



1004MP

4 Watts, 35 Volts

Pulsed Avionics, 960 to 1215 MHz

GENERAL DESCRIPTION

The 1004MP is a COMMON BASE transistor capable of providing 4 Watts of Pulsed, RF output power in the band 960 to 1215 MHz. This transistor is specifically designed for pulsed Avionics amplifier applications. It utilizes gold metalization and low thermal resistance packaging to provide high reliability and supreme ruggedness.

ABSOLUTE MAXIMUM RATINGS

Maximum Power Dissipation

Device Dissipation @ 25°C 7 W

Maximum Voltage and Current

Collector to Base Voltage (BV_{ces}) 50 V

Emitter to Base Voltage (BV_{ebo}) 3.5 V

Collector Current (I_c) 300 mA

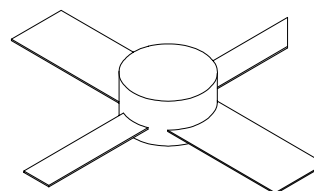
Maximum Temperatures

Storage Temperature -40 to +150 °C

Operating Junction Temperature +200 °C

CASE OUTLINE

55FW-1



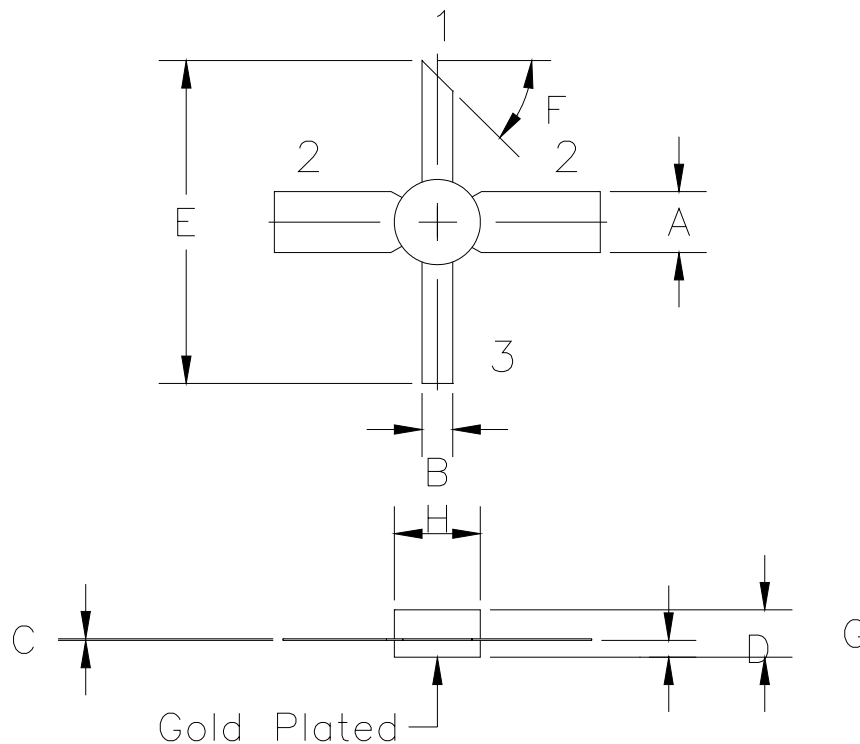
ELECTRICAL CHARACTERISTICS @ 25°C

SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN	TYP	MAX	UNITS
P_{out}	Power Output	F = 1090 MHz V_{cc} = 35 Volts PW = 10 μ s, DF = 1%	4.0	4.5		W
P_{in}	Power Input				0.5	W
P_g	Power Gain		7.0	9.0		dB
η_c	Collector Efficiency		40	45		%
VSWR	Load Mismatch Tolerance				30:1	

FUNCTIONAL CHARACTERISTICS @ 25°C

BV_{ebo}	Emitter to Base Breakdown	I_e = 1 mA	3.5			V
BV_{ces}	Collector to Emitter Breakdown	I_c = 10 mA	50			V
h_{FE}	DC – Current Gain	V_{ce} = 5V, I_c = 100 mA	20			
C_{ob}	Capacitance	V_{cb} = 28V, f=1 MHz		3.3	5.0	pF
θ_{jc}^1	Thermal Resistance				25	°C/W

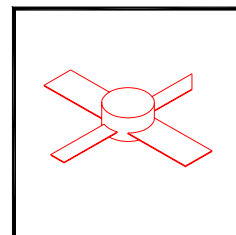
1004MP



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



CHz TECHNOLOGY
RF - MICROWAVE SILICON POWER TRANSISTORS

DWG NO.

55FW