3.6$
1050 MHz	$1.2 + j2.5$	$3.0 - j2.4$
1215 MHz	$1.7 + j2.4$	$2.0 - j2.5$

$P_{in} = 26.7 \text{ W}$

$V_{cc} = 35 \text{ V}$