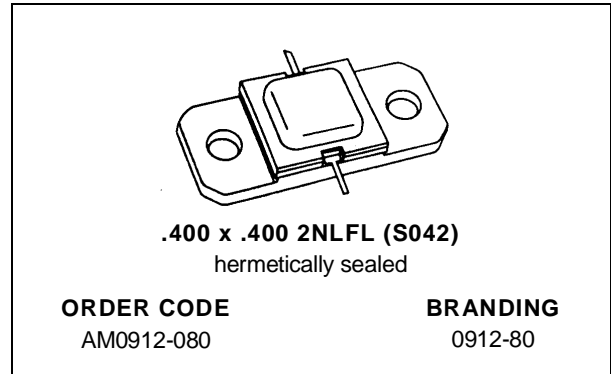


**RF & MICROWAVE TRANSISTORS
AVIONICS APPLICATIONS**

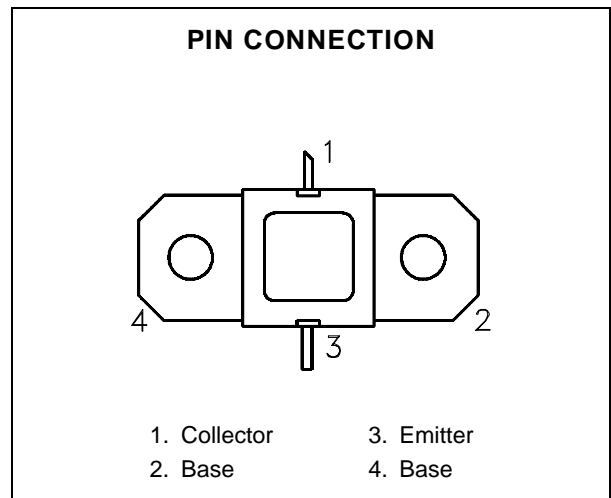
- REFRACTORY/GOLD METALLIZATION
- EMITTER SITE BALLASTED
- LOW THERMAL RESISTANCE
- INPUT/OUTPUT MATCHING
- OVERLAY GEOMETRY
- METAL/CERAMIC HERMETIC PACKAGE
- $P_{OUT} = 90$ W MIN. WITH 13 dB GAIN
- BANDWIDTH 225 MHz


DESCRIPTION

The AM0912-080 Avionics power transistor is a broadband, high peak pulse power device specifically designed for avionics applications requiring broad bandwidth with moderate duty cycle and pulse width constraints such as ground/ship based DME/TACAN.

This device is also designed for specialized applications including JTIDS where reduced power provided under pulse formats utilizing short pulse widths and high burst or overall duty cycles.

The AM0912-080 is housed in the unique AMPAC™ Hermetic Metal/Ceramic package with internal Input/Output matching structures.


ABSOLUTE MAXIMUM RATINGS ($T_{case} = 25^{\circ}C$)

Symbol	Parameter	Value	Unit
P_{DISS}	Power Dissipation* ($T_C \leq 100^{\circ}C$)	220	W
I_C	Device Current*	7.0	A
V_{CC}	Collector-Supply Voltage*	50	V
T_J	Junction Temperature (Pulsed RF Operation)	250	$^{\circ}C$
T_{STG}	Storage Temperature	- 65 to +200	$^{\circ}C$

THERMAL DATA

$R_{TH(j-c)}$	Junction-Case Thermal Resistance*	0.80	$^{\circ}C/W$
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*Applies only to rated RF amplifier operation

AM0912-080

ELECTRICAL SPECIFICATIONS (T_{case} = 25°C)

STATIC

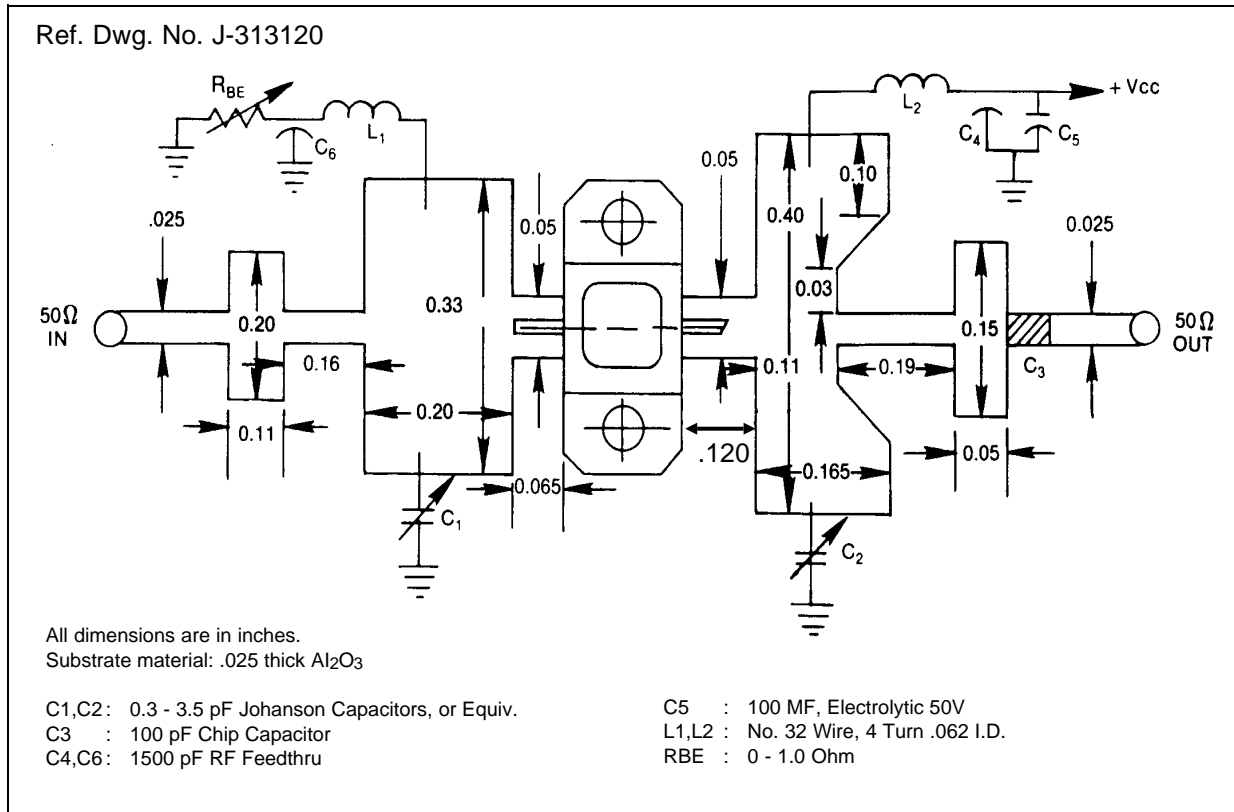
Symbol	Test Conditions		Value			Unit
			Min.	Typ.	Max.	
BV _{CBO}	I _C = 40mA	I _E = 0mA	65	—	—	V
BV _{EBO}	I _E = 10mA	I _C = 0mA	3.0	—	—	V
BV _{CER}	I _C = 40mA	R _{BE} = 10Ω	65	—	—	V
I _{CBO}	V _{CB} = 50V		—	—	12	mA
h _{FE}	V _{CE} = 5V	I _C = 2A	20	—	120	—

DYNAMIC

Symbol	Test Conditions			Value			Unit
				Min.	Typ.	Max.	
P _{OUT}	f = 960 — 1215MHz	P _{IN} = 13W	V _{CC} = 50V	90	100	—	W
η _C	f = 960 — 1215MHz	P _{IN} = 13W	V _{CC} = 50V	38	44	—	%
G _P	f = 960 — 1215MHz	P _{IN} = 13W	V _{CC} = 50V	8.4	—	—	dB

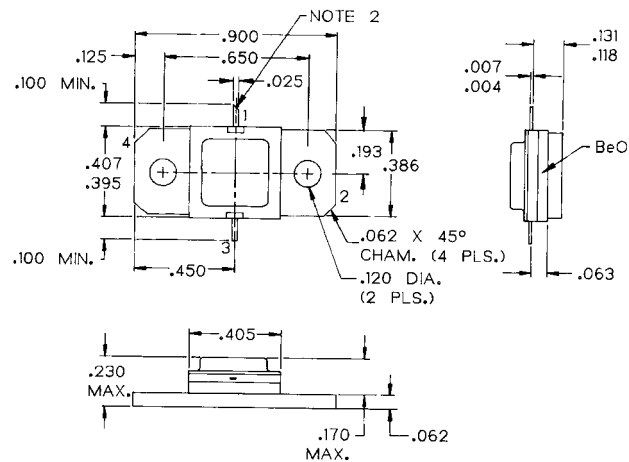
Note: Pulse Width = 10μSec
Duty Cycle = 10%

TEST CIRCUIT



PACKAGE MECHANICAL DATA

Ref.: Dwg. No.: J113214F



NOTES:

1. ALL TOLERANCE $\pm .010$ EXCEPT WHERE NOTED;
DIMENSIONS IN INCHES.
2. COLLECTOR LEAD SLANT CUT.

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