



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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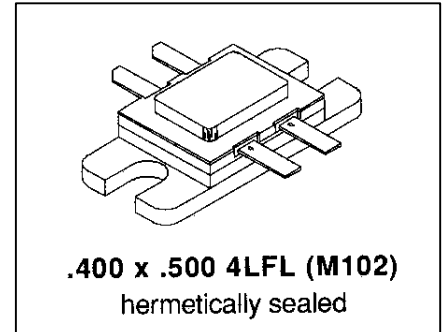


MS2200

**RF AND MICROWAVE TRANSISTORS
UHF PULSED APPLICATIONS**

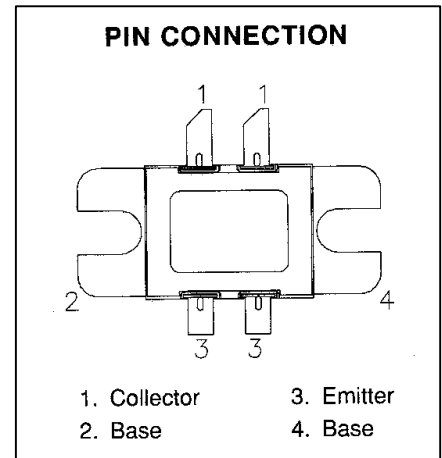
Features

- 500 Watts @ 250 μSec Pulse Width, 10% Duty Cycle
- Refractory Gold Metallization
- Emitter Ballasting And Low Resistance For Reliability and Ruggedness
- Infinite VSWR Capability At Specified Operating Conditions
- Input Matched, Common Base Configuration
- Balanced Configuration



DESCRIPTION:

The MS2200 is a hermetically sealed, gold metallized silicon NPN pulse power transistor mounted in a common base balanced configuration. The MS2200 is designed for applications requiring high peak power and low duty cycles within the frequency range of 400 – 500 MHz.



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

Symbol	Parameter	Value	Unit
V _{CBO}	Collector-Base Voltage	65	V
V _{CES}	Collector-Emitter Voltage	65	V
V _{EBO}	Emitter-Base Voltage	3.5	V
I _C	Device Current	43.2	A
P _{DISS}	Power Dissipation	1167	W
T _J	Junction Temperature	+200	°C
T _{STG}	Storage Temperature	-65 to +150	°C

Thermal Data

R_{TH(j-c)}	Junction-Case Thermal Resistance	0.15	°C/W
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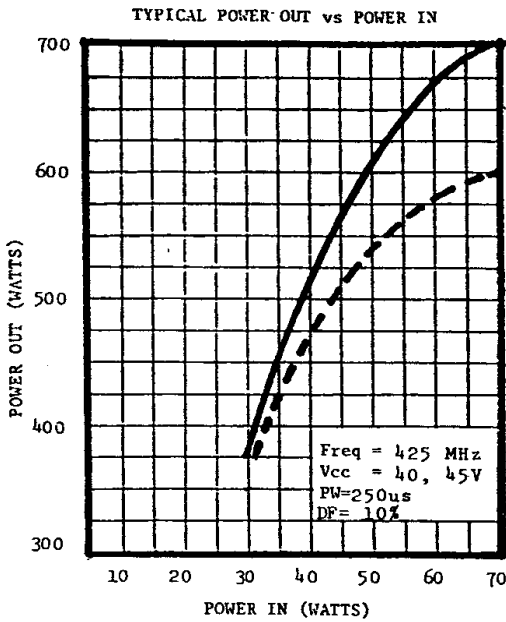
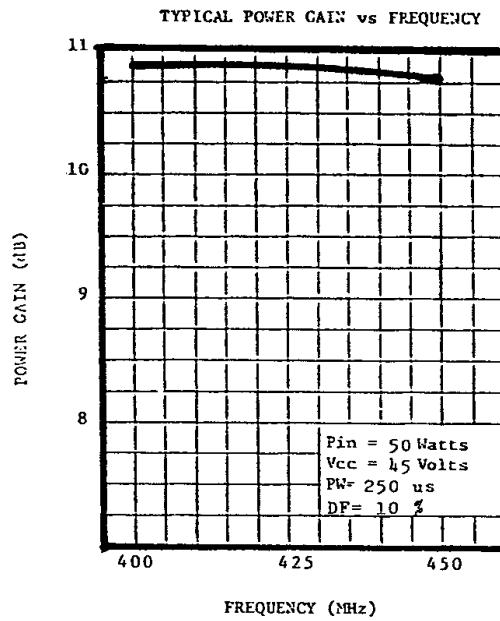
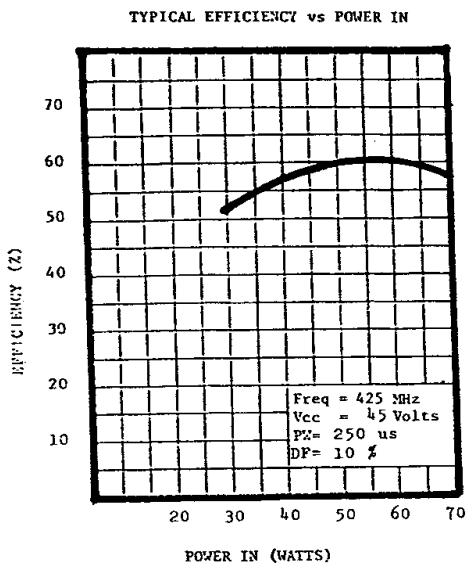
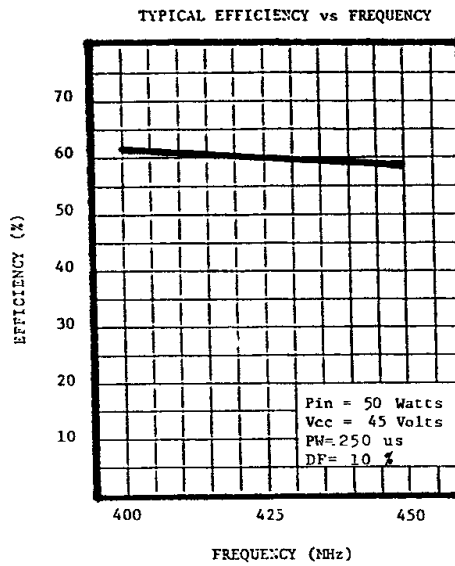
ELECTRICAL SPECIFICATIONS (T_{case} = 25 °C)
STATIC

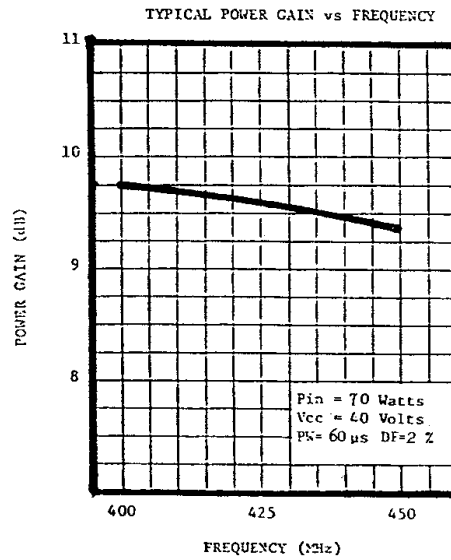
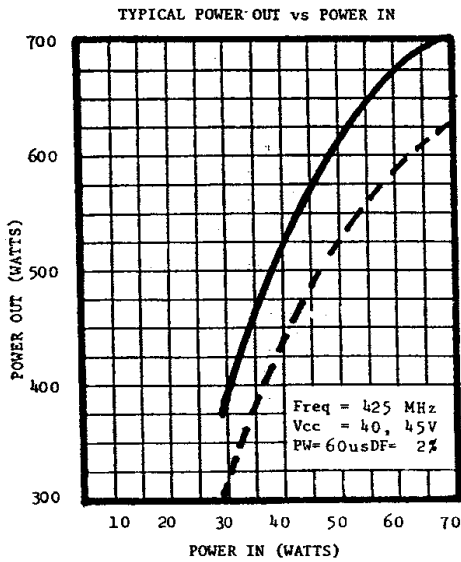
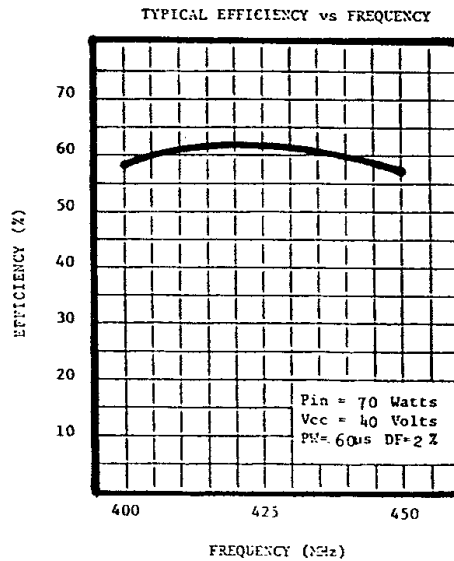
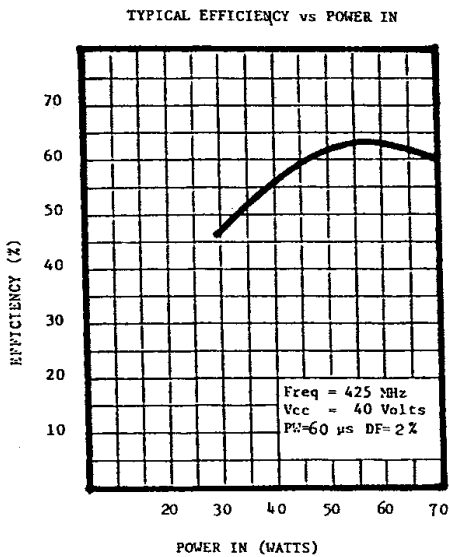
Symbol	Test Conditions	Value			Units
		Min.	Typ.	Max.	
BV_{CBO}	I_C = 50 mA I_E = 0 mA	65	—	—	V
BV_{CES}	I_C = 50 mA V_{BE} = 0 V	65	—	—	V
BV_{EBO}	I_E = 10 mA I_C = 0 mA	3.5	—	—	V
I_{CES}	V_{CE} = 30 V I_E = 0 mA	—	—	15	mA
h_{FE}	V_{CE} = 5 V I_C = 5 A	20	—	200	—

DYNAMIC

Symbol	Test Conditions	Value			Units
		Min.	Typ.	Max.	
P_{OUT}	f = 425 MHz P_{IN} = 54 W V_{CE} = 40 V	500	—	—	W
G_P	f = 425 MHz P_{IN} = 54 W V_{CE} = 40 V	9.7	—	—	Db
η_C	f = 425 MHz P_{IN} = 54 W V_{CE} = 40 V	50	—	—	%

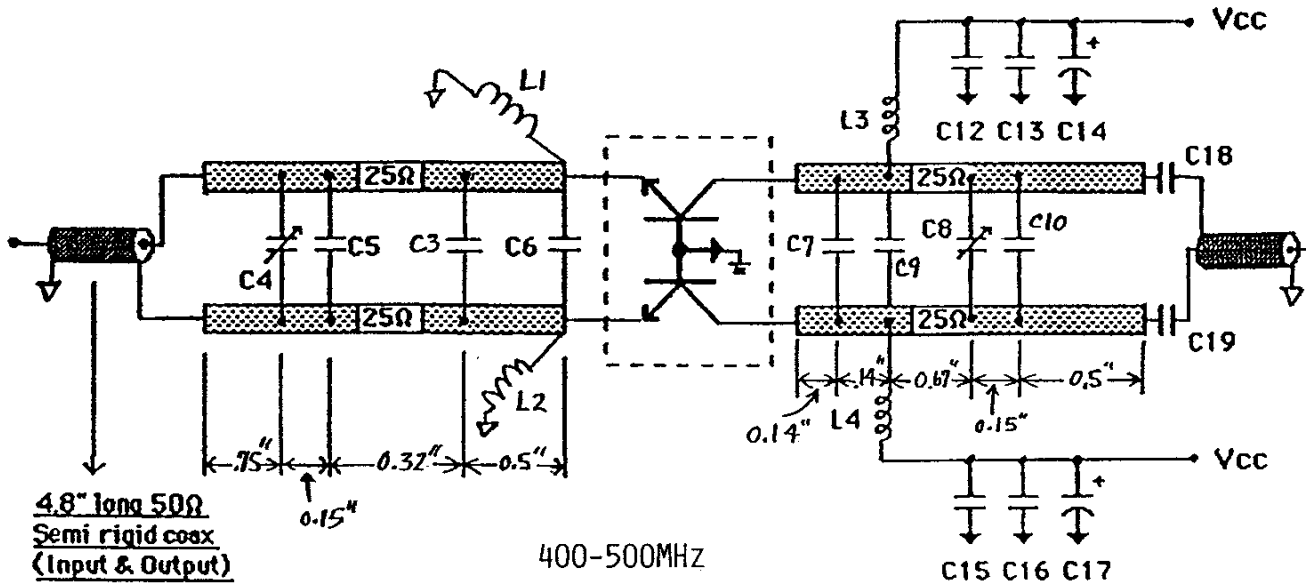
Note: Pulse Width = 250μSec, Duty Cycle = 10%
This device is suitable for use under other pulse width/duty cycle conditions.
Please contact the factory for specific applications assistance.

TYPICAL PERFORMANCE
POWER OUTPUT vs POWER INPUT

POWER GAIN vs FREQUENCY

EFFICIENCY vs POWER INPUT

EFFICIENCY vs FREQUENCY


TYPICAL PERFORMANCE (CONTINUED)
POWER OUTPUT vs POWER INPUT
POWER GAIN vs FREQUENCY

EFFICIENCY vs POWER INPUT
EFFICIENCY vs FREQUENCY


MS2200

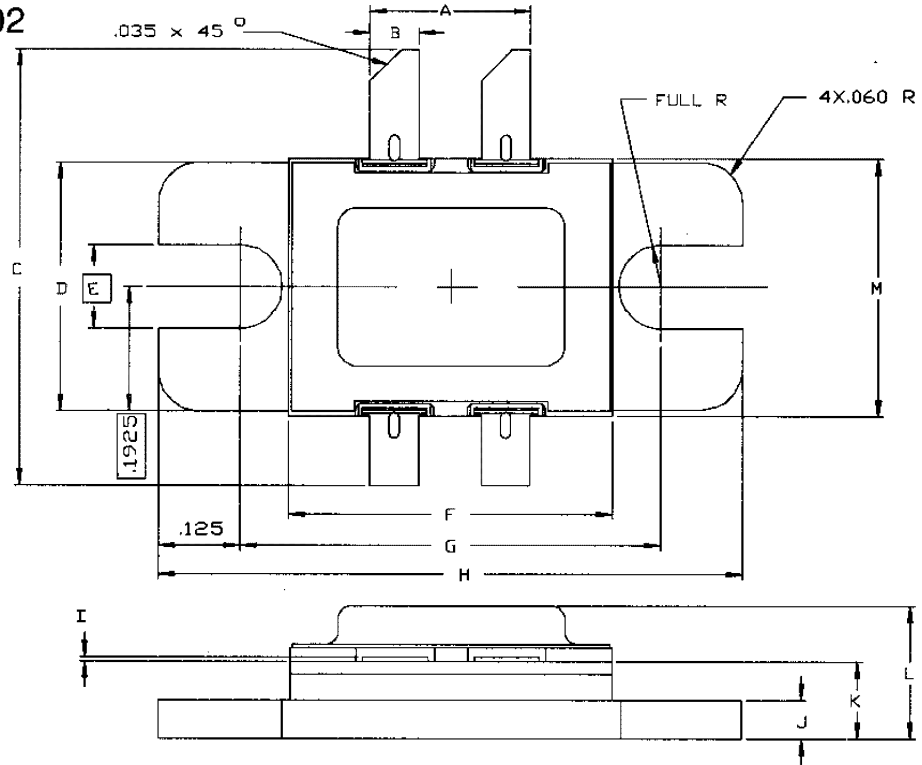
TEST CIRCUIT



MS2200

PACKAGE MECHANICAL DATA

Ref.: Dwg. No.12-0102



ADVANCED POWER TECHNOLOGY			CONT'D		
	MINIMUM Inches/mm	MAXIMUM Inches/mm		MINIMUM Inches/mm	MAXIMUM Inches/mm
A	.240/6,10	.254/6,45	K	.115/2,92	.130/3,30
B	.070/1,78	.080/2,03	L	---	.230/5,84
C	.780/19,81	.820/20,83	M	.395/10,03	.407/10,34
D	.380/9,65	.390/9,91			
E	.130/3,30				
F	.495/12,57	.507/12,88			
G	.640/16,26	.655/16,64			
H	.890/22,61	.910/23,11			
I	.002/0,05	.006/0,15			
J	.058/1,47	.065/1,65			