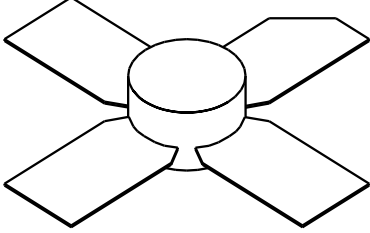


<p><b>GENERAL DESCRIPTION</b></p> <p>The 1090MP is a COMMON BASE bipolar transistor. It is designed for pulsed systems in the frequency band 1025-1150 MHz. The transistor includes input prematch for broadband capability. The device has gold thin-film metallization for proven highest MTTF. Low thermal resistance package reduces junction temperature, extends life.</p>	<p><b>CASE OUTLINE</b> <b>55FU, STYLE 1</b></p> 
<p><b>ABSOLUTE MAXIMUM RATINGS</b></p> <p>Maximum Power Dissipation @ 25°C<sup>2</sup> 250 Watts Peak</p> <p><b>Maximum Voltage and Current</b></p> <p>BVces Collector to Emitter Voltage 60 Volts BVebo Emitter to Base Voltage 4.0 Volts Ic Collector Current 6.0 Amps Peak</p> <p><b>Maximum Temperatures</b></p> <p>Storage Temperature - 65 to +150 °C Operating Junction Temperature + 200°C</p>	

**ELECTRICAL CHARACTERISTICS @ 25 °C**

SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN	TYP	MAX	UNITS
<b>Pout</b>	Broadband Power Out	F = 1025-1150 MHz	90	98		Watts
<b>Pin</b>	Power Input	Vcc = 50 Volts			14	Watts
<b>Pg</b>	Broadband Power Gain	PW = 10 μsec	8.0	8.5		d B
$\eta_c$	Collector Efficiency	DF = 1%	35	38		%
<b>VSWR</b>	Load Mismatch Tolerance	F = 1090 MHz			10:1	

<b>BVebo</b>	Emitter to Base Breakdown	Ie = 1 mA	3.5			Volts
<b>BVces</b>	Collector to Emitter Breakdown	Ie = 10 mA	65			Volts
<b>Cob</b>	Capacitance Collector to Base	Vcb = 50 V			16	pF
<b>h<sub>FE</sub></b>	DC - Current Gain	Ic = 500mA, Vcc = 5V	15		120	
<b>θjc<sup>1</sup></b>	Thermal Resistance	Tc = 25 °C			0.6	°C/W

Note1: At Rated Power Output and pulse conditions.

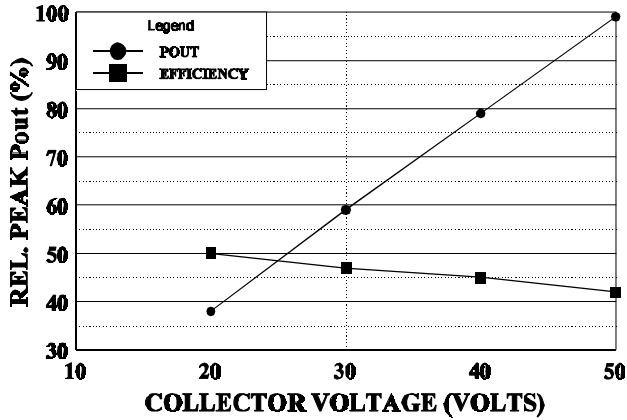
2: Maximum Ratings are for RF Amplifier Operation

Issue Aug 1996

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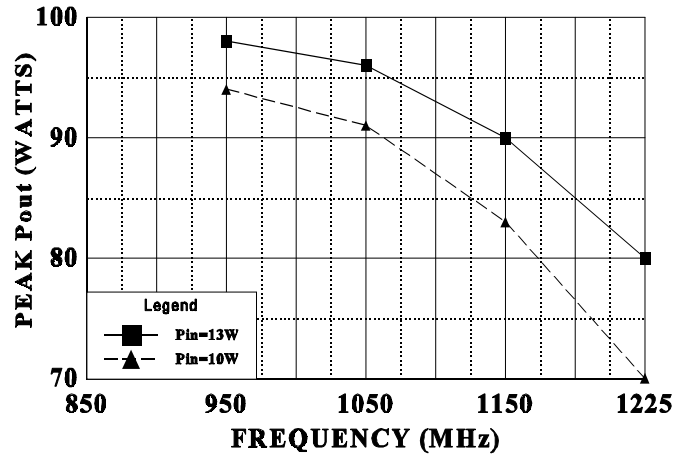
**Pout & COL. EFF. vs COL. VOLTAGE**

F=1215MHz, PW=10us, DF = 1%, Tc=25C



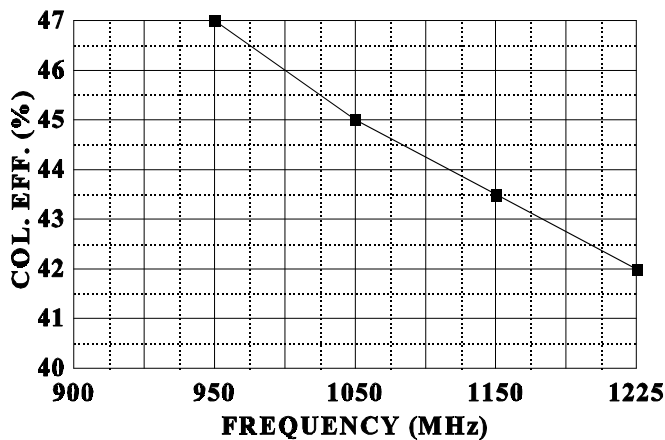
**NARROWBAND PEAK Pout vs FREQUENCY**

Vcc=50V, PW=10usec, DF = 1%, Tc=25 C



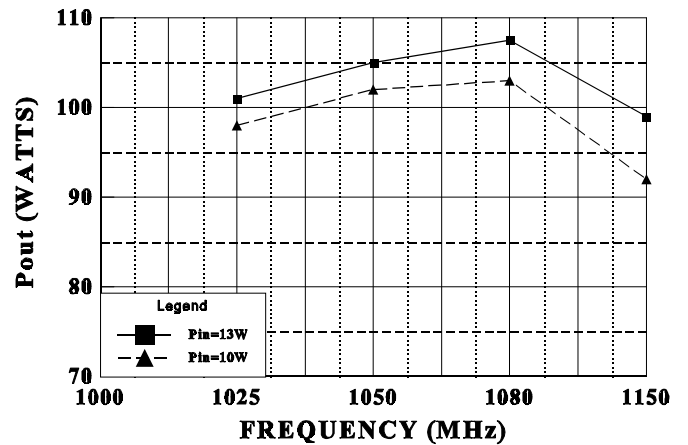
**NARROWBAND COL. EFF. vs FREQ.**

Vcc=50V, Pin=14 W, 10 usec / 1%



**TYPICAL Pout**

Vcc=50V, PW=10usec, DF = 1%, Tc =25 C



August 1996

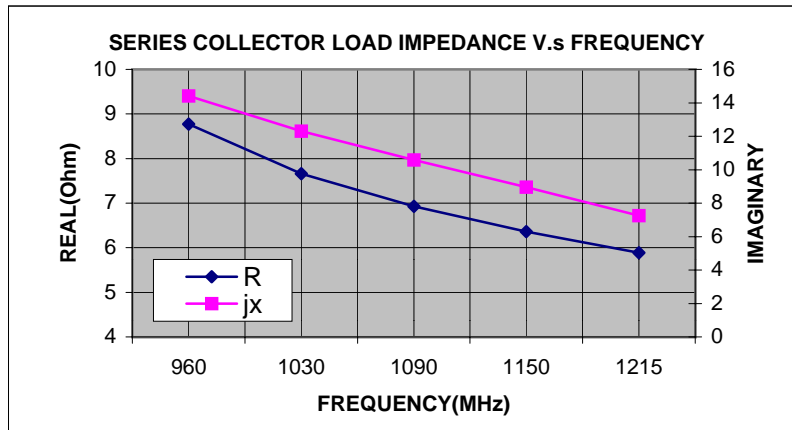
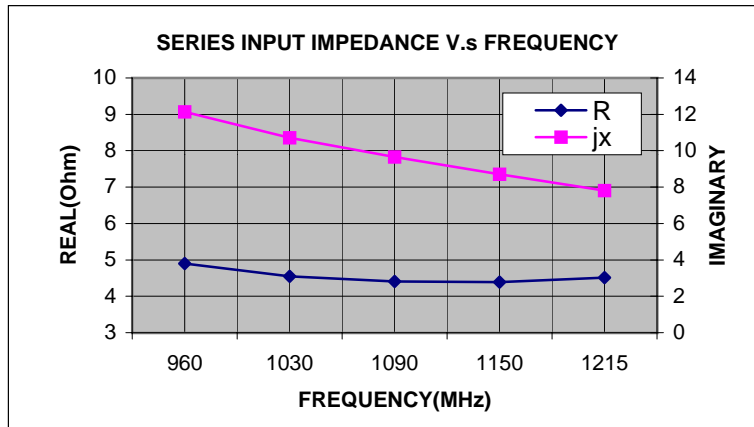
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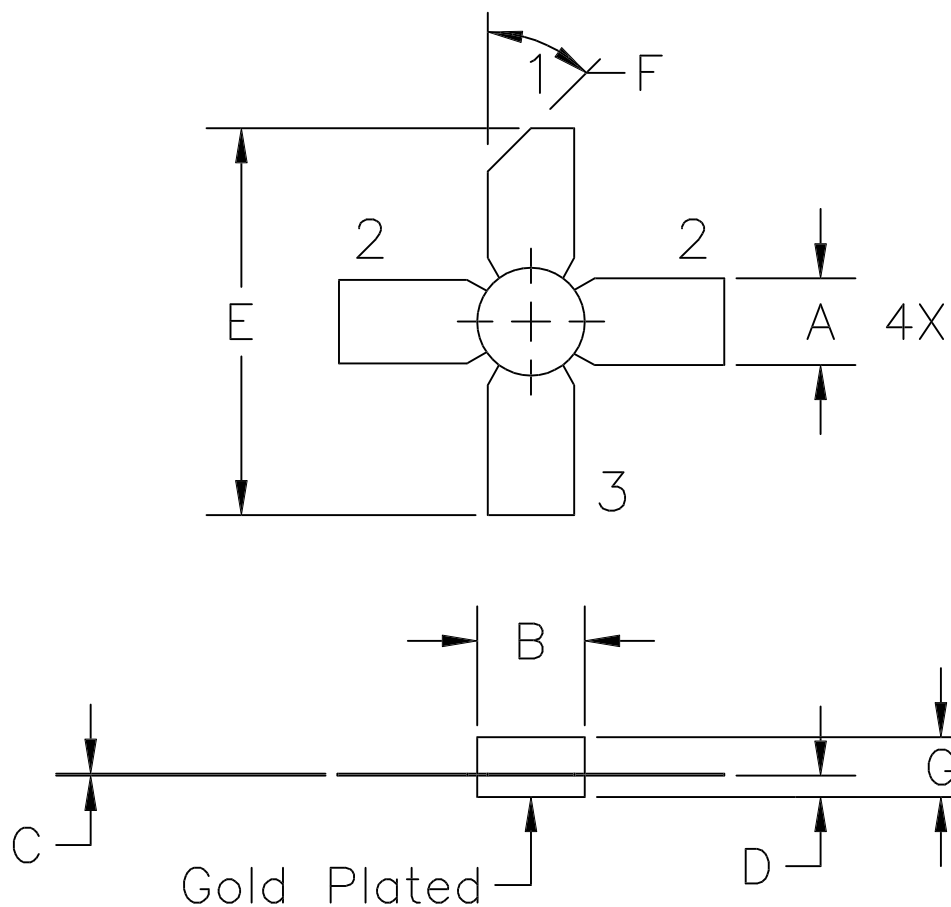
GHZ Technology Inc. 3000 Oakmead Village Drive, Santa Clara, CA 95051-0808 Tel. 408 / 986-8031 Fax 408 / 986-8120

# 1090MP

VCB=50V Pout= 90Watts. PW 10uS, DF=1%

	Zin		ZCL	
Frequency	R	jx	R	jx
960	4.9	12.13	8.77	14.41
1030	4.55	10.71	7.66	12.3
1090	4.41	9.65	6.93	10.59
1150	4.39	8.7	6.36	8.95
1215	4.51	7.81	5.89	7.26





**STYLE 1:**  
**PIN1 = COLLECTOR**  
**2 = BASE (2X)**  
**3 = EMITTER**

**STYLE 2:**  
**PIN1 = COLLECTOR**  
**2 = EMITTER (2X)**  
**3 = BASE**

DIM	MILLIMETER	TOL	INCHES	TOL
A	5.71	.13	.225	.005
B	7.11 DIA	.13	.280 DIA	.005
C	0.13	.02	.005	.001
D	1.40	.13	.055	.005
E	25.53	.64	1.005	.025
F	45°	5°	45°	5°
G	3.94	REF	.155	REF

