ADVANCED POWER TECHNOLOGY RF®

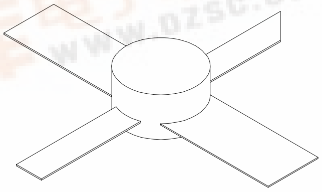
1075MP

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

GENERAL DESCRIPTION

The 1075MP 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°C^2 250 Watts Pk

Maximum Voltage and Current

BVces	Collector to Emitter Voltage	65 Volts
BVebo	Emitter to Base Voltage	3.5 Volts
Ic	Collector Current	6.5 Amps Pk

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	75			W
P_{IN}	Power Input	Vcc = 50 Volts			13	W
P_G	Power Gain	PW = 10 µsec, DF = 1%	7.5	9		dB
ηc	Efficiency			40		%
VSWR	Load Mismatch Tolerance	F = 1090 MHz			20:1	

FUNCTIONAL CHARACTERISTICS @ 25°C

BVebo	Emitter to Base Breakdown	Ie = 5 mA	3.5			V
BVces	Collector to Emitter Breakdown	Ic = 15mA	65			V
Hfe	DC Current Gain	Vce = 5V, Ic = 100 mA	20			
Cob	Output Capacitance	Vcb = 50 V, f = 1 MHz		45	50	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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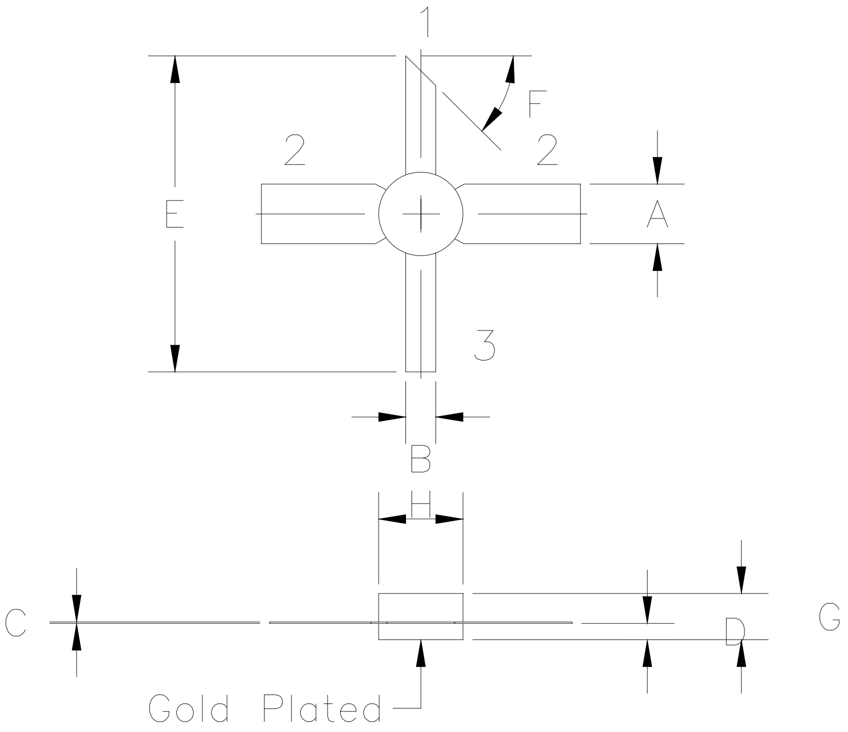
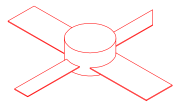


DIM	MILLIMETER	±TOL	INCHES	±TOL
A	5.08	.13	.200	.005
B	7.11 DIA	.13	.280 DIA	.005
C	0.13	.02	.005	.001
D	1.40	.13	.055	.005
E	26.92	.64	1.060	.025
F	45°	5°	45°	5°
G	3.94	REF	.155	REF
H	2.54	.13	.100	.005

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

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



GHz TECHNOLOGY
RF – MICROWAVE SILICON POWER TRANSISTORS

DWG NO.
55FW