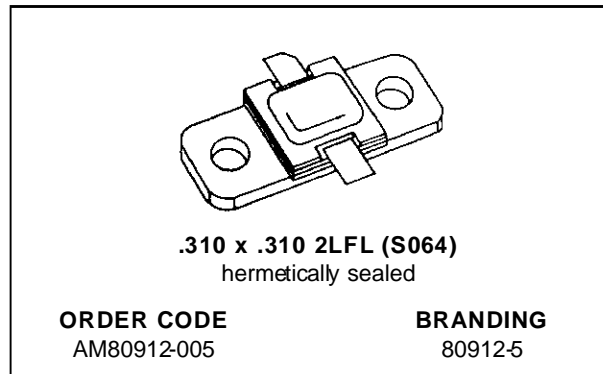


RF & MICROWAVE TRANSISTORS AVIONICS APPLICATIONS

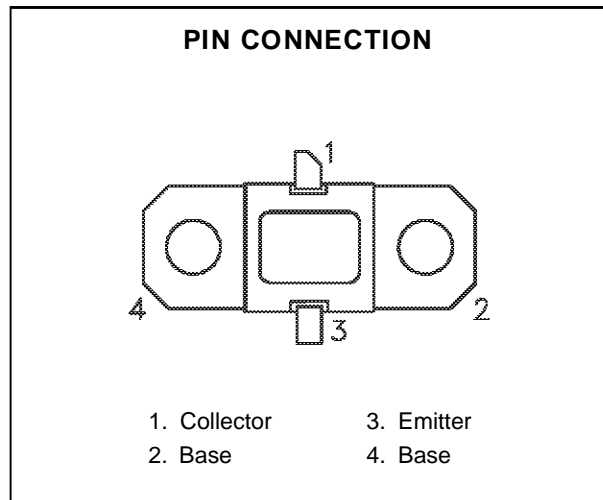
- REFRACTORY/GOLD METALLIZATION
- EMITTER SITE BALLASTED
- 5:1 VSWR CAPABILITY
- LOW THERMAL RESISTANCE
- INPUT/OUTPUT MATCHING
- OVERLAY GEOMETRY
- METAL/CERAMIC HERMETIC PACKAGE
- P_{OUT} = 6.0 W MIN. WITH 9.3 dB GAIN



DESCRIPTION

The AM80912-005 is designed for specialized avionics applications, including JTIDS, where power is provided under pulse formats utilizing short pulse widths and high burst or overall duty cycles.

The AM80912-005 is housed in the unique IMPAC™ Hermetic Metal/Ceramic package with



ABSOLUTE MAXIMUM RATINGS (T_{case} = 25°C)

Symbol	Parameter	Value	Unit
P _{DISS}	Power Dissipation* (T _c ≤ 75°C)	25	W
I _c	Device Current*	0.9	A
V _{CC}	Collector-Supply Voltage*	32	V
T _J	Junction Temperature (Pulsed RF Operation)	250	°C
T _{STG}	Storage Temperature	- 65 to +200	°C

THERMAL DATA

R _{TH(j-c)}	Junction-Case Thermal Resistance*	7.0	°C/W
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*Applies only to rated RF amplifier operation

ELECTRICAL SPECIFICATIONS ($T_{case} = 25^{\circ}C$)

STATIC

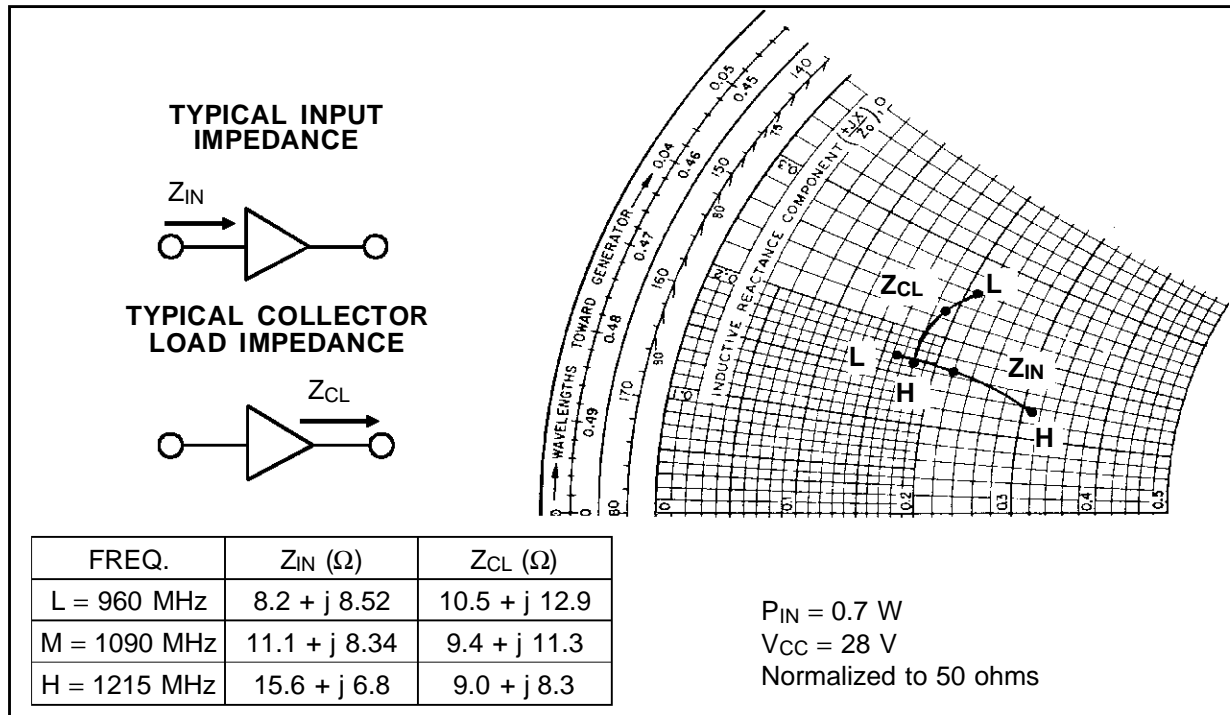
Symbol	Test Conditions		Value			Unit
			Min.	Typ.	Max.	
BV _{CBO}	I _C = 1mA	I _E = 0mA	48	—	—	V
BV _{EBO}	I _E = 1mA	I _C = 0mA	3.5	—	—	V
BV _{CER}	I _C = 5mA	R _{BE} = 10Ω	48	—	—	V
I _{CES}	V _{BE} = 0V	V _{CE} = 28V	—	—	0.5	mA
h _{FE}	V _{CE} = 5V	I _C = 250mA	30	—	300	—

DYNAMIC

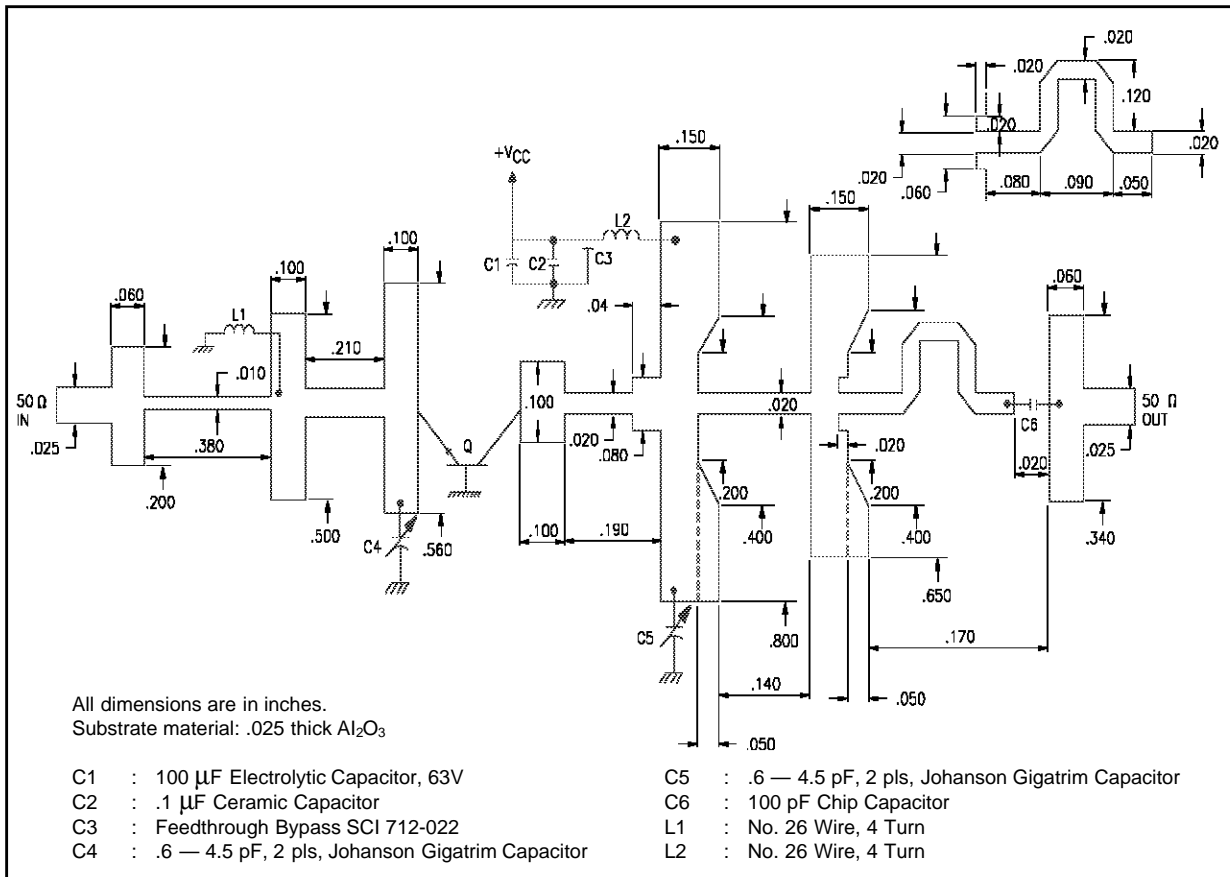
Symbol	Test Conditions			Value			Unit
				Min.	Typ.	Max.	
P _{OUT}	f = 960 — 1215MHz	P _{IN} = 0.7W	V _{CC} = 28V	6.0	—	—	W
η _c	f = 960 — 1215MHz	P _{IN} = 0.7W	V _{CC} = 28V	45	—	—	%
G _P	f = 960 — 1215MHz	P _{IN} = 0.7W	V _{CC} = 28V	9.3	—	—	dB

Note: Pulse format: 6.4 μS on 6.6 μS off, repeat for 3.3 ms, then off for 4.5125 ms.
Duty Cycle: Burst 49.2%, overall 20.8%

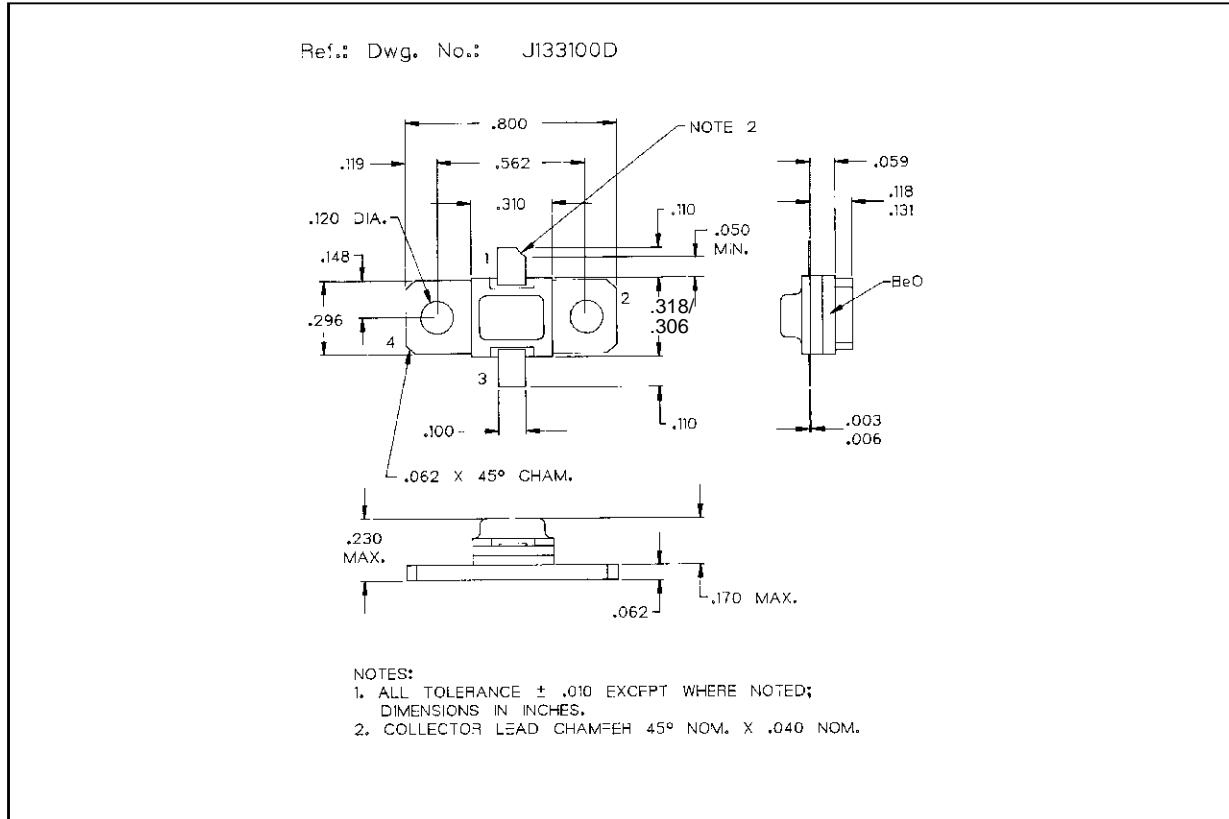
IMPEDANCE DATA



TEST CIRCUIT



PACKAGE MECHANICAL DATA



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