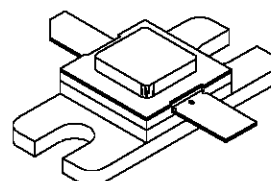


RF & MICROWAVE TRANSISTORS TELEMETRY APPLICATIONS

PRELIMINARY DATA

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



.400 SQ 2LFL (M147)
hermetically sealed

ORDER CODE

AM81719-030

BRANDING

81719-030

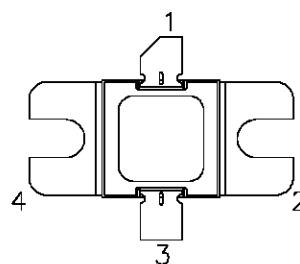
DESCRIPTION

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.

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*	67.3	W
I_C	Device Current*	2.67	A
V_{CC}	Collector-Supply Voltage*	28	V
T_J	Junction Temperature	200	$^{\circ}\text{C}$
T_{STG}	Storage Temperature	- 65 to +200	$^{\circ}\text{C}$

THERMAL DATA

$R_{TH(j-c)}$	Junction-Case Thermal Resistance*	2.6	$^{\circ}\text{C/W}$
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*Applies only to rated RF amplifier operation

ELECTRICAL SPECIFICATIONS (T_{case} = 25°C)

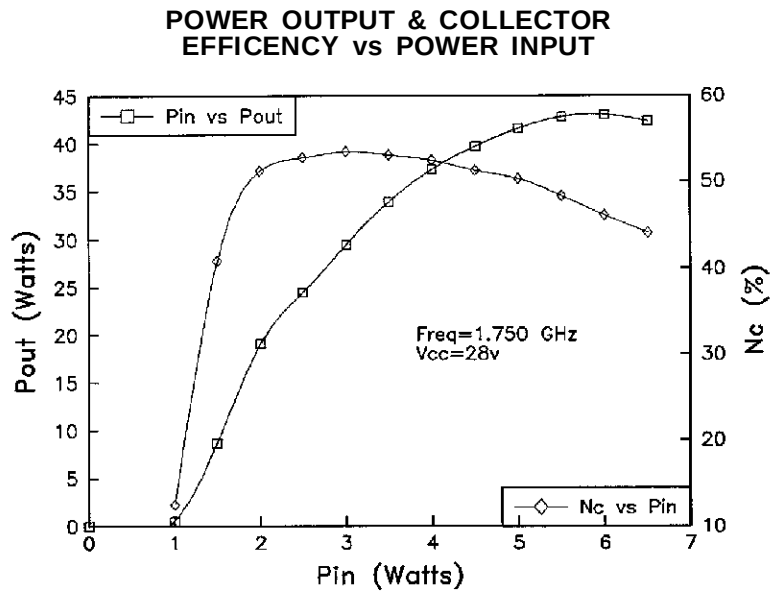
STATIC

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	—

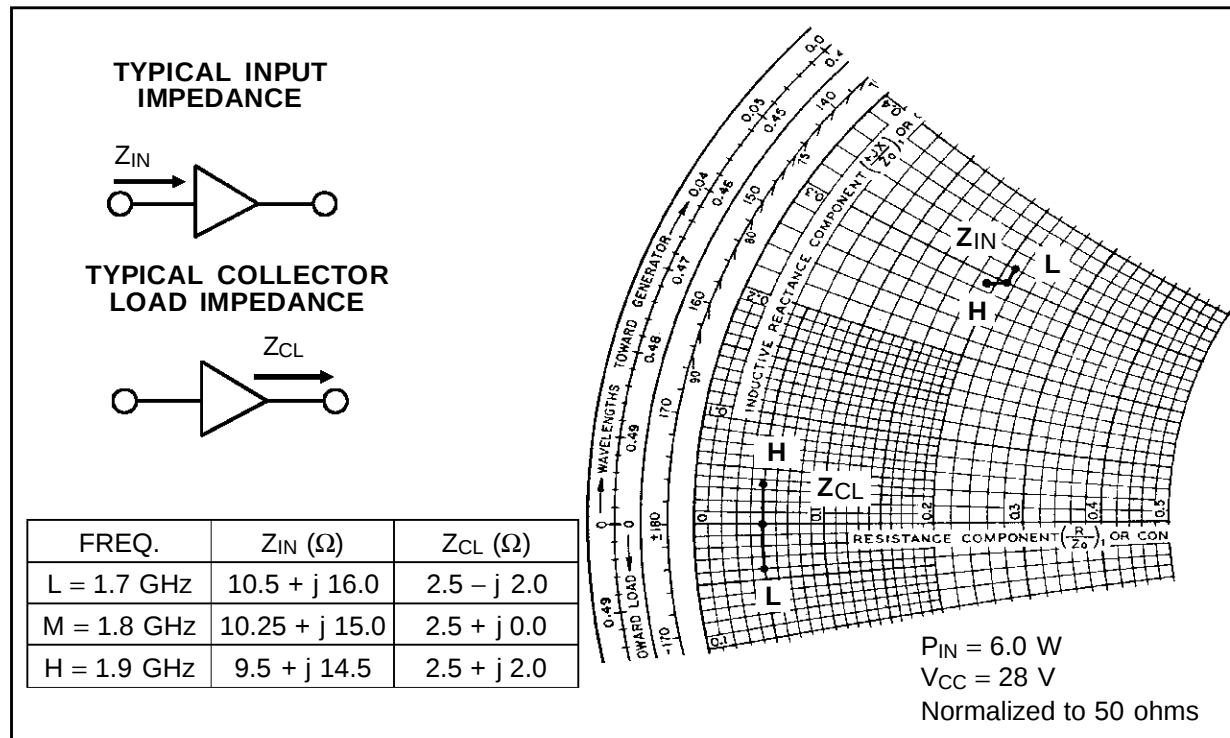
DYNAMIC

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

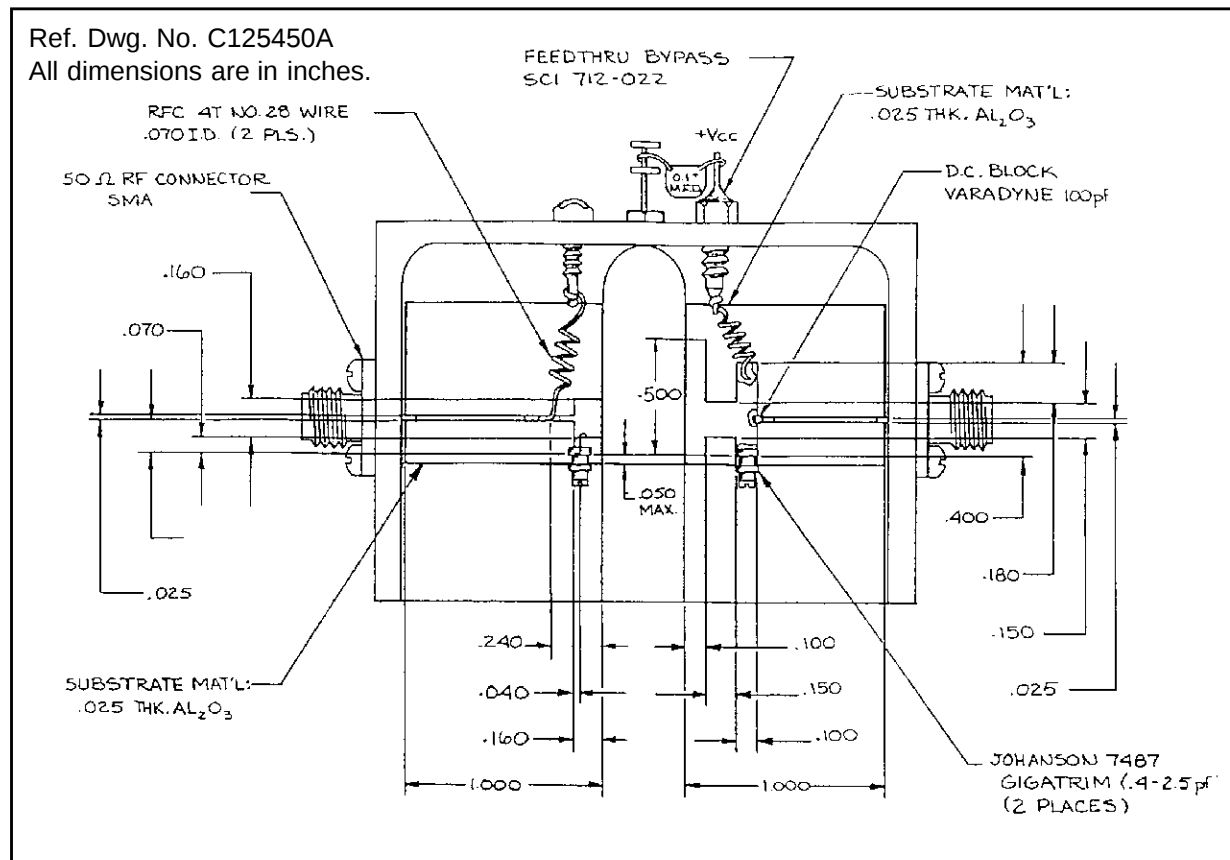
TYPICAL PERFORMANCE



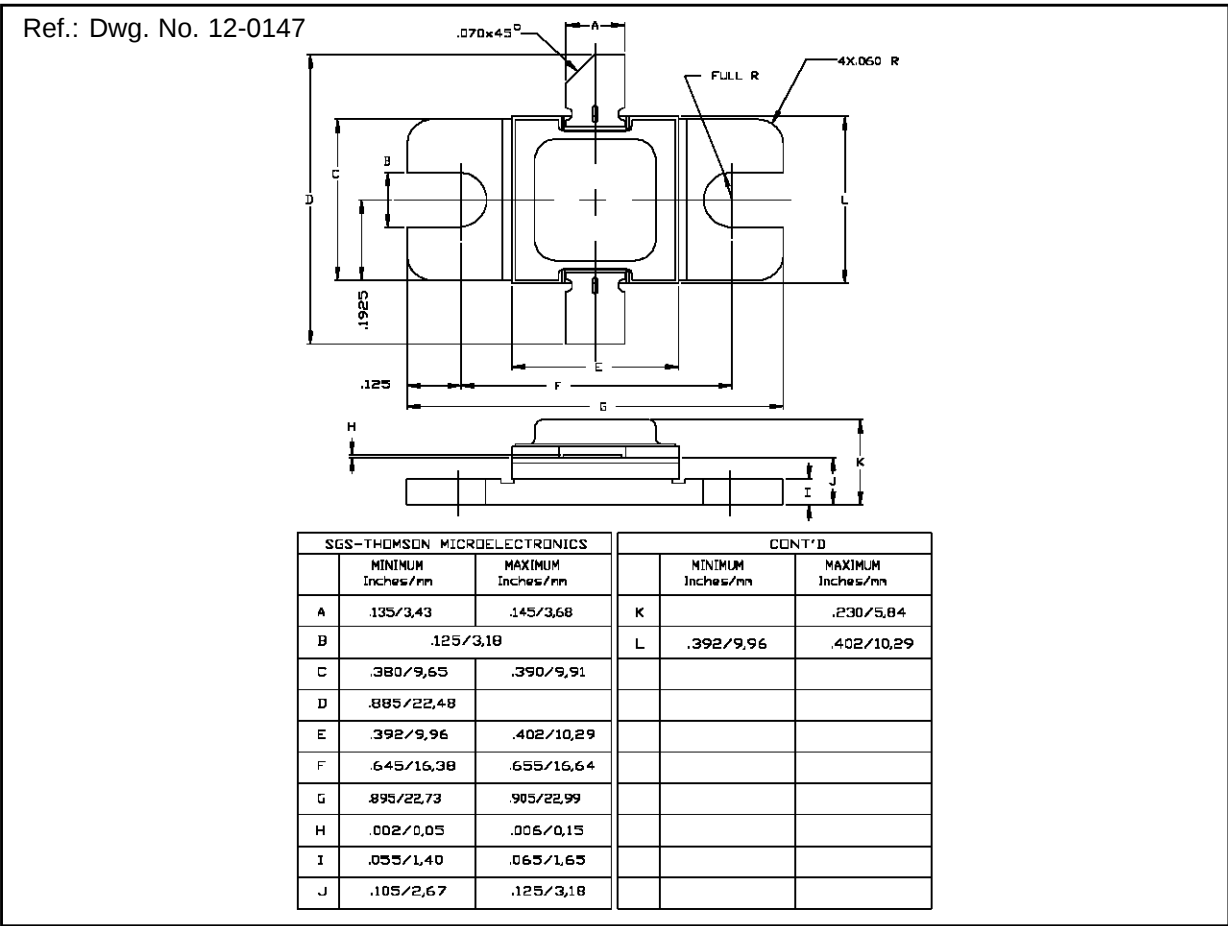
IMPEDANCE DATA



TEST CIRCUIT



PACKAGE MECHANICAL DATA



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