



# 1035MP

35 Watts, 50 Volts

Avionics 1025 - 1150 MHz

## GENERAL DESCRIPTION

The 1035 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°C<sup>2</sup>

125 Watts Pk

### Maximum Voltage and Current

BVces Collector to Emitter Voltage

65 Volts

BVebo Emitter to Base Voltage

3.5 Volts

Ic Collector Current

2.5 Amps Pk

### Maximum Temperatures

Storage Temperature

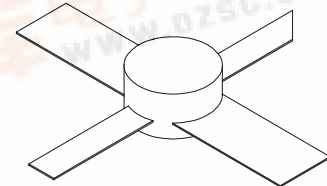
- 65 to + 150°C

Operating Junction Temperature

+ 200°C

## CASE OUTLINE

55FW-1



## ELECTRICAL CHARACTERISTICS @ 25°C

| SYMBOL           | CHARACTERISTICS         | TEST CONDITIONS            | MIN | TYP  | MAX  | UNITS |
|------------------|-------------------------|----------------------------|-----|------|------|-------|
| P <sub>OUT</sub> | Power Out               | F = 1025-1150 MHz          | 35  |      |      | W     |
| P <sub>IN</sub>  | Power Input             | V <sub>cc</sub> = 50 Volts |     |      | 3.5  | W     |
| P <sub>G</sub>   | Power Gain              | PW = 10 μsec, DF = 1%      | 10  | 10.5 |      | dB    |
| η <sub>c</sub>   | Efficiency              |                            |     | 45   |      | %     |
| VSWR             | Load Mismatch Tolerance | F = 1090 MHz               |     |      | 10:1 |       |

## FUNCTIONAL CHARACTERISTICS @ 25°C

|                              |                                |                                               |     |    |     |      |
|------------------------------|--------------------------------|-----------------------------------------------|-----|----|-----|------|
| BVebo                        | Emitter to Base Breakdown      | I <sub>e</sub> = 5 mA                         | 3.5 |    |     | V    |
| BVces                        | Collector to Emitter Breakdown | I <sub>c</sub> = 15mA                         | 65  |    |     | V    |
| Hfe                          | DC Current Gain                | V <sub>ce</sub> = 5V, I <sub>c</sub> = 100 mA | 20  |    |     |      |
| Cob                          | Output Capacitance             | V <sub>cb</sub> = 50 V, f = 1 MHz             |     | 17 | 20  | pF   |
| θ <sub>jc</sub> <sup>2</sup> | Thermal Resistance             |                                               |     |    | 1.4 | °C/W |

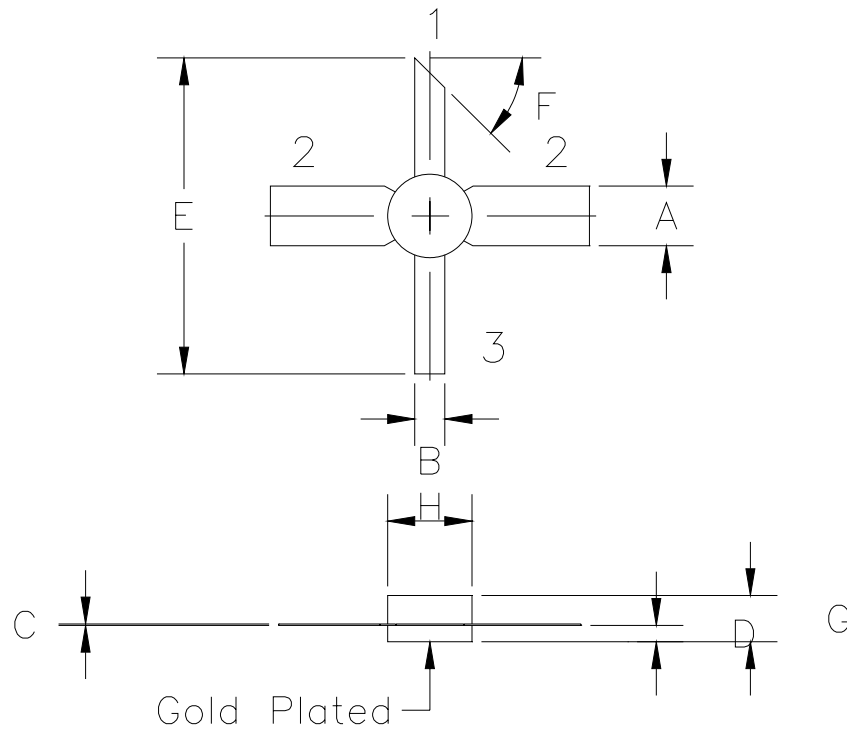
Note 1: At rated output power and pulse conditions

2: At rated pulse conditions

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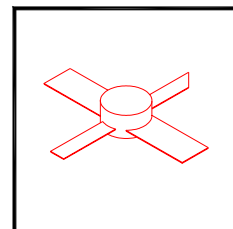
# 1035MP



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