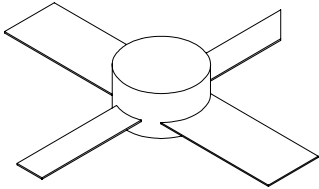




1090MP

90 Watts, 50 Volts, Class C
Avionics 1025 - 1150 MHz

<p>GENERAL DESCRIPTION</p> <p>The 1090MP is a COMMON BASE bipolar transistor. It is designed for pulsed systems in the frequency band 1025-1150 MHz. The device has gold thin-film metallization for proven highest MTTF. The transistor includes input prematch for broadband capability. Low thermal resistance package reduces junction temperature, extends life.</p>	<p>CASE OUTLINE 55FW-1</p> 
<p>ABSOLUTE MAXIMUM RATINGS</p> <p>Maximum Power Dissipation @ 25°C² 250 Watts Peak</p> <p>Maximum Voltage and Current</p> <p>BVces Collector to Emitter Voltage 65 Volts BVebo Emitter to Base Voltage 3.5 Volts Ic Collector Current 6.5 Amps Peak</p> <p>Maximum Temperatures</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
P _{OUT}	Power Out	F = 1025-1150 MHz	90			W
P _{IN}	Power Input	V _{cc} = 50 Volts			14	W
P _G	Power Gain	PW = 10 µsec, DF = 1%	8.08	8.5		dB
η _c	Efficiency			40		%
VSWR ¹	Load Mismatch Tolerance	F = 1090 MHz			20:1	

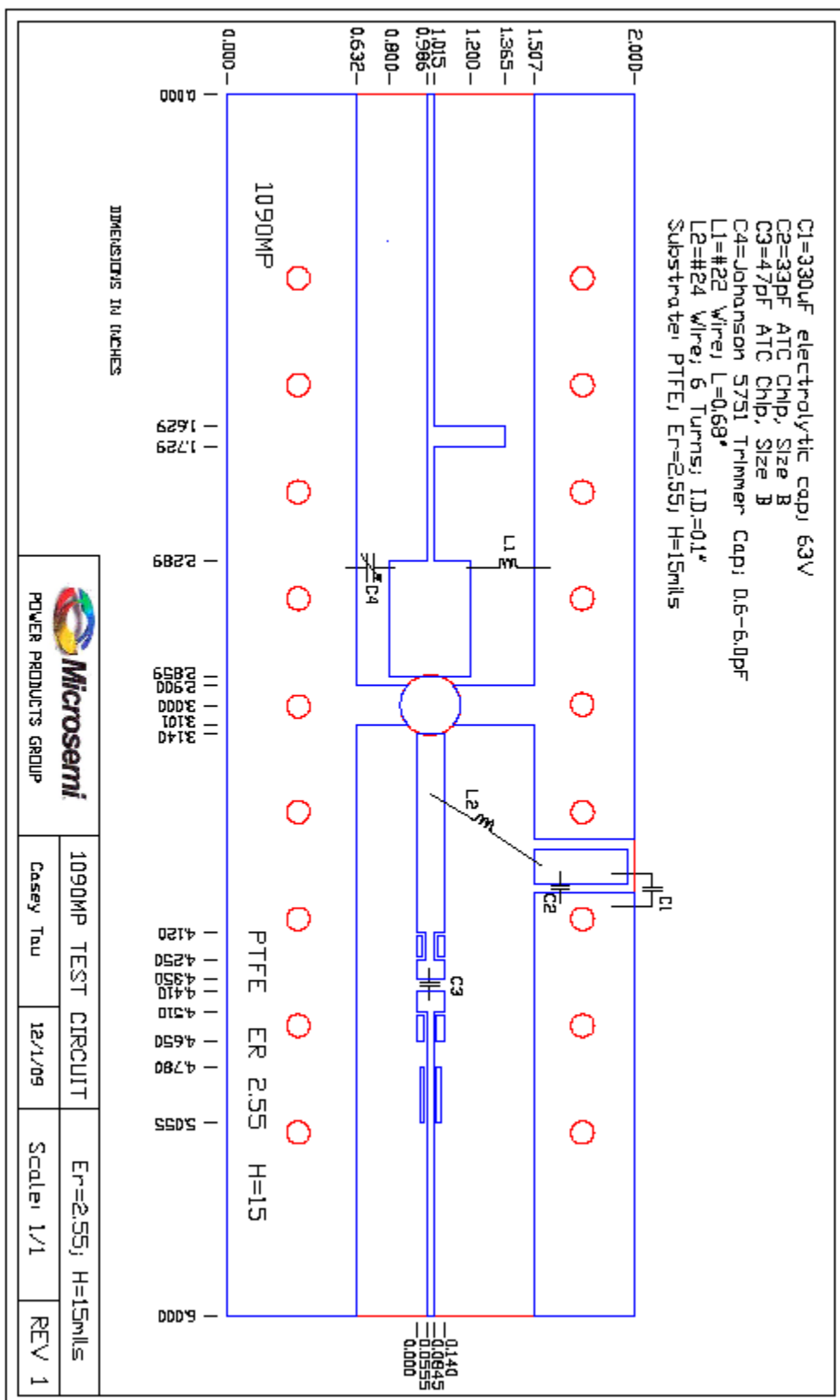
FUNCTIONAL CHARACTERISTICS @ 25°C

BVebo	Emitter to Base Breakdown	I _e = 1 mA	3.5			V
BVces	Collector to Emitter Breakdown	I _c = 10mA	65			V
H _{fe}	DC Current Gain	V _{ce} = 5V, I _c = 500 mA	15		120	
C _{ob}	Output Capacitance	V _{cb} = 50 V, f = 1 MHz		12		pF
θ _{jc} ¹	Thermal Resistance				0.6	°C/W

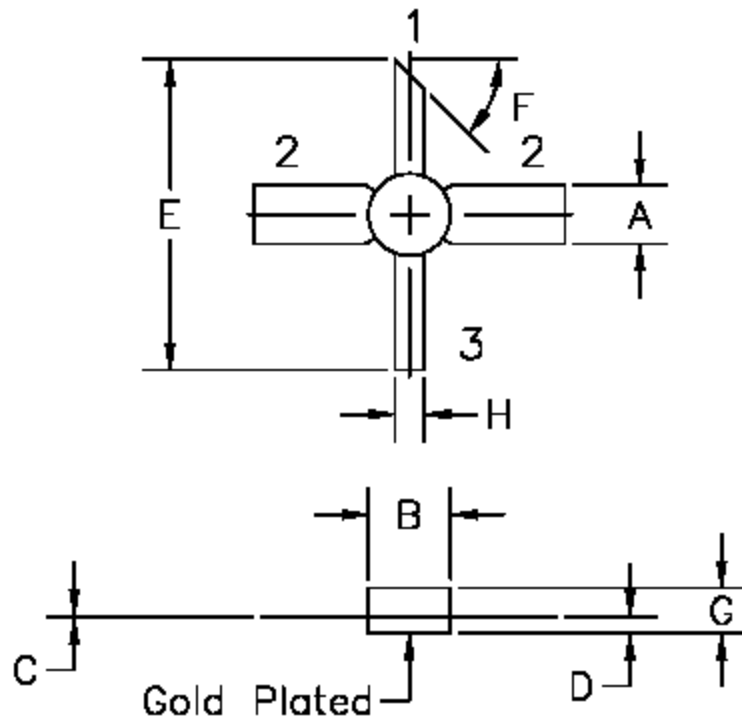
Note 1: At rated pulse conditions

Rev B: Dec 2009

Microsemi reserves the right to change, without notice, the specifications and information contained herein. Visit our web site at www.microsemi.com or contact our factory direct.



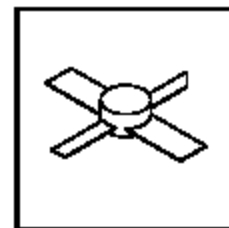
MICROSEMI reserves the right to change, without notice, the specifications and information contained herein. Visit our web site at www.microsemi.com or contact our factory direct.



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

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

DIM	MILLIMETER	±TOL	INCHES	±TOL
A	5.08	.13	.200	.005
B	7.11 DIA	.13	.280 DIA	.005
C	0.13	.02	.005	.001
D	1.40	.13	.055	.005
E	26.92	.64	1.060	.025
F	45°	5°	45°	5°
G	3.94	REF	.155	REF
H	2.54	.13	.100	.005



DWG NO.

55FW