

1090MP

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

GENERAL DESCRIPTION

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.

CASE OUTLINE 55FW-1

ABSOLUTE MAXIMUM RATINGS

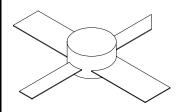
Maximum Power Dissipation @ 25°C² 250 Watts Peak

Maximum Voltage and Current

BVcesCollector to Emitter Voltage65 VoltsBVeboEmitter to Base Voltage3.5 VoltsIcCollector Current6.5 Amps Peak

Maximum Temperatures

Storage Temperature $-65 \text{ to } +150 \text{ }^{\circ}\text{C}$ Operating Junction Temperature $+200 \text{ }^{\circ}\text{C}$



ELECTRICAL CHARACTERISTICS @ 25°C

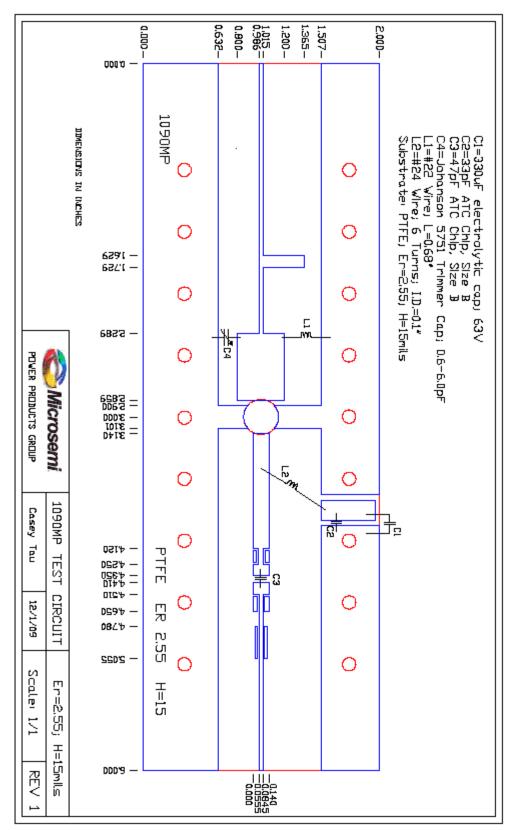
SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN	TYP	MAX	UNITS
P_{OUT}	Power Out	F= 1025-1150 MHz	90			W
P _{IN}	Power Input	Vcc = 50 Volts			14	W
P_{G}	Power Gain	PW = 10 μsec, DF = 1%	8.08	8.5		dB
ης	Efficiency			40		%
VSWR ¹	Load Mismatch Tolerance	F = 1090 MHz			20:1	

FUNCTIONAL CHARACTERISTICS @ 25°C

BVebo	Emitter to Base Breakdown	Ie = 1 mA	3.5			V
BVces	Collector to Emitter Breakdown	Ic = 10mA	65			V
Hfe	DC Current Gain	Vce = 5V, $Ic = 500 mA$	15		120	
Cob	Output Capacitance	Vcb = 50 V, f = 1 MHz		12		pF
θjc ¹	Thermal Resistance				0.6	°C/W

Note 1: At rated pulse conditions

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