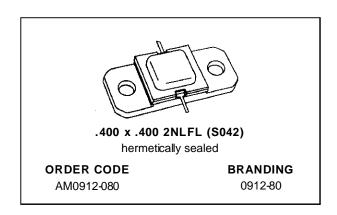


# AM0912-080

# RF & MICROWAVE TRANSISTORS AVIONICS APPLICATIONS

- REFRACTORY/GOLD METALLIZATION
- EMITTER SITE BALLASTED
- LOW THERMAL RESISTANCE
- INPUT/OUTPUT MATCHING
- OVERLAY GEOMETRY
- METAL/CERAMIC HERMETIC PACKAGE
- P<sub>OUT</sub> = 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.

# PIN CONNECTION 1. Collector 3. Emitter 2. Base 4. Base

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

Symbol	Parameter	Value	Unit				
P <sub>DISS</sub>	Power Dissipation* (T <sub>C</sub> ≤100°C)	220	W				
Ic	Device Current*	7.0	А				
Vcc	Collector-Supply Voltage*	50	V				
TJ	Junction Temperature (Pulsed RF Operation)	250	°C				
T <sub>STG</sub>	Storage Temperature	- 65 to +200	°C				

# THERMAL DATA

_				
	$R_{TH(j-c)}$	Junction-Case Thermal Resistance*	0.80	°C/W

<sup>\*</sup>Applies only to rated RF amplifier operation

September 1992

# **ELECTRICAL SPECIFICATIONS** (T<sub>case</sub> = 25°C)

## **STATIC**

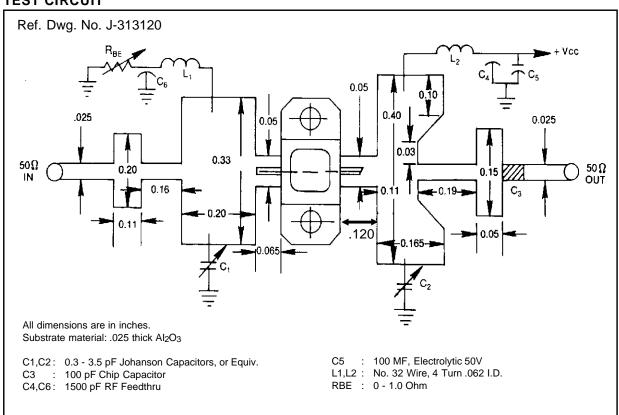
Symbol	Took Conditions	Value			IIn:4		
	Test Conditions		Min.	Тур.	Max.	Unit	
BV <sub>CBO</sub>	$I_C = 40 \text{mA}$	$I_E = 0mA$		65	_		V
BV <sub>EBO</sub>	I <sub>E</sub> = 10mA	$I_C = 0mA$		3.0	_	_	V
BVcer	IC = 40mA	$R_{BE} = 10\Omega$		65	_	_	V
Ісво	V <sub>CB</sub> = 50V			_	_	12	mA
h <sub>FE</sub>	V <sub>CE</sub> = 5V	I <sub>C</sub> = 2A		20	_	120	_

## **DYNAMIC**

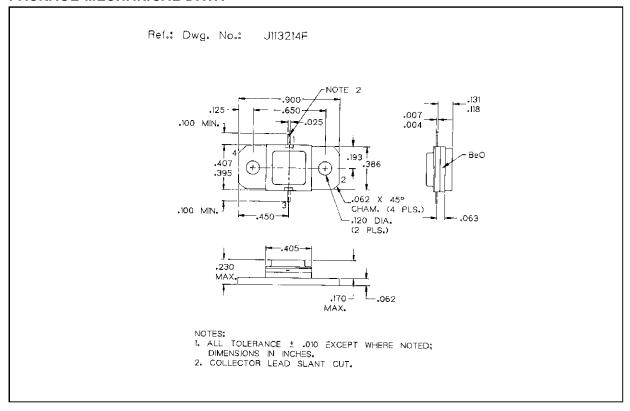
Cymhal	Took Conditions		Value		IImi4		
Symbol	Test Conditions			Min.	Тур.	Max.	Unit
Pout	f = 960 — 1215MHz	$P_{IN} = 13W$	$V_{CC} = 50V$	90	100	_	W
ης	f = 960 — 1215MHz	$P_{IN} = 13W$	$V_{CC} = 50V$	38	44	_	%
G <sub>P</sub>	f = 960 — 1215MHz	P <sub>IN</sub> = 13W	V <sub>CC</sub> = 50V	8.4	_	_	dB

Note: Pulse Width =  $10\mu Sec$ Duty Cycle = 10%

# **TEST CIRCUIT**



## PACKAGE MECHANICAL DATA



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