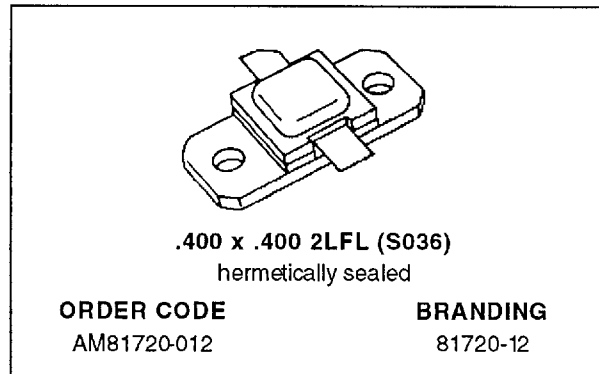


RF & MICROWAVE TRANSISTORS COMMUNICATIONS APPLICATIONS

- REFRACTORY/GOLD METALLIZATION
- EMITTER SITE BALLASTED
- RUGGIZED VSWR $\infty:1$
- LOW THERMAL RESISTANCE
- INPUT/OUTPUT MATCHING
- OVERLAY GEOMETRY
- METAL/CERAMIC HERMETIC PACKAGE
- $P_{OUT} = 12$ W MIN. WITH 7.4 dB GAIN

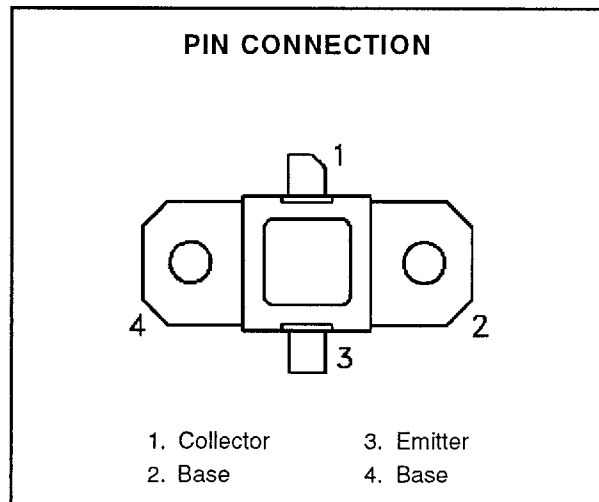


DESCRIPTION

The AM81720-012 is designed specifically for Telecommunications applications.

The device is capable of withstanding any mismatch load condition at any phase angle (VSWR $\infty:1$) under full rated conditions. The unit is an overlay, emitter site ballasted, geometry utilizing a refractory/gold metallization system.

The unique AMPAC™ devices are housed in Hermetic Metal/Ceramic packages with internal Input/Output matching structures.



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

Symbol	Parameter	Value	Unit
P_{DISS}	Power Dissipation*	31.8	W
I_c	Device Current*	1.47	A
V_{CC}	Collector-Supply Voltage*	24	V
T_J	Junction Temperature	200	$^{\circ}C$
T_{STG}	Storage Temperature	- 65 to +200	$^{\circ}C$

THERMAL DATA

$R_{TH(j-c)}$	Junction-Case Thermal Resistance	5.5	$^{\circ}C/W$
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*Applies only to rated RF amplifier operation

NOTE: Thermal Resistance determined by Infra-Red Scanning of Hot-Spot Junction Temperature at rated RF operating conditions.

AM81720-012

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

STATIC

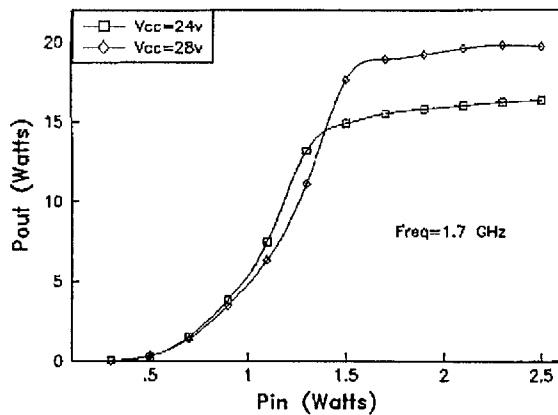
Symbol	Test Conditions		Value			Unit
			Min.	Typ.	Max.	
BV_{CBO}	$I_C = 5mA$	$I_E = 0mA$	45	—	—	V
BV_{EBO}	$I_E = 5mA$	$I_C = 0mA$	3.0	—	—	V
I_{CBO}	$V_{CB} = 24V$		—	—	1.25	mA
h_{FE}	$V_{CE} = 5V$	$I_C = 1A$	15	—	150	—

DYNAMIC

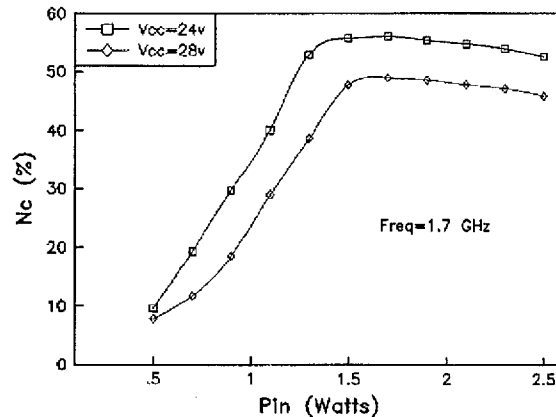
Symbol	Test Conditions			Value			Unit
				Min.	Typ.	Max.	
P_{OUT}	$f = 1.7 - 2.0GHz$	$P_{IN} = 2.2W$	$V_{CC} = 24V$	12	—	—	W
η_c	$f = 1.7 - 2.0GHz$	$P_{IN} = 2.2W$	$V_{CC} = 24V$	40	—	—	%
G_P	$f = 1.7 - 2.0GHz$	$P_{IN} = 2.2W$	$V_{CC} = 24V$	7.4	—	—	dB

TYPICAL PERFORMANCE

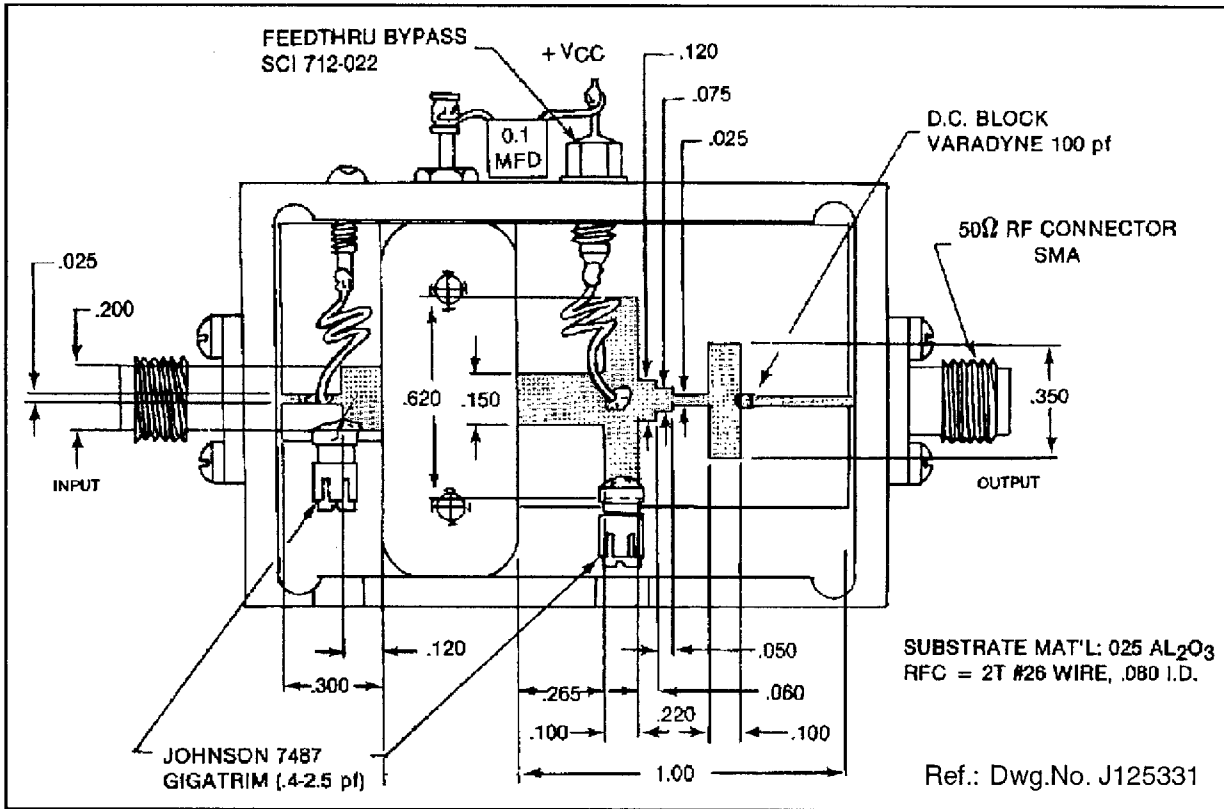
POWER OUTPUT vs POWER INPUT



COLLECTOR EFFICIENCY vs POWER INPUT

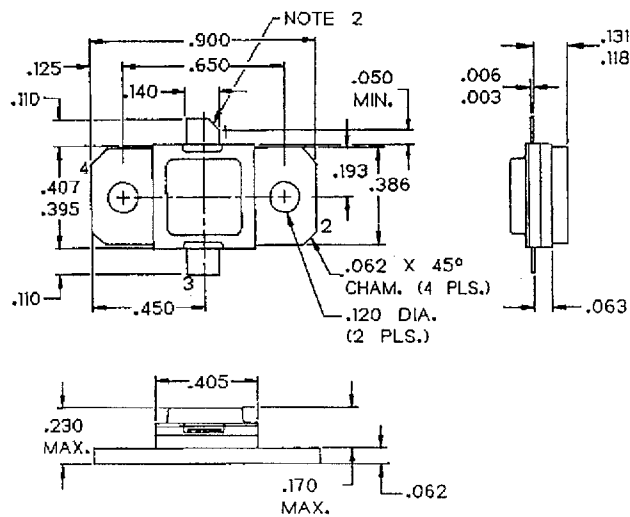


TEST CIRCUIT



PACKAGE MECHANICAL DATA

Ref.: Dwg. No.: J133102E



- NOTES:
1. ALL TOLERANCE ± .010 EXCEPT WHERE NOTED;
DIMENSIONS IN INCHES.
 2. COLLECTOR LEAD CHAMFER 45° NOM. X .040 NOM.