

NPN SILICON RF POWER TRANSISTOR

DESCRIPTION:

The **ASI AJT015** is a silicon bipolar power transistor designed for avionics applications including JTIDS in 960-1215 MHz band.

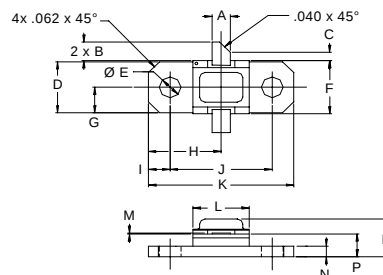
FEATURES:

- Internal Input/Output Matching Network
- $P_G = 8.1$ dB at 15 W/ 1215 MHz
- **Omnigold™** Metalization System
- 28 V Operations

MAXIMUM RATINGS

I_C	1.8 A
V_{CC}	32 V
P_{DISS}	50 W @ $T_C = 25^\circ\text{C}$
T_J	-65°C to $+250^\circ\text{C}$
T_{STG}	-65°C to $+200^\circ\text{C}$
θ_{JC}	3.0°C/W

PACKAGE STYLE .310 2L FLG



DIM	MINIMUM inches / mm	MAXIMUM inches / mm
A	.095 / 2.41	.105 / 2.67
B	.100 / 2.54	.120 / 3.05
C	.050 / 1.27	
D	.286 / 7.26	.306 / 7.77
E	.110 / 2.79	.130 / 3.30
F	.306 / 7.77	.318 / 8.08
G	.148 / 3.76	
H	.400 / 10.16	
I	.119 / 3.02	
J	.552 / 14.02	.572 / 14.53
K	.790 / 20.07	.810 / 20.57
L	.300 / 7.62	.320 / 8.13
M	.003 / 0.08	.006 / 0.15
N	.052 / 1.32	.072 / 1.83
P	.118 / 3.00	.131 / 3.33
R		.230 / 5.84

ORDER CODE: ASI10545

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

SYMBOL	TEST CONDITIONS	MINIMUM	TYPICAL	MAXIMUM	UNITS
BV_{CBO}	$I_C = 10$ mA	55			V
BV_{CER}	$I_C = 10$ mA $R_{BE} = 10 \Omega$	55			V
BV_{EBO}	$I_E = 1$ mA	3.5			V
I_{CES}	$V_{CE} = 28$ V $V_{BE} = 0$ V			2.0	mA
h_{FE}	$V_{CE} = 5.0$ V $I_C = 500$ mA	15		150	---
P_G	$V_{CC} = 28$ V $P_{OUT} = 15$ W $f = 960 - 1215$ MHz	8.1			dB
η_c	$P_{IN} = 2.3$ W	40			%

Pulse format: 6.4 μsec on 6.6 μsec off, repeat for 3.3 μsec . Then off for 4.525 μsec

Duty Cycle: Burst 49.2%, overall 20.8%



IMPEDANCE DATA:

FREQ	$Z_{IN}(\Omega)$	$Z_{CL}(\Omega)$
960	$5.7 + j4.3$	$5.7 - j7.7$
1090	$5.8 + j2.5$	$4.3 - j6.5$
1215	$5.0 + j3.0$	$4.0 - j4.8$

 $P_{IN} = 2.3 \text{ W}$ $V_{CC} = 28 \text{ V}$ 