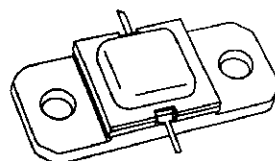


RF & MICROWAVE TRANSISTORS UHF COMMUNICATIONS APPLICATIONS

- 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

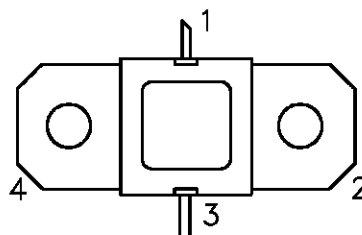
DESCRIPTION

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	$^{\circ}\text{C/W}$
---------------	-----------------------------------	-----	----------------------

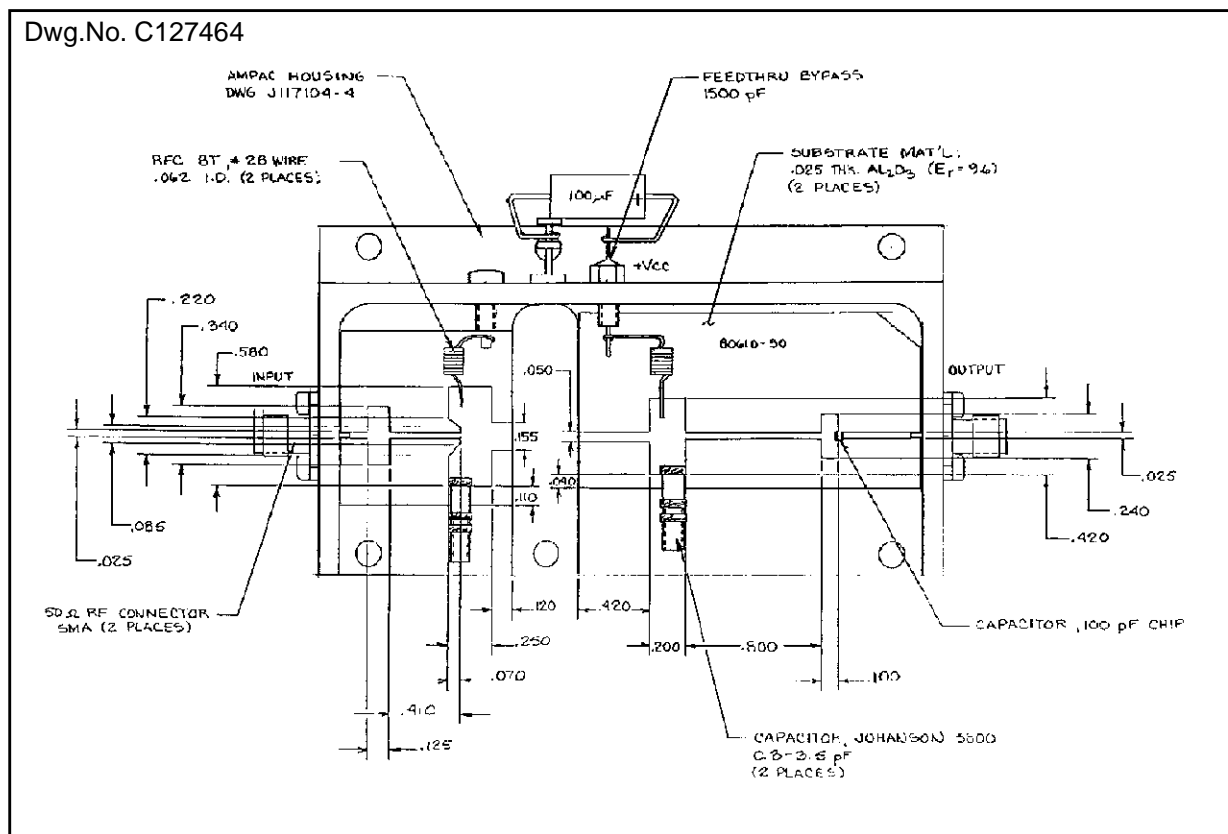
*Applies only to rated RF amplifier operation

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	—

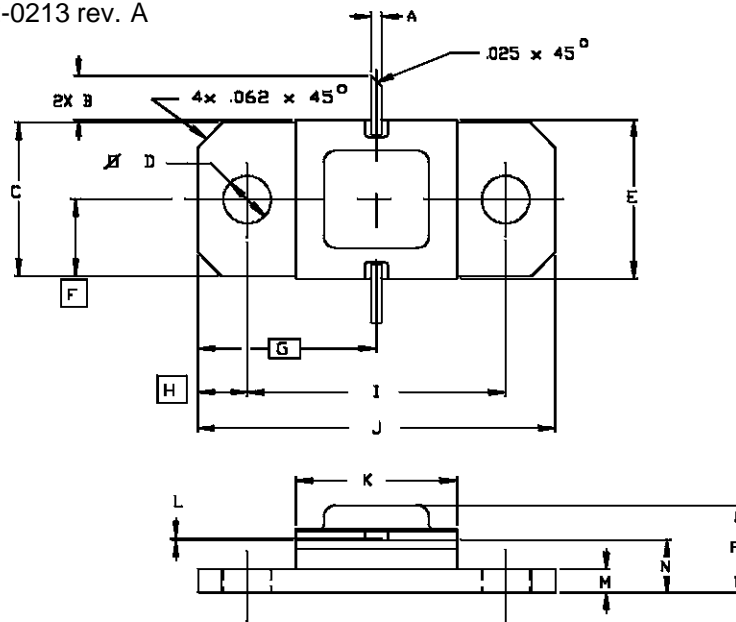
DYNAMIC

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			

Information furnished is believed to be accurate and reliable. However, SGS-THOMSON Microelectronics assumes no responsibility for the consequences of use of such information nor for any infringement of patents or other rights of third parties which may result from its use. No license is granted by implication or otherwise under any patent or patent rights of SGS-THOMSON Microelectronics. Specifications mentioned in this publication are subject to change without notice. This publication supersedes and replaces all information previously supplied. SGS-THOMSON Microelectronics products are not authorized for use as critical components in life support devices or systems without express written approval of SGS-THOMSON Microelectronics.

©1995 SGS-THOMSON Microelectronics - All Rights Reserved

SGS-THOMSON Microelectronics GROUP OF COMPANIES

Australia - Brazil - France - Germany - Hong Kong - Italy - Japan - Korea - Malaysia - Malta - Morocco - The Netherlands - Singapore - Spain - Sweden - Switzerland - Taiwan - Thailand - United Kingdom - U.S.A.