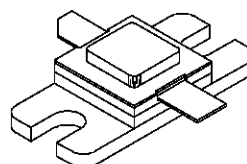


RF & MICROWAVE TRANSISTORS TELEMETRY APPLICATIONS

PRELIMINARY DATA

- REFRACTORY/GOLD METALLIZATION
- EMITTER SITE BALLASTED
- INPUT/OUTPUT MATCHING
- OVERLAY GEOMETRY
- METAL/CERAMIC HERMETIC PACKAGE
- $P_{OUT} = 40$ W MIN. WITH 7 dB GAIN



.400 X .400 2 LFL (M228)
hermetically sealed

ORDER CODE
AM81719-040

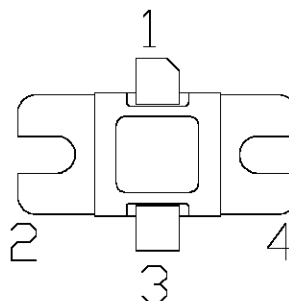
BRANDING
81719-40

DESCRIPTION

The AM81719-040 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-ballasted refractory-gold overlay die geometry with computerized automatic wire-bonding is employed to ensure long-term reliability and product consistency.

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*	79.5	W
I_C	Device Current*	4.8	A
V_{CC}	Collector-Supply Voltage*	30	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*	2.2	$^{\circ}\text{C/W}$
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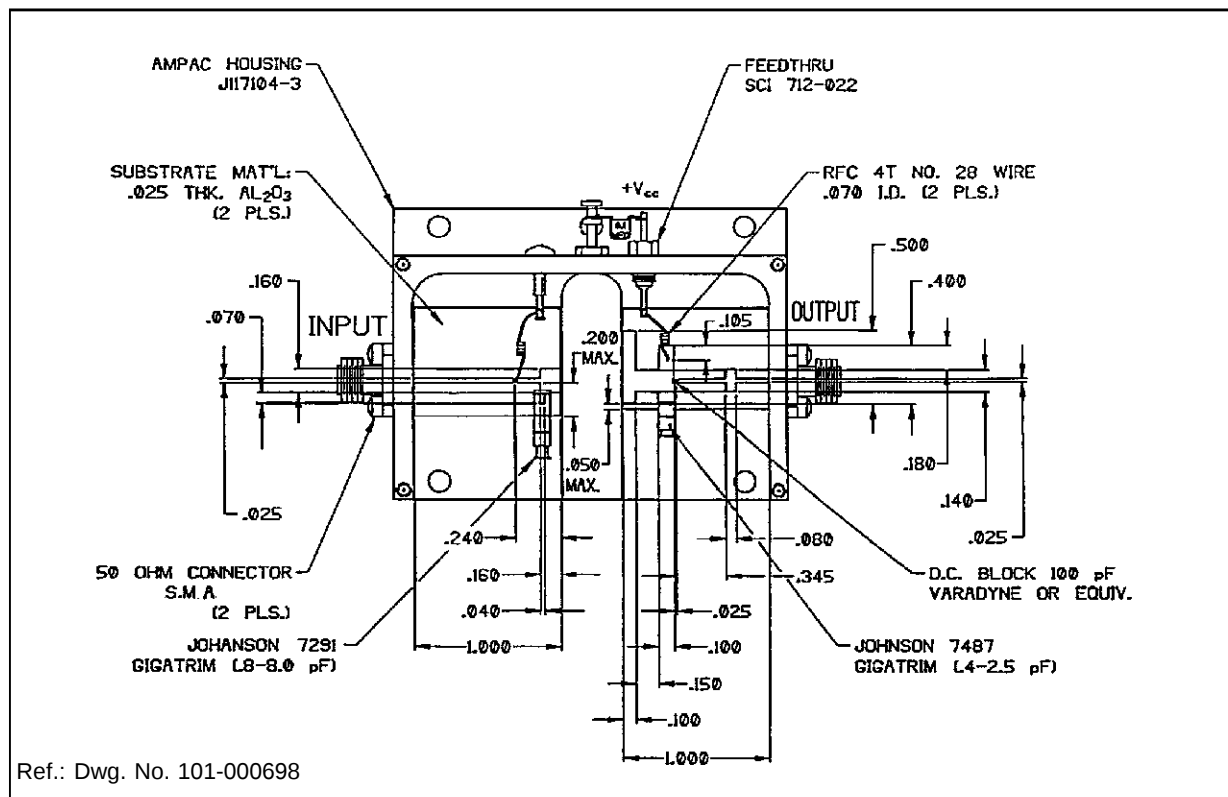
*Applies only to rated RF amplifier operation

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

Symbol	Test Conditions	Value			Unit
		Min.	Typ.	Max.	
BV_{CBO}	$I_C = 50 \text{ mA}$ $I_E = 0 \text{ mA}$	42	—	—	V
BV_{EBO}	$I_E = 4 \text{ mA}$ $I_C = 0 \text{ mA}$	3.5	—	—	V
BV_{CES}	$I_C = 80 \text{ mA}$	45	—	—	V
I_{CBO}	$V_{CB} = 28 \text{ V}$	—	—	8	mA
h_{FE}	$V_{CE} = 30 \text{ V}$ $I_C = 2.5 \text{ A}$	30	—	300	—

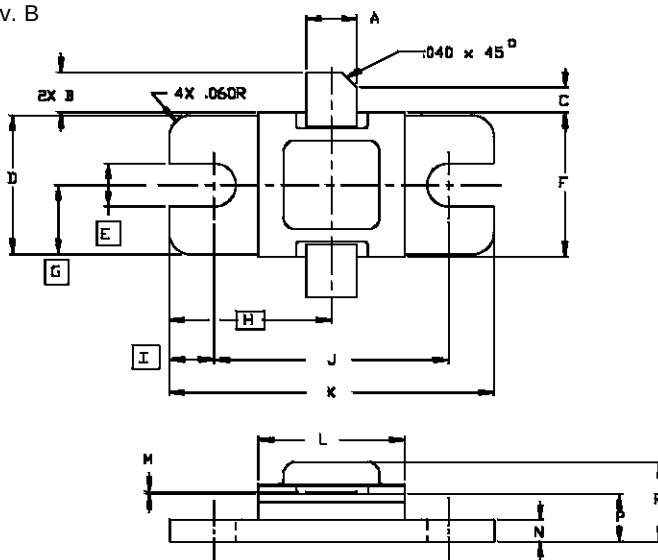
DYNAMIC

Symbol	Test Conditions	Value			Unit
		Min.	Typ.	Max.	
P_{OUT}	$f = 1750 - 1850 \text{ MHz}$ $P_{IN} = 8.0 \text{ W}$ $V_{CC} = 28 \text{ V}$	40	—	—	W
η_C	$f = 1750 - 1850 \text{ MHz}$ $P_{IN} = 8.0 \text{ W}$ $V_{CC} = 28 \text{ V}$	43	—	—	%
G_P	$f = 1750 - 1850 \text{ MHz}$ $P_{IN} = 8.0 \text{ W}$ $V_{CC} = 28 \text{ V}$	6.7	—	—	dB

TEST CIRCUIT

PACKAGE MECHANICAL DATA

Ref: Dwg. No. 12-0228 rev. B



SGS-THOMSON MICROELECTRONICS		
	MINIMUM Inches/mm	MAXIMUM Inches/mm
A	.135/3,43	.145/3,68
B	.100/2,54	.120/3,05
C	.050/1,27	
D	.376/9,55	.396/10,06
E	.125/3,18	.135/3,43
F	.395/10,03	.407/10,34
G	.193/4,90	
H	.450/11,43	
I	.125/3,18	
J	.640/16,26	.660/16,76

CONT'D		
	MINIMUM Inches/mm	MAXIMUM Inches/mm
K	.890/22,61	.910/23,11
L	.395/10,03	.415/10,54
M	.003/0,08	.006/0,15
N	.052/1,32	.072/1,83
P	.114/2,90	.130/3,30
R		.230/5,84

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