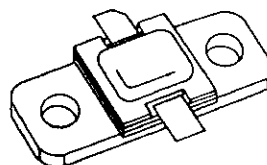


## RF & MICROWAVE TRANSISTORS AVIONICS APPLICATIONS

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



**.310 x .310 2LFL (S064)**  
hermetically sealed

**ORDER CODE**  
AM80912-005

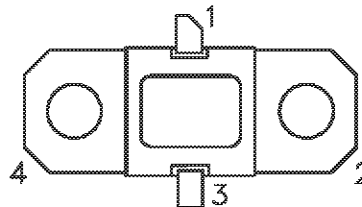
**BRANDING**  
80912-5

### 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

### PIN CONNECTION



- |              |            |
|--------------|------------|
| 1. Collector | 3. Emitter |
| 2. Base      | 4. Base    |

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

Symbol	Parameter	Value	Unit
$P_{DISS}$	Power Dissipation* ( $T_C \leq 75^{\circ}\text{C}$ )	25	W
$I_C$	Device Current*	0.9	A
$V_{CC}$	Collector-Supply Voltage*	32	V
$T_J$	Junction Temperature (Pulsed RF Operation)	250	$^{\circ}\text{C}$
$T_{STG}$	Storage Temperature	- 65 to +200	$^{\circ}\text{C}$

### THERMAL DATA

$R_{TH(j-c)}$	Junction-Case Thermal Resistance*	7.0	$^{\circ}\text{C/W}$
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\*Applies only to rated RF amplifier operation

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

<b>Symbol</b>	<b>Test Conditions</b>		<b>Value</b>			<b>Unit</b>
			<b>Min.</b>	<b>Typ.</b>	<b>Max.</b>	
$BV_{CBO}$	$I_C = 1\text{mA}$	$I_E = 0\text{mA}$	48	—	—	V
$BV_{EBO}$	$I_E = 1\text{mA}$	$I_C = 0\text{mA}$	3.5	—	—	V
$BV_{CER}$	$I_C = 5\text{mA}$	$R_{BE} = 10\Omega$	48	—	—	V
$I_{CES}$	$V_{BE} = 0\text{V}$	$V_{CE} = 28\text{V}$	—	—	0.5	mA
$h_{FE}$	$V_{CE} = 5\text{V}$	$I_C = 250\text{mA}$	30	—	300	—

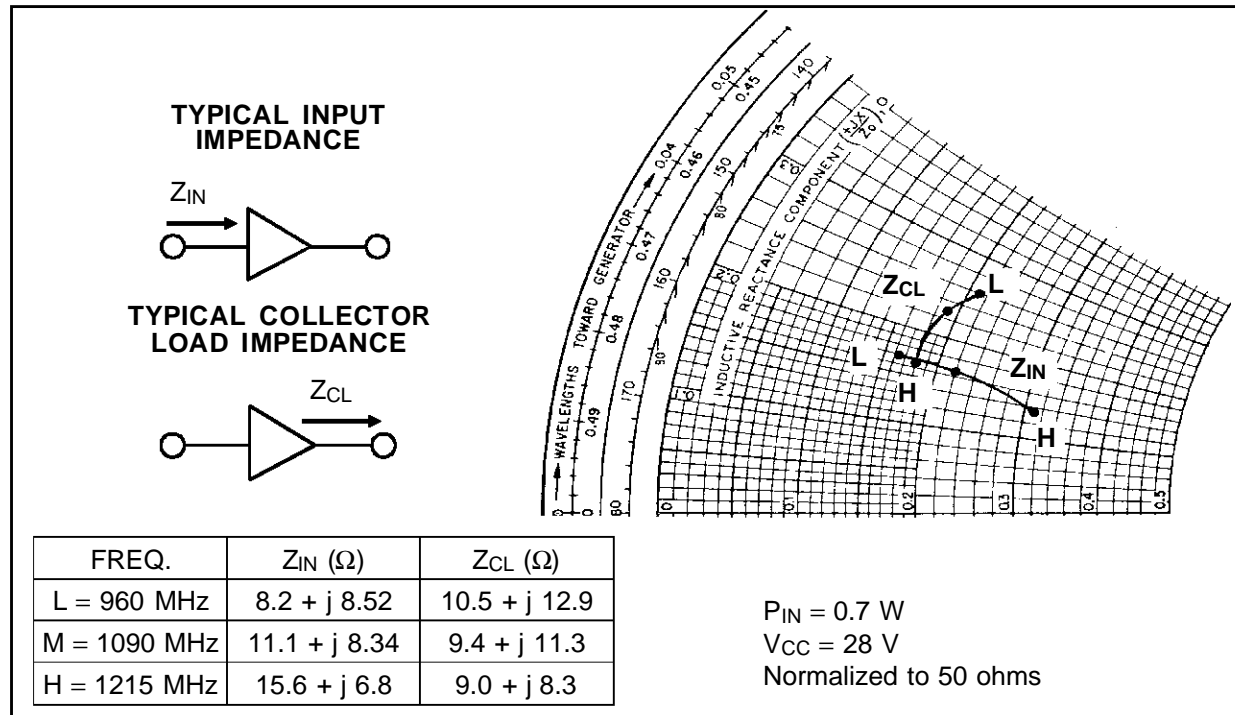
**DYNAMIC**

<b>Symbol</b>	<b>Test Conditions</b>			<b>Value</b>			<b>Unit</b>
				<b>Min.</b>	<b>Typ.</b>	<b>Max.</b>	
$P_{OUT}$	$f = 960 - 1215\text{MHz}$	$P_{IN} = 0.7\text{W}$	$V_{CC} = 28\text{V}$	6.0	—	—	W
$\eta_c$	$f = 960 - 1215\text{MHz}$	$P_{IN} = 0.7\text{W}$	$V_{CC} = 28\text{V}$	45	—	—	%
$G_P$	$f = 960 - 1215\text{MHz}$	$P_{IN} = 0.7\text{W}$	$V_{CC} = 28\text{V}$	9.3	—	—	dB

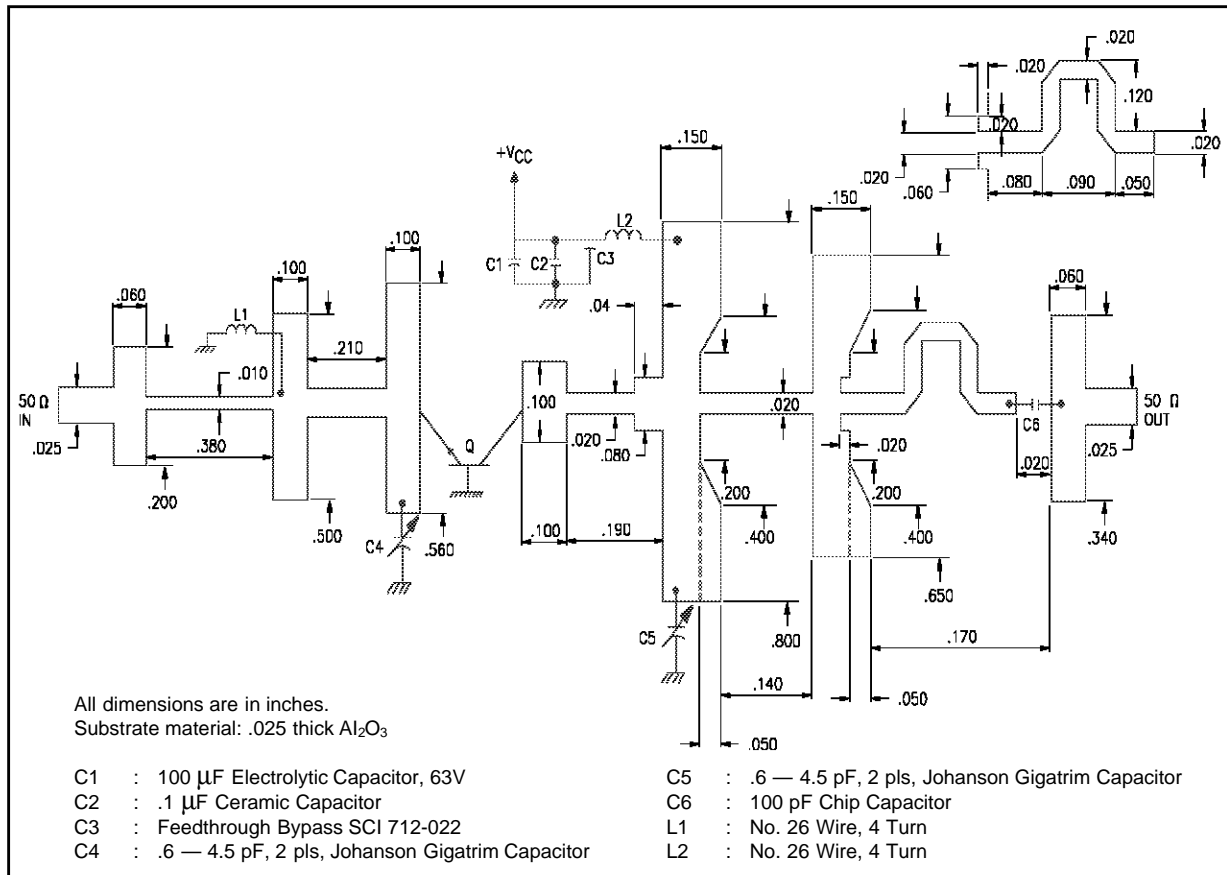
Note: Pulse format: 6.4  $\mu\text{S}$  on 6.6  $\mu\text{S}$  off, repeat for 3.3 ms, then off for 4.5125 ms.

Duty Cycle: Burst 49.2%, overall 20.8%

## IMPEDANCE DATA

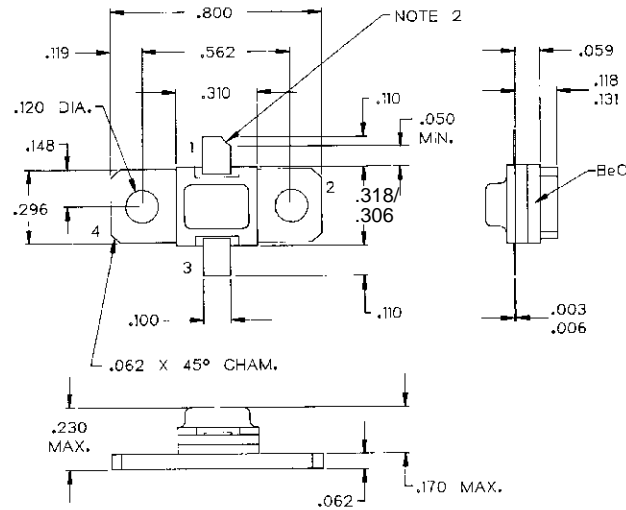


## TEST CIRCUIT



## PACKAGE MECHANICAL DATA

Ref.: Dwg. No.: J133100D



## NOTES:

1. ALL TOLERANCE  $\pm .010$  EXCEPT WHERE NOTED;  
DIMENSIONS IN INCHES.
2. COLLECTOR LEAD CHAMFER 45° NOM. X .040 NOM.

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