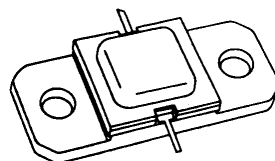


RF & MICROWAVE TRANSISTORS UHF COMMUNICATIONS APPLICATIONS

- REFRACTORY/GOLD METALLIZATION
- EMITTER SITE BALLASTED
- INPUT/OUTPUT MATCHING
- METAL/CERAMIC HERMETIC PACKAGE
- $P_{OUT} = 30 \text{ W MIN. WITH } 8.5 \text{ dB GAIN}$



.400 x .400 2NLFL (S042)
hermetically sealed

ORDER CODE

AM80610-030

BRANDING

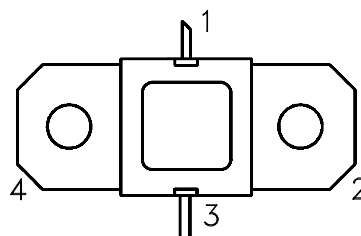
80610-30

DESCRIPTION

The AM80610-030 is a high power, common base NPN silicon bipolar device optimized for CW operation in the 620 - 960 MHz frequency range.

AM80610-030 utilizes a rugged, overlay, emitter-ballasted L-Band die geometry to achieve high gain and collector efficiency and is suitable for driver or output stage use in Class C power amplifiers. Typical applications include military communications, ECM, and test equipment.

The AM80610-030 is provided in the industry-standard, metal/ceramic AMPAC™ hermetic 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* ($T_C \leq 50^{\circ}\text{C}$)	57	W
I_C	Device Current*	3.0	A
V_{CC}	Collector-Supply Voltage*	32	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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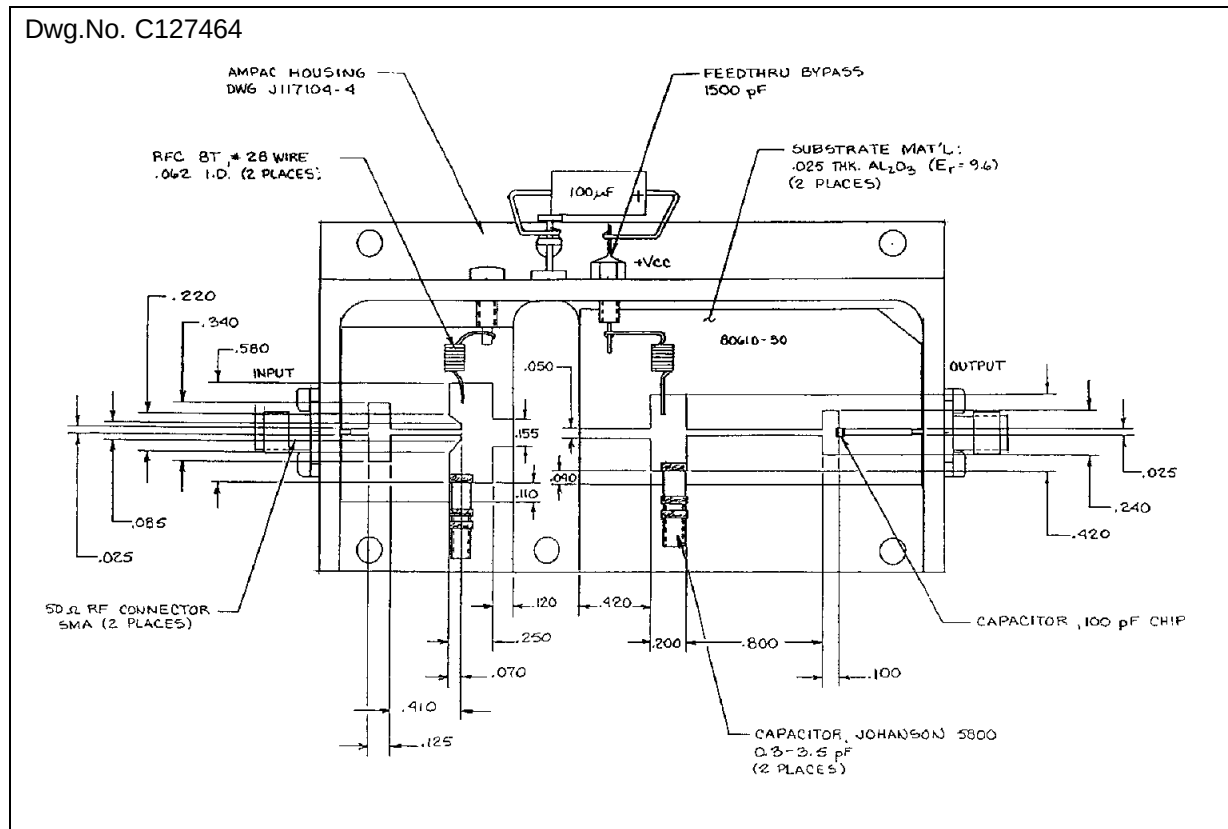
*Applies only to rated RF amplifier operation

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

Symbol	Test Conditions	Value			Unit
		Min.	Typ.	Max.	
BV_{CBO}	$I_{\text{C}} = 20 \text{ mA}$ $I_{\text{E}} = 0 \text{ mA}$	55	—	—	V
BV_{EBO}	$I_{\text{E}} = 2 \text{ mA}$ $I_{\text{C}} = 0 \text{ mA}$	3.5	—	—	V
BV_{CER}	$I_{\text{C}} = 40 \text{ mA}$ $R_{\text{BE}} = 10 \Omega$	55	—	—	V
I_{CES}	$V_{\text{BE}} = 0 \text{ V}$ $V_{\text{CE}} = 28 \text{ V}$	—	—	10	mA
h_{FE}	$V_{\text{CE}} = 5 \text{ V}$ $I_{\text{C}} = 2 \text{ A}$	15	—	150	—

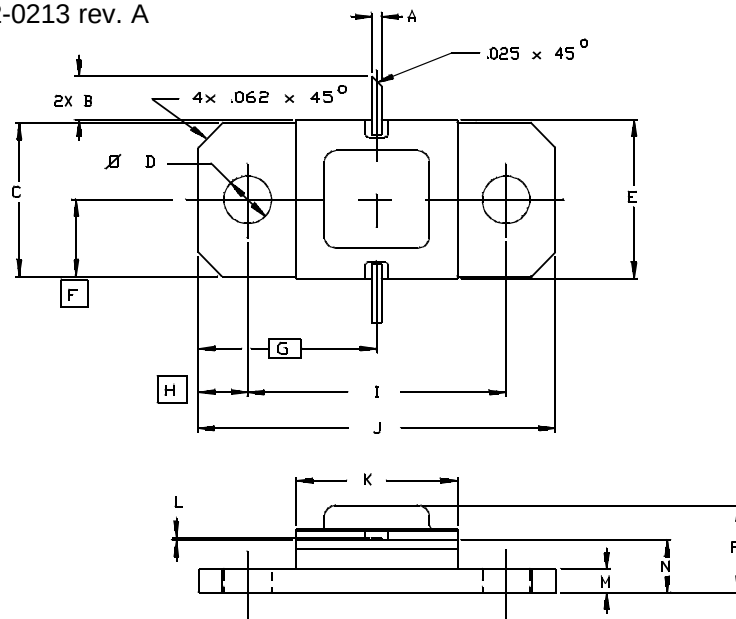
DYNAMIC

Symbol	Test Conditions	Value			Unit
		Min.	Typ.	Max.	
P_{OUT}	$f = 620 - 960 \text{ MHz}$ $P_{\text{IN}} = 4.2 \text{ W}$ $V_{\text{CC}} = 28 \text{ V}$	30	—	—	W
η_{C}	$f = 620 - 960 \text{ MHz}$ $P_{\text{IN}} = 4.2 \text{ W}$ $V_{\text{CC}} = 28 \text{ V}$	50	—	—	%
G_{P}	$f = 620 - 960 \text{ MHz}$ $P_{\text{IN}} = 4.2 \text{ W}$ $V_{\text{CC}} = 28 \text{ V}$	8.5	—	—	dB

TEST CIRCUIT

PACKAGE MECHANICAL DATA

Ref.: Dwg. No. 12-0213 rev. A



SGS-THOMSON MICROELECTRONICS			CONT'D		
	MINIMUM Inches/mm	MAXIMUM Inches/mm		MINIMUM Inches/mm	MAXIMUM Inches/mm
A	.020/0,51	.030/0,76	K	.395/10,03	.415/10,54
B	.100/2,54		L	.004/0,10	.006/0,18
C	.376/9,55	.396/10,06	M	.052/1,32	.072/1,83
D	.110/2,79	.130/3,30	N	.118/3,00	.131/3,33
E	.395/10,03	.407/10,34	P		.230/5,84
F	.193/4,90				
G	.450/11,43				
H	.125/3,18				
I	.640/16,26	.660/16,76			
J	.890/22,61	.910/23,11			

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