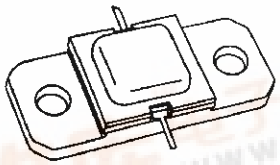
SGS-THOMSON MICROELECTRONICS

AM80610-030

RF & MICROWAVE TRANSISTORS UHF COMMUNICATIONS APPLICATIONS

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



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

ORDER CODE	BRANDING
AM80610-030	80610-30

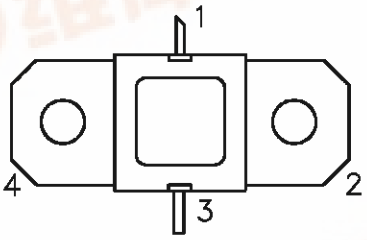
DESCRIPTION

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
2. Base
3. Emitter
4. Base

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

Symbol	Parameter	Value	Unit
P_{DISS}	Power Dissipation* ($T_C \leq 50°C$)	57	W
I_C	Device Current*	3.0	A
V_{CC}	Collector-Supply Voltage*	32	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

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

STATIC

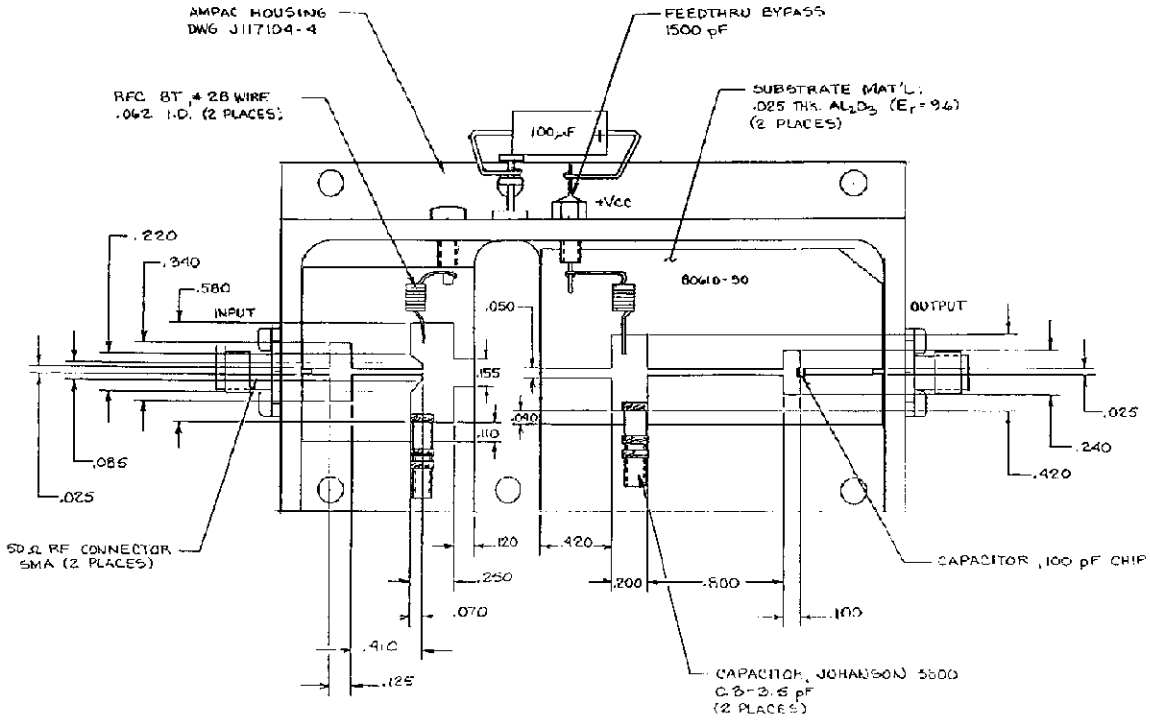
Symbol	Test Conditions		Value			Unit
			Min.	Typ.	Max.	
BV_{CBO}	I_C = 20 mA	I_E = 0 mA	55	—	—	V
BV_{EBO}	I_E = 2 mA	I_C = 0 mA	3.5	—	—	V
BV_{CER}	I_C = 40 mA	R_{BE} = 10 Ω	55	—	—	V
I_{CES}	V_{BE} = 0 V	V_{CE} = 28 V	—	—	10	mA
h_{FE}	V_{CE} = 5 V	I_C = 2 A	15	—	150	—

DYNAMIC

Symbol	Test Conditions			Value			Unit
				Min.	Typ.	Max.	
P_{OUT}	f = 620 – 960 MHz	P_{IN} = 4.2 W	V_{CC} = 28 V	30	—	—	W
η_C	f = 620 – 960 MHz	P_{IN} = 4.2 W	V_{CC} = 28 V	50	—	—	%
G_P	f = 620 – 960 MHz	P_{IN} = 4.2 W	V_{CC} = 28 V	8.5	—	—	dB

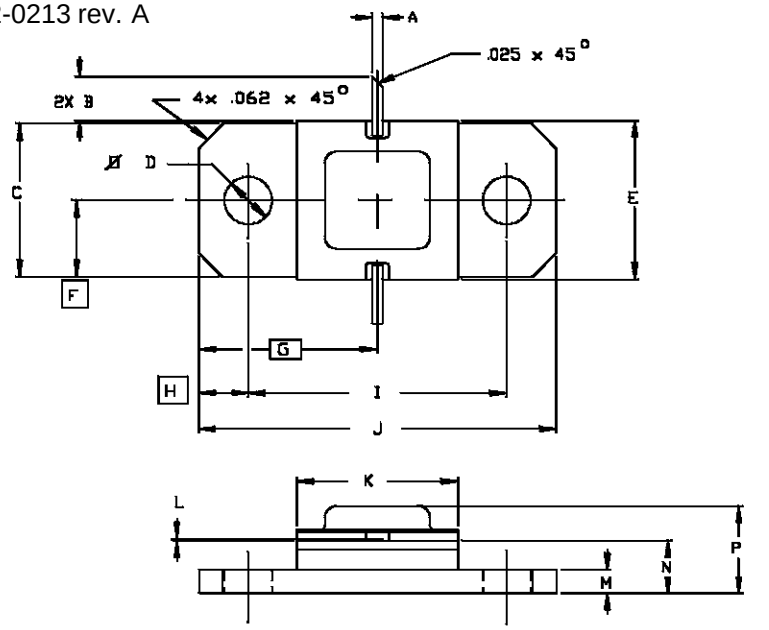
TEST CIRCUIT

Dwg.No. C127464



PACKAGE MECHANICAL DATA

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



SGS-THOMSON MICROELECTRONICS		
	MINIMUM Inches/mm	MAXIMUM Inches/mm
A	.020/0,51	.030/0,76
B	.100/2,54	
C	.376/9,55	.396/10,06
D	.110/2,79	.130/3,30
E	.395/10,03	.407/10,34
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

CONT'D		
	MINIMUM Inches/mm	MAXIMUM Inches/mm
K	.395/10,03	.415/10,54
L	.004/0,10	.006/0,18
M	.052/1,32	.072/1,83
N	.118/3,00	.131/3,33
P		.230/5,84