

GENERAL DESCRIPTION

This device utilizes the most advanced design and process technologies. These features provide the most consistent and reliable chip and package combination designed, built and tested specifically for use in VHF, 12 volt land mobile applications.

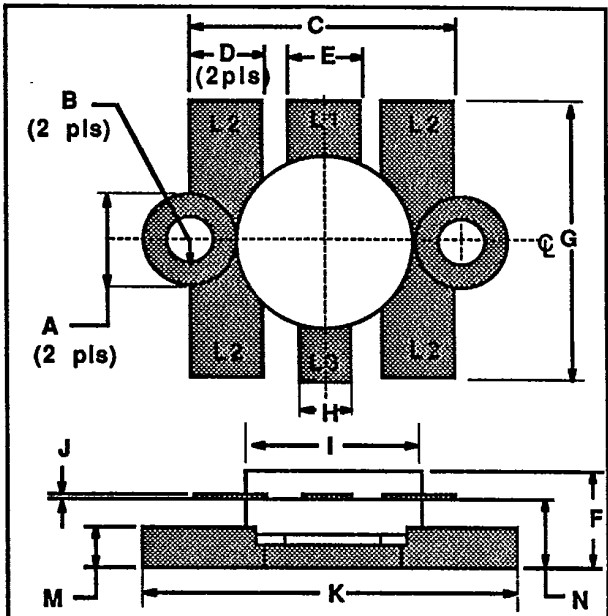
VMOB70
70 WATT - 12.5 VOLTS
136-175 MHz

MOBILE COMMUNICATIONS

ABSOLUTE MAXIMUM RATINGS

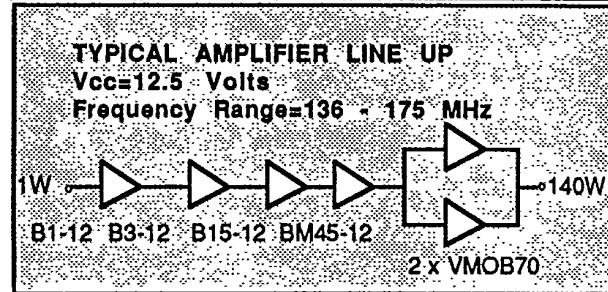
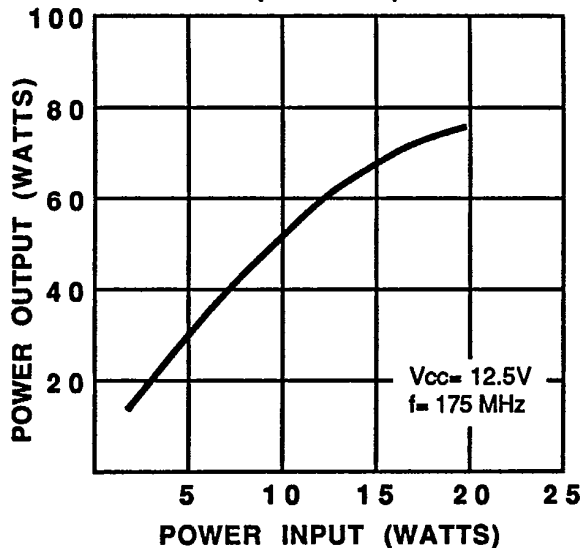
Maximum Power Dissipation @ 25°C Case Temperature	195 W
Maximum Voltage and Current	
BVces Collector to Emitter Voltage	36V
BVebo Emitter to Base Voltage	4.0V
Ic Collector Current	15 A

Maximum Temperatures	
Storage Temperature	-65 to +150 °C
Operating Junction Temperature	+200 °C



DIM	Millimeter	TOL	Inches	TOL
A	6.35 DIA	.13	.250 DIA	.005
B	3.17 DIA	.13	.125 DIA	.005
C	18.41	.13	.725	.005
D	5.46	.13	.215	.005
E	5.21	.13	.205	.005
F	6.73	REF	.265	REF
G	17.27	.38	.680	.015
H	3.94	.13	.155	.005
I	12.70 DIA	.13	.500 DIA	.005
J	0.13	.02	.005	.001
K	24.76	.13	.975	.005
M	2.41	.13	.095	.005
N	4.32	.13	.170	.005

POWER OUTPUT VS POWER INPUT (TYPICAL)

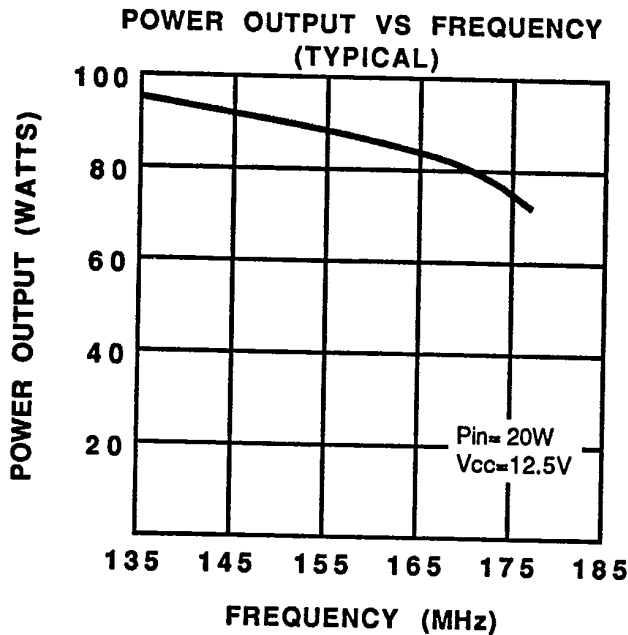


VMOB70-2

ELECTRICAL CHARACTERISTICS¹

SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN.	TYP.	MAX.	UNITS
P _{out}	Power Output	f = 136 - 175 MHz V _{cc} = 12.5V	70			Watts
P _{in}	Power Input			18	20	Watts
P _g	Power Gain			6.0		dB
η _c	Collector Efficiency			65		%
V _{SWR}	Load Mismatch Tolerance	f = 150 MHz, P _{in} = 20W, V _{cc} = 16V			25:1	
B _{Vebo}	Breakdown Voltage (Emitter to Base)	I _c = 0A, I _e = 10mA	4.0			Volts
B _{Vces}	Breakdown Voltage (Collector to Emitter)	V _{be} = 0A, I _c = 50 mA	36			Volts
B _{Vceo}	Breakdown Voltage (Collector to Emitter)	I _b = 0A, I _c = 50 mA	16			Volts
θ _{jc}	Thermal Resistance				0.9	°C/W
h _{FE}	DC Current Gain	V _c = 5v, I _c = 1A	10			

Note 1: T_c = +25°C unless otherwise specified

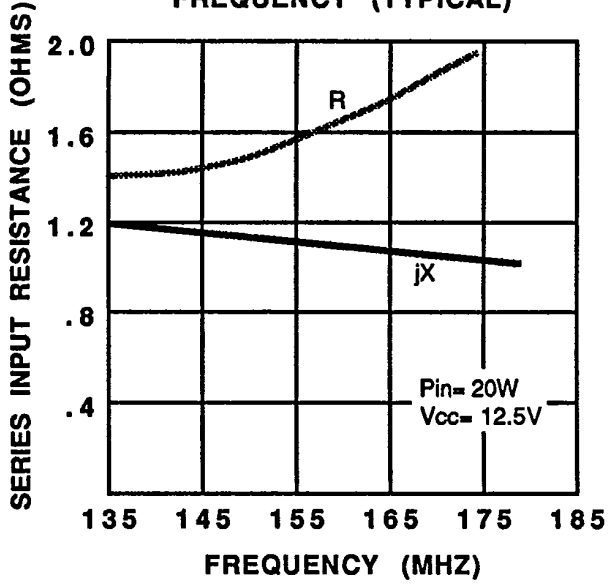


SPECIFICATIONS MAY BE SUBJECT TO CHANGE WITHOUT NOTICE

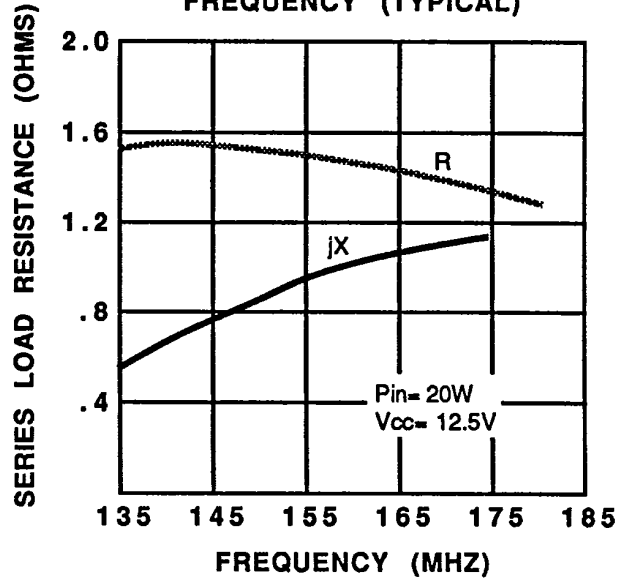
296

VMOB70-3

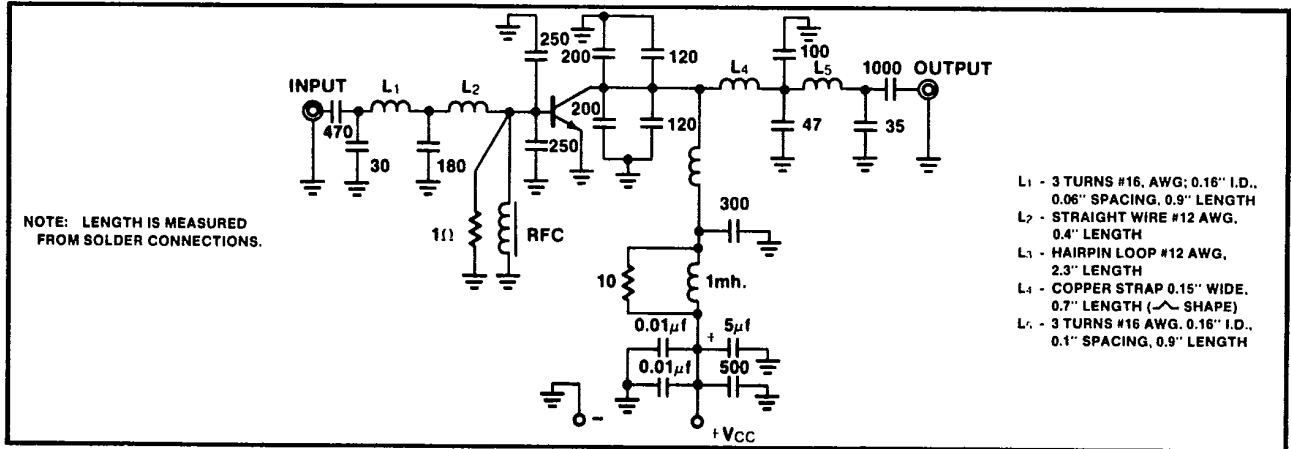
SERIES INPUT IMPEDANCE VS FREQUENCY (TYPICAL)



SERIES LOAD IMPEDANCE VS FREQUENCY (TYPICAL)



136-175 MHz TEST AMPLIFIER



NOTE 1. Under the normal operating conditions as specified. Junction temperature to be 200°C maximum as measured by I.R. scan of the chip.

299