



MS2441

# NPN SILICON RF POWER TRANSISTOR

## DESCRIPTION:

The **ASI MS2441** is a silicon NPN power transistor, designed for high power and low duty cycle DME and IFF applications.

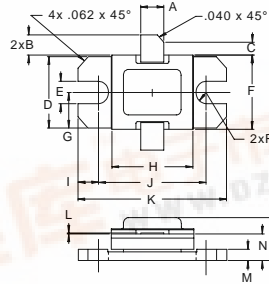
## FEATURES:

- Internal Input/Output Matching Networks
- $P_G = 6.5$  dB at 400 W/1150 MHz
- **Omnigold™** Metalization System

## MAXIMUM RATINGS

$I_C$	22 A
$V_{CBO}$	65 V
$V_{CES}$	65 V
$P_{DISS}$	1458 W @ $T_C = 25$ °C
$T_J$	-65 °C to +200 °C
$T_{STG}$	-65 °C to +150 °C
$\theta_{JC}$	0.12 °C/W

## PACKAGE STYLE .400 2L FLG (A)



DIM	MINIMUM inches / mm	MAXIMUM inches / mm
A	.135 / 3.43	.145 / 3.68
B	.100 / 2.54	.120 / 3.05
C	.050 / 1.27	
D	.376 / 9.55	.396 / 10.06
E	.110 / 2.79	.130 / 3.30
F	.395 / 10.03	.407 / 10.34
G	.193 / 4.90	
H	.490 / 12.45	.510 / 12.95
I	.100 / 2.54	
J	.690 / 17.53	.710 / 18.03
K	.890 / 22.61	.910 / 23.11
L	.003 / 0.08	.006 / 0.18
M	.052 / 1.32	.072 / 1.83
N	.118 / 3.00	.131 / 3.33
P		.230 / 5.84

COMMON BASE CONFIGURATION

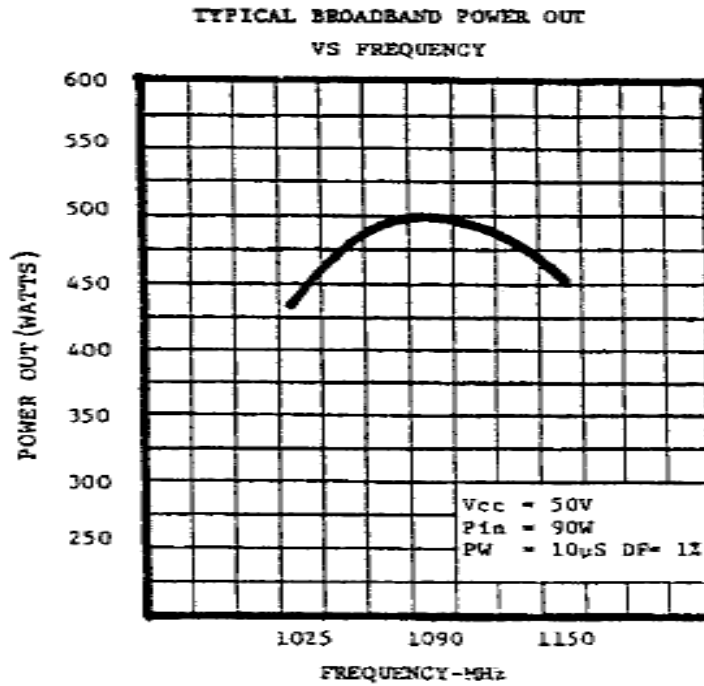
## CHARACTERISTICS $T_C = 25$ °C

SYMBOL	TEST CONDITIONS	MINIMUM	TYPICAL	MAXIMUM	UNITS
$BV_{CBO}$	$I_C = 25$ mA	65			V
$BV_{CES}$	$I_C = 50$ mA	65			V
$BV_{EBO}$	$I_E = 10$ mA	3.5			V
$I_{CES}$	$V_{CE} = 50$ V			25	mA
$h_{FE}$	$V_{CE} = 5.0$ V $I_C = 0.25$ A	10		200	---
$P_G$	$V_{CC} = 50$ V $P_{OUT} = 400$ W $f = 1025 - 1150$ MHz	6.5			dB
$\eta_c$	$P_{IN} = 90$ W	40			%

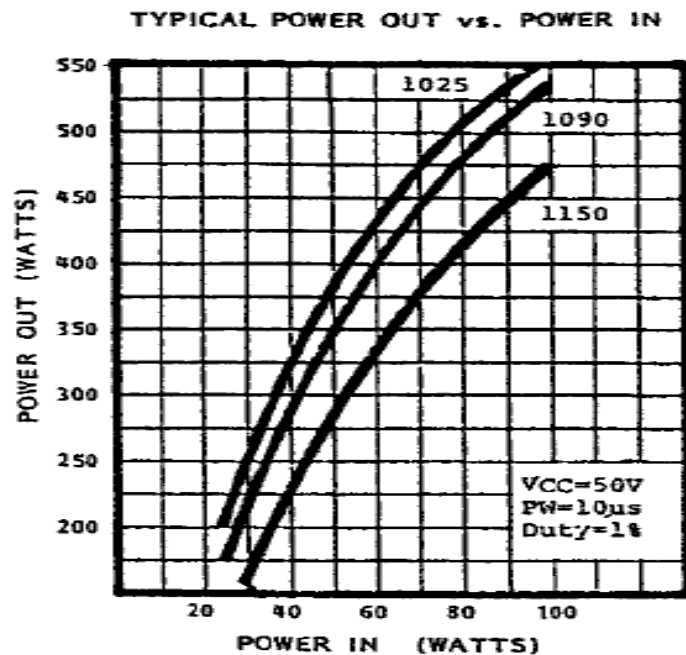
Pulse Width = 10  $\mu$ sec, Duty Cycle = 1 %



**POWER OUTPUT vs FREQUENCY**



**POWER OUTPUT vs POWER INPUT**





**IMPEDANCE DATA:**

FREQ	$Z_{IN}(\Omega)$	$Z_{CL}(\Omega)$
1020 MHz	$2.89 + j4.1$	$1.38 - j3.2$
1090 MHz	$2.32 + j3.4$	$1.33 - j2.8$
1150 MHz	$1.99 + j2.8$	$1.26 - j2.5$

$P_{IN} = 90 \text{ W}$

$V_{CE} = 50 \text{ V}$