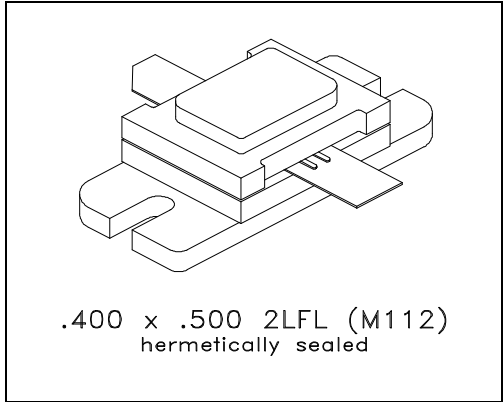


MS2475

**RF & MICROWAVE TRANSISTORS
 AVIONICS APPLICATIONS**

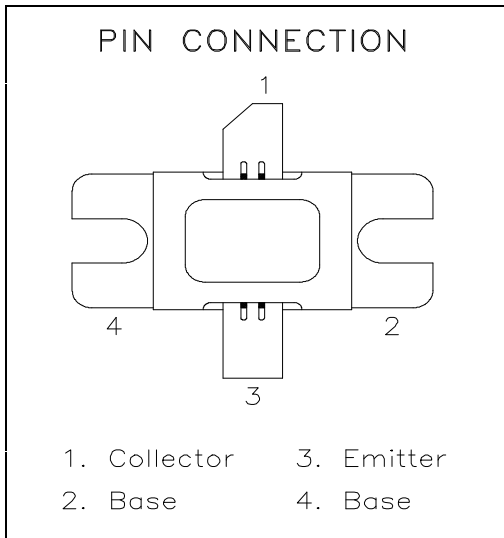
Features

- DESIGNED FOR HIGH POWER PULSED IFF
- 720 WATTS (min.) IFF 1030 or 1090 MHz
- REFRACTORY GOLD METALLIZATION
- 6.8 dB MIN. GAIN
- LOW THERMAL RESISTANCE FOR RELIABILITY AND RUGGEDNESS
- 30:1 LOAD VSWR CAPABILITY AT SPECIFIED OPERATING CONDITIONS
- INPUT MATCHED, COMMON BASE CONFIGURATION



DESCRIPTION:

The MS2475 is a silicon NPN power transistor designed for IFF applications. The MS2475 is designed to exceed the high peak power requirements of today's IFF systems. Hermetic sealing, gold metalization and internal input matching provide superior long term reliability and broadband performance.



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

Symbol	Parameter	Value	Unit
V _{CC}	Collector-Supply Voltage*	55	V
I _C	Device Current* (T _C ≤ 100°C)	45	A
P _{DISS}	Power Dissipation*	1670	W
T _J	Junction Temperature	+200	°C
T _{STG}	Storage Temperature	- 65 to + 200	°C

Thermal Data

R _{TH(j-c)}	Junction-Case Thermal Resistance*	0.06	°C/W
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* Applies only to rated RF operation.

ELECTRICAL SPECIFICATIONS (Tcase = 25°C)

STATIC

Symbol	Test Conditions		Value			Unit
			Min.	Typ.	Max.	
BV_{CBO}	I_C = 25 mA	I_E = 0 mA	65	----	----	V
BV_{CER}	I_C = 25 mA	R_{BE} = 10 Ω	65	----	----	V
BV_{EBO}	I_E = 10 mA	I_C = 0 mA	3.5	----	----	V
I_{CES}	V_{CE} = 50 V	V_{BE} = 0 V	----	----	60	mA
h_{FE}	V_{CE} = 5 V	I_C = 2 A	10	----	250	----

DYNAMIC

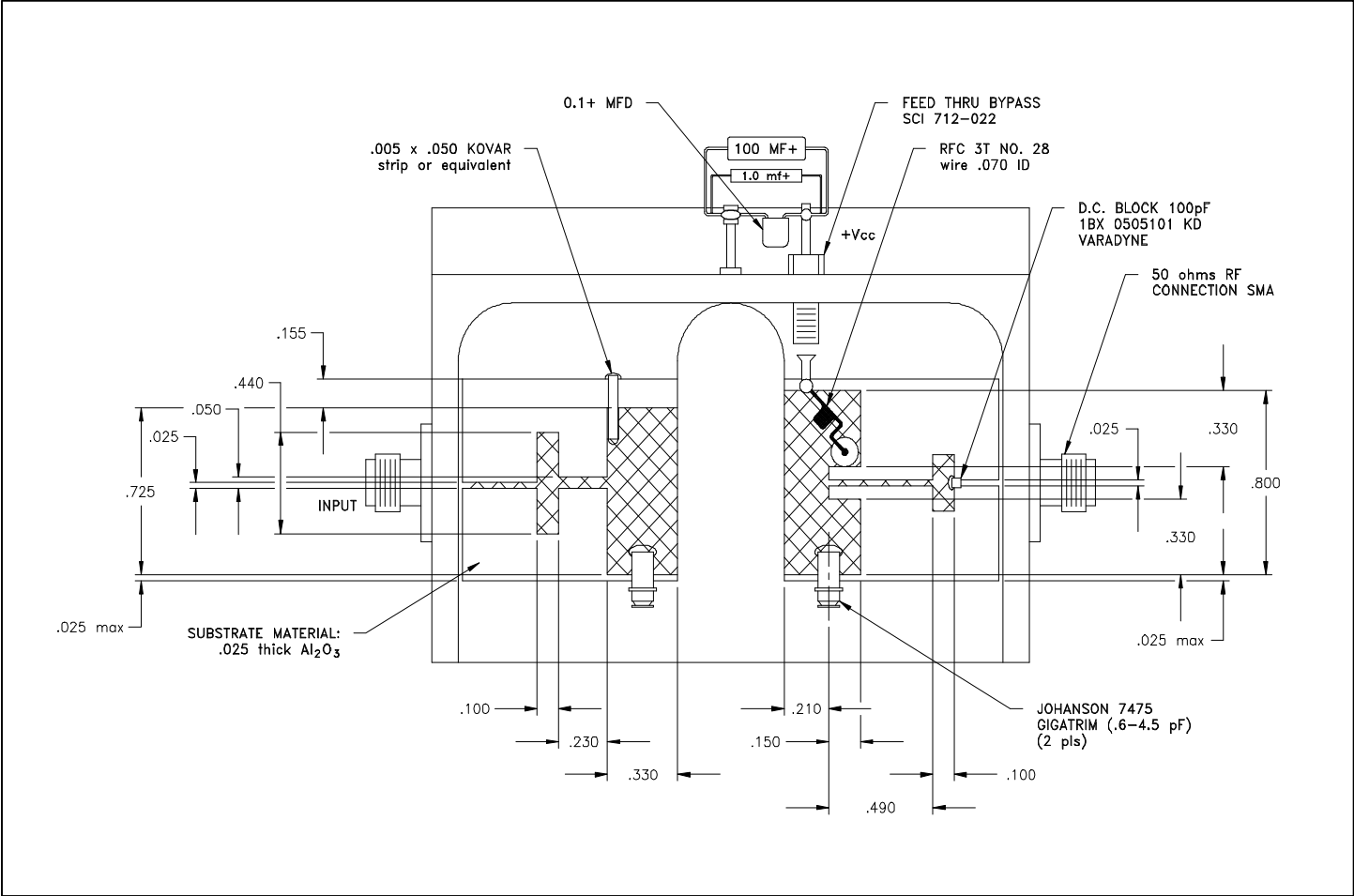
Symbol	Test Conditions			Value			Unit
				Min.	Typ.	Max.	
P_{OUT}	f = 1090 MHz	P_{IN} = 150 W	V_{CC} = 50 V	720	----	----	W
h_C	f = 1090 MHz	P_{IN} = 150 W	V_{CC} = 50 V	35	----	----	%
G_P	f = 1090 MHz	P_{IN} = 150 W	V_{CC} = 50 V	6.8	----	----	dB

Note: Pulse width = 10μSec. Duty Cycle = 1%

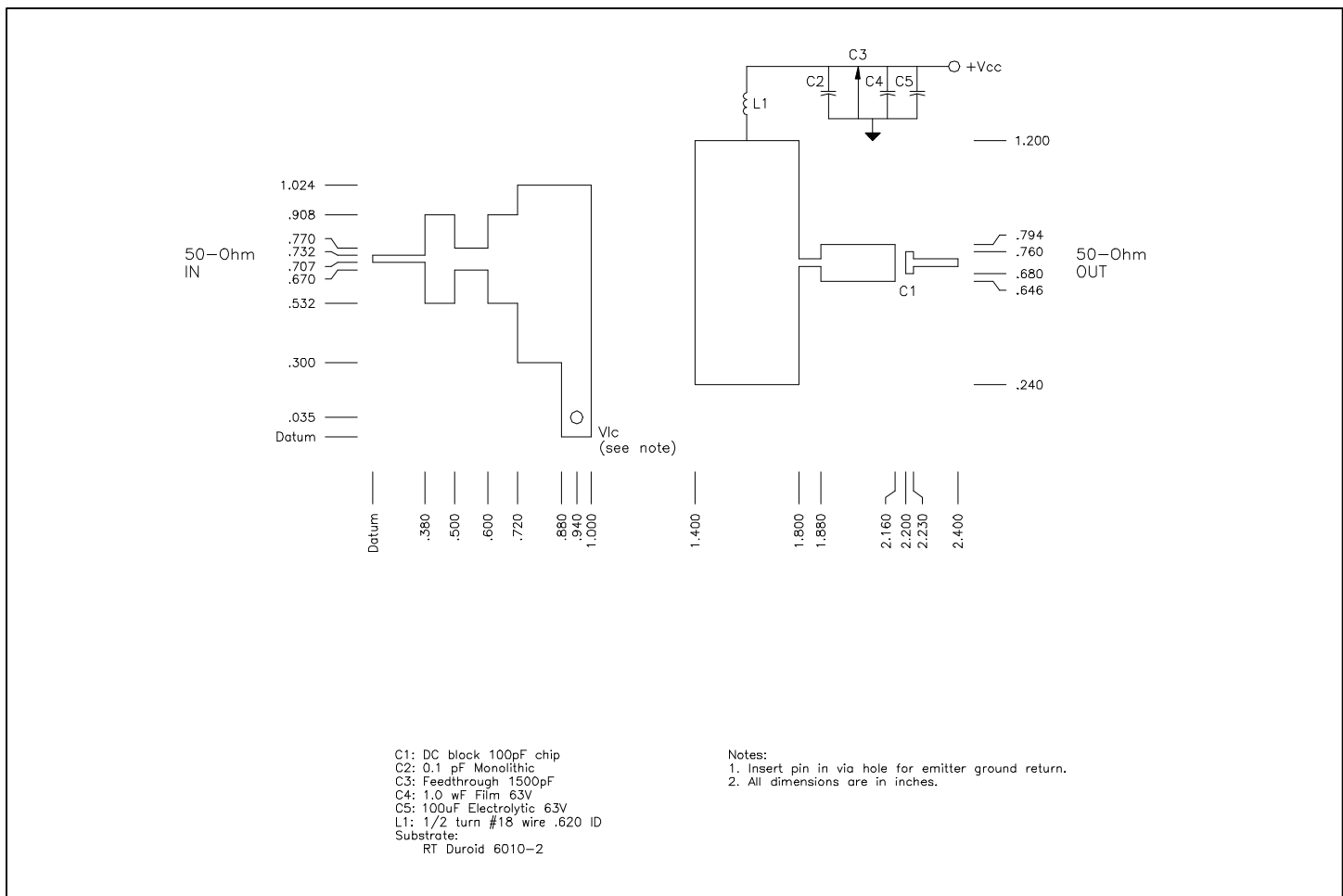
IMPEDANCE DATA:

FREQUENCY	Zin	Zcl
1030 MHz	4.18 + j1.32	0.81 + j0.55
1090 MHz	3.16 + j1.24	0.75 + j0.60

Test Circuit (1090 MHz)

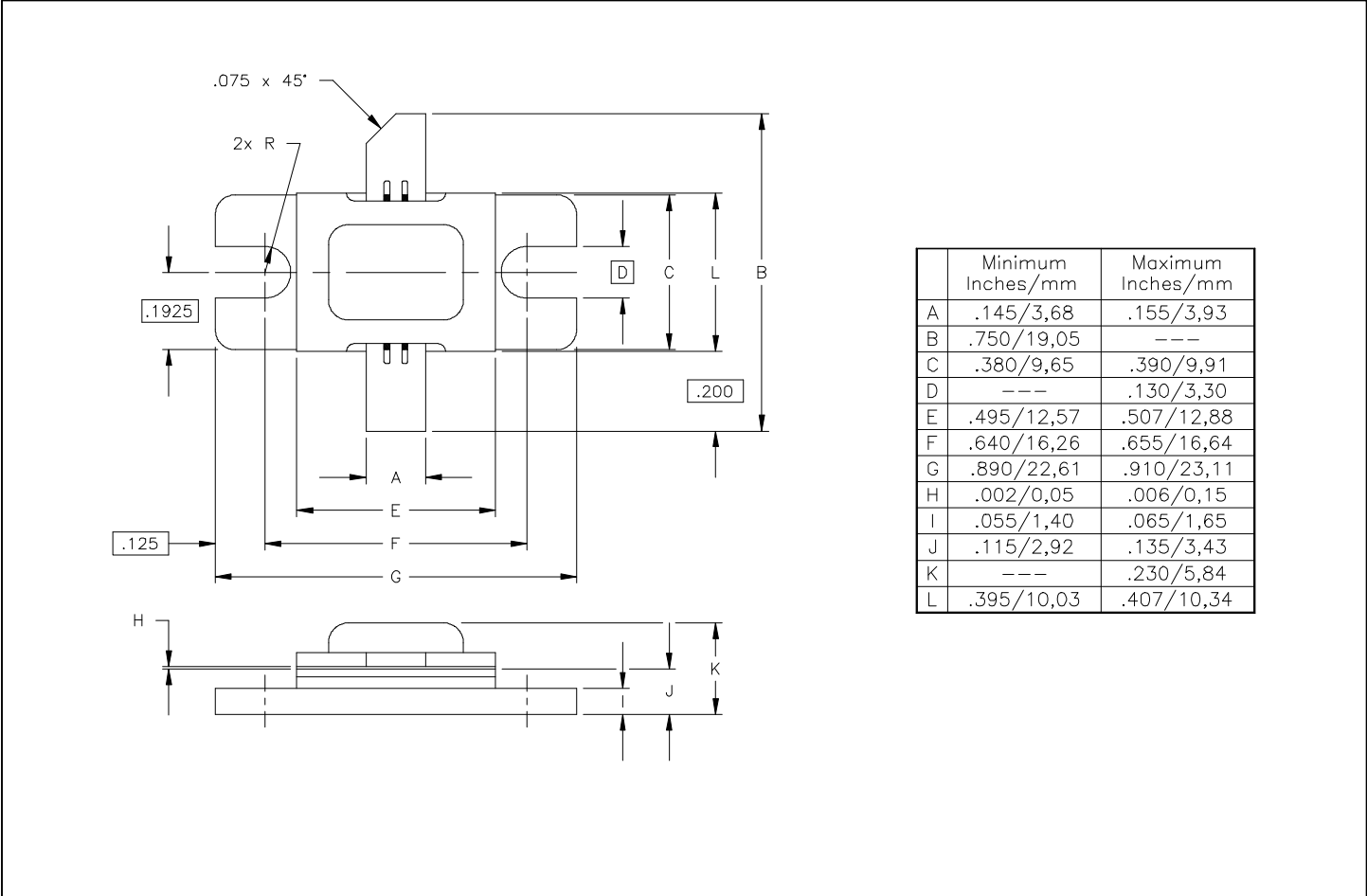


1030 MHz Typical Circuit



MS2475

PACKAGE MECHANICAL DATA



	Minimum Inches/mm	Maximum Inches/mm
A	.145/3,68	.155/3,93
B	.750/19,05	---
C	.380/9,65	.390/9,91
D	---	.130/3,30
E	.495/12,57	.507/12,88
F	.640/16,26	.655/16,64
G	.890/22,61	.910/23,11
H	.002/0,05	.006/0,15
I	.055/1,40	.065/1,65
J	.115/2,92	.135/3,43
K	---	.230/5,84
L	.395/10,03	.407/10,34