

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

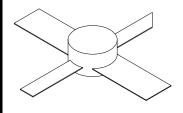
Maximum Power Dissipation @ 25°C² 250 Watts Peak

Maximum Voltage and Current

BVces Collector to Emitter Voltage 60 Volts
BVebo Emitter to Base Voltage 4.0 Volts
Ic Collector Current 6.0 Amps Peak

Maximum Temperatures

Storage Temperature - 65 to +150 °C
Operating Junction Temperature + 200 °C



ELECTRICAL CHARACTERISTICS @ 25°C

SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN	TYP	MAX	UNITS
P_{OUT}	Power Out	F= 1025-1150 MHz	90	98		W
P _{IN}	Power Input	Vcc = 50 Volts			14	W
P_{G}	Power Gain	$PW = 10 \mu sec, DF = 1\%$	8.0	8.5		dB
ης	Efficiency		35	38		%
VSWR	Load Mismatch Tolerance	F = 1090 MHz			10:1	

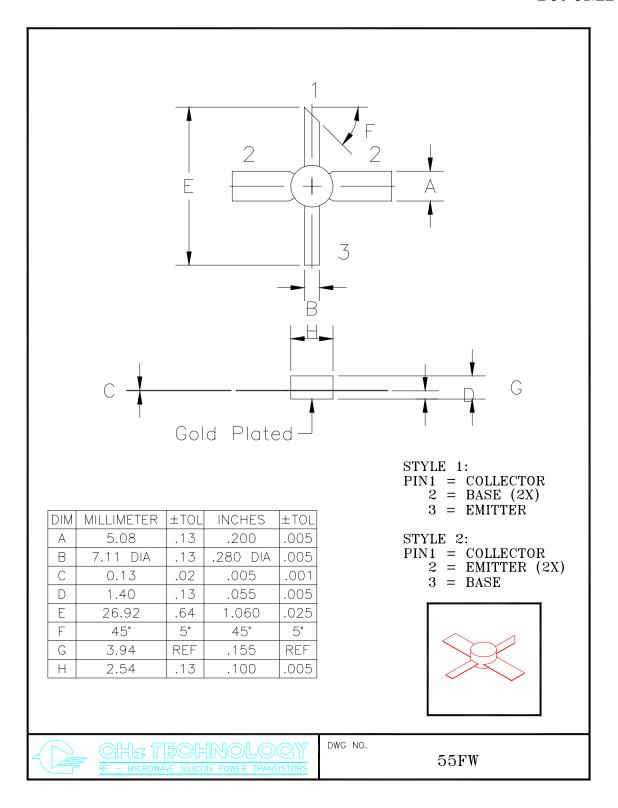
FUNCTIONAL CHARACTERISTICS @ 25°C

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		16	pF
θjc^2	Thermal Resistance			0.6	°C/W

Note 1: At rated output power and pulse conditions

2: At rated pulse conditions

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