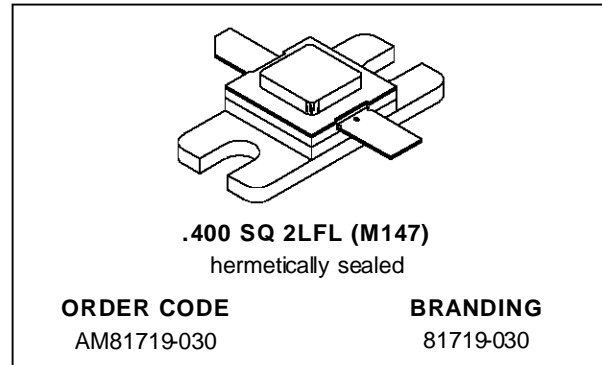


RF & MICROWAVE TRANSISTORS TELEMETRY APPLICATIONS

PRELIMINARY DATA

- REFRACTORY/GOLD METALLIZATION
- EMITTER SITE BALLASTED
- LOW THERMAL RESISTANCE
- INPUT/OUTPUT MATCHING
- OVERLAY GEOMETRY
- METAL/CERAMIC HERMETIC PACKAGE
- P_{OUT} = 28 W MIN. WITH 6.7 dB GAIN

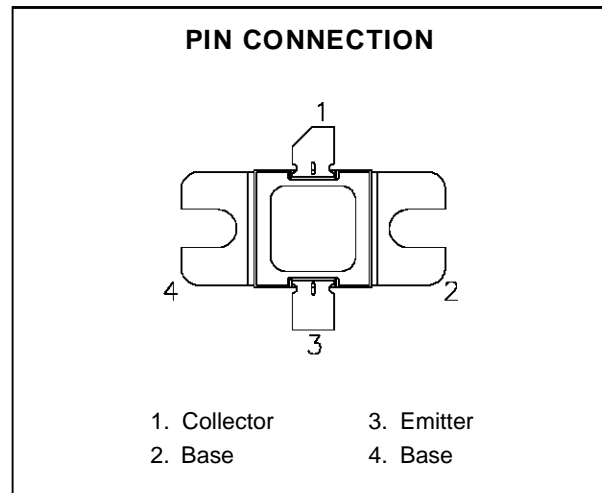


DESCRIPTION

The AM81719-030 is a high power silicon NPN bipolar transistor designed for Class C, CW communications and telemetry applications in the 1.75 - 1.85 GHz frequency range.

An emitter site ballasted refractory/gold overlay die geometry computerized automatic wire bonding is employed to ensure long term reliability and product consistency.

AM81719-030 is supplied in the industry-standard AMPAC™ hermetic metal/ceramic package.



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

Symbol	Parameter	Value	Unit
P _{DISS}	Power Dissipation*	67.3	W
I _C	Device Current*	2.67	A
V _{CC}	Collector-Supply Voltage*	28	V
T _J	Junction Temperature	200	°C
T _{STG}	Storage Temperature	- 65 to +200	°C

THERMAL DATA

R _{TH(j-c)}	Junction-Case Thermal Resistance*	2.6	°C/W
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*Applies only to rated RF amplifier operation

ELECTRICAL SPECIFICATIONS (Tcase = 25°C)

STATIC

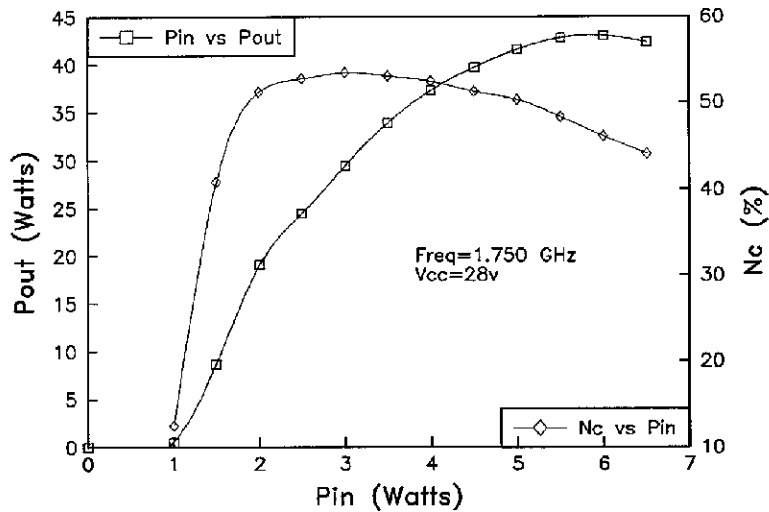
Symbol	Test Conditions		Value			Unit
			Min.	Typ.	Max.	
BV _{CBO}	I _C = 10mA	I _E = 0mA	45	—	—	V
BV _{EBO}	I _E = 10mA	I _C = 0mA	3.0	—	—	V
BV _{CES}	I _C = 10mA		45	—	—	V
I _{CES}	V _{BE} = 0V	V _{CE} = 28V	—	—	5	mA
h _{FE}	V _{CE} = 5V	I _C = 2mA	15	—	150	—

DYNAMIC

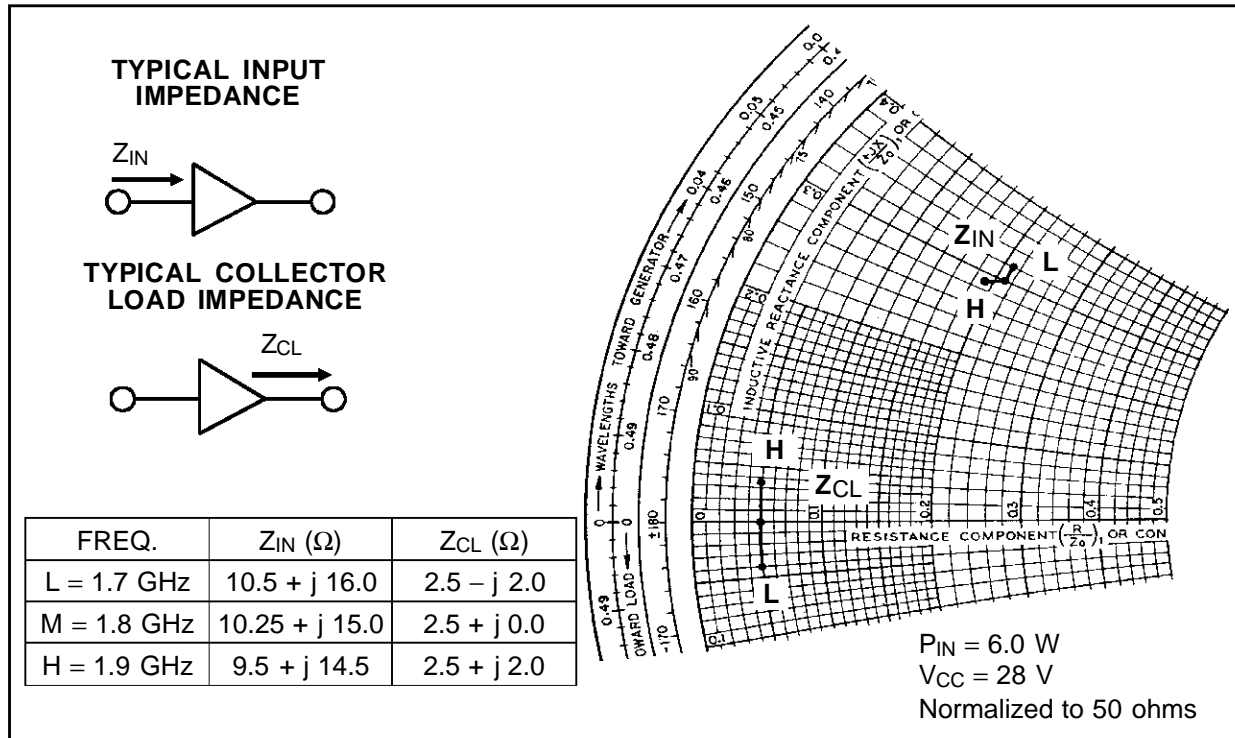
Symbol	Test Conditions			Value			Unit
				Min.	Typ.	Max.	
P _{OUT}	f = 1.75 — 1.85GHz	P _{IN} = 6.0W	V _{CC} = 28V	28	—	—	W
η _c	f = 1.75 — 1.85GHz	P _{IN} = 6.0W	V _{CC} = 28V	40	—	—	%
G _P	f = 1.75 — 1.85GHz	P _{IN} = 6.0W	V _{CC} = 28V	6.7	—	—	dB

TYPICAL PERFORMANCE

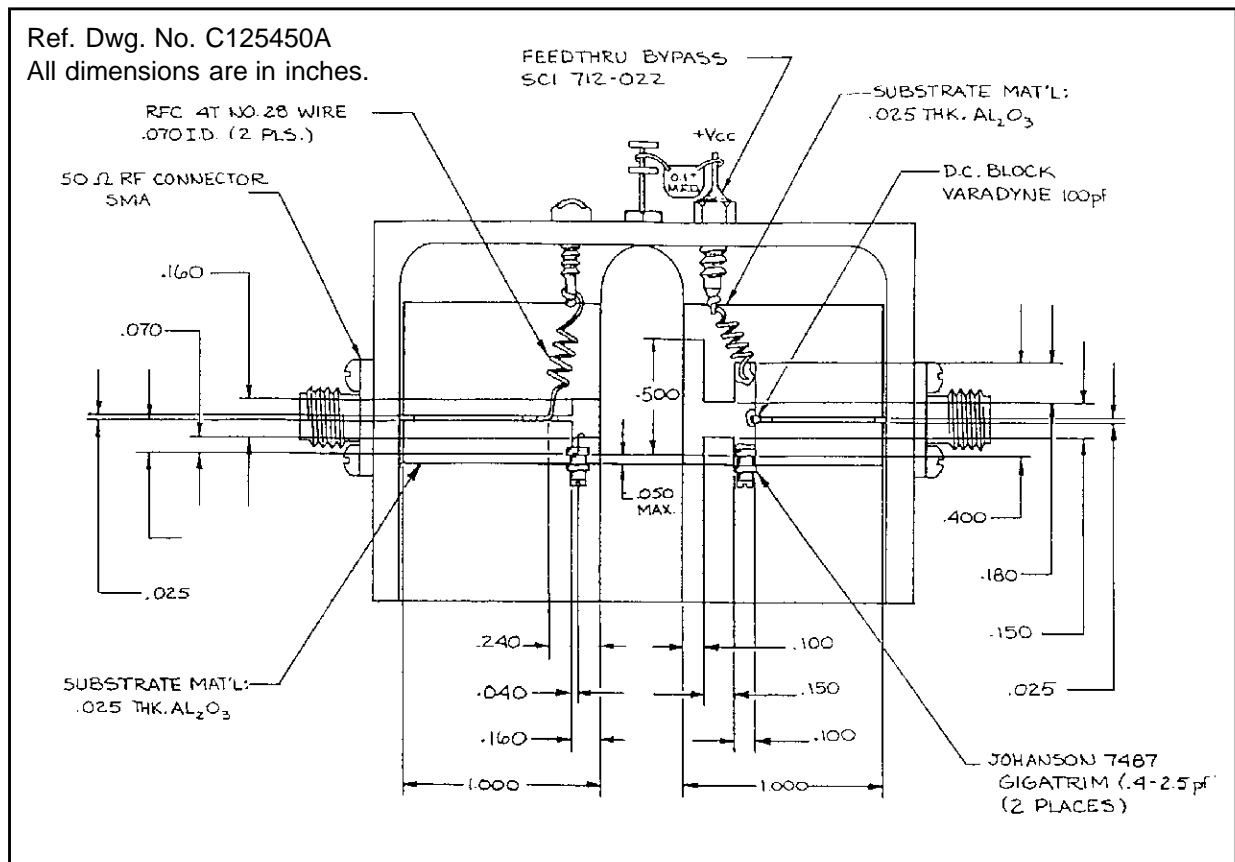
POWER OUTPUT & COLLECTOR EFFICIENCY vs POWER INPUT



IMPEDANCE DATA

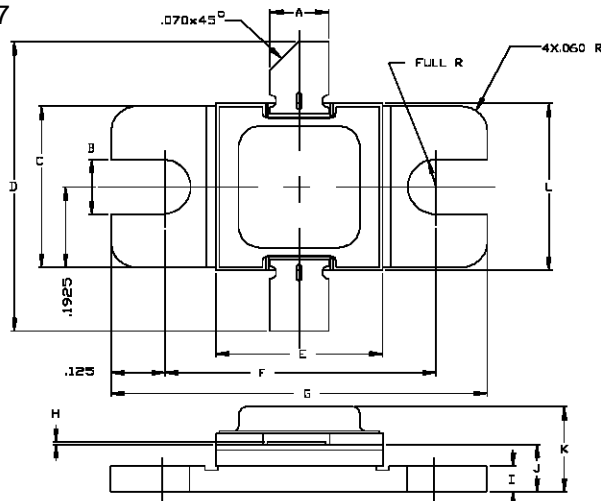


TEST CIRCUIT



PACKAGE MECHANICAL DATA

Ref.: Dwg. No. 12-0147



SGS-THOMSON MICROELECTRONICS		CONT'D			
	MINIMUM Inches/mm	MAXIMUM Inches/mm		MINIMUM Inches/mm	MAXIMUM Inches/mm
A	.135/3,43	.145/3,68	K		.230/5,84
B	.125/3,18		L	.392/9,96	.402/10,29
C	.380/9,65	.390/9,91			
D	.885/22,48				
E	.392/9,96	.402/10,29			
F	.645/16,38	.655/16,64			
G	.895/22,73	.905/22,99			
H	.002/0,05	.006/0,15			
I	.055/1,40	.065/1,65			
J	.105/2,67	.125/3,18			

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