

1015MP

15 Watts, 50 Volts

Avionics 1025 - 1150 MHz

GENERAL DESCRIPTION

The 1015 MP 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.

ABSOLUTE MAXIMUM RATINGS

Maximum Power Dissipation @ 25°C² 50 Watts Pk

Maximum Voltage and Current

BVces Collector to Emitter Voltage 65 Volts

BVebo Emitter to Base Voltage 3.5 Volts

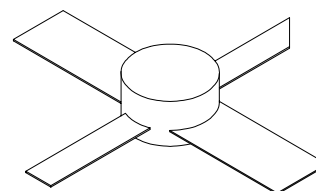
Ic Collector Current 1.0 Amps Pk

Maximum Temperatures

Storage Temperature - 65 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 Out	F = 1025-1150 MHz	15			W
P _{IN}	Power Input	V _{cc} = 50 Volts			1.5	W
P _G	Power Gain	PW = 10 μsec, DF = 1%	10	11		dB
η _c	Efficiency			40		%
VSWR	Load Mismatch Tolerance	F = 1090 MHz			20:1	

FUNCTIONAL CHARACTERISTICS @ 25°C

BVebo	Emitter to Base Breakdown	I _e = 5 mA	3.5			V
BVces	Collector to Emitter Breakdown	I _c = 15mA	65			V
H _{fe}	DC Current Gain	V _{ce} = 5V, I _c = 100 mA	20			
C _{ob}	Output Capacitance	V _{cb} = 50 V, f = 1 MHz		5.0	7.5	pF
θ _{jc} ²	Thermal Resistance				3.5	°C/W

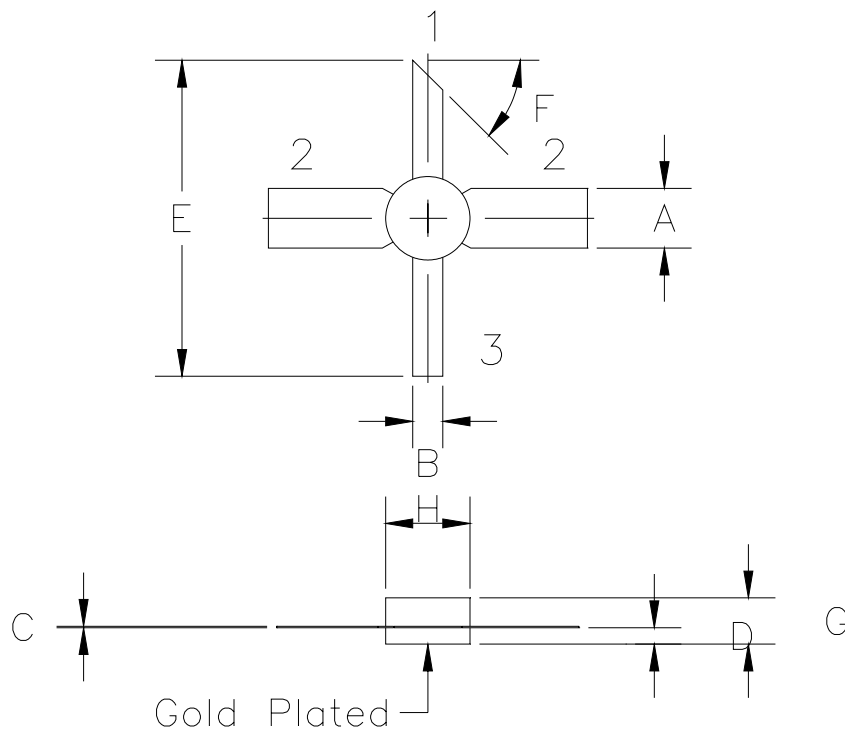
Note 1: At rated output power and pulse conditions

2: At rated pulse conditions

Initial Issue June, 1995

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

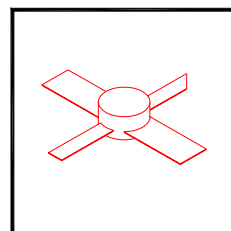
1015MP



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

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