

### 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.

## CASE OUTLINE 55FW-1

#### **ABSOLUTE MAXIMUM RATINGS**

**Maximum Power Dissipation** 

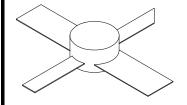
Device Dissipation @ 25°C 7 W

**Maximum Voltage and Current** 

Collector to Base Voltage (BV<sub>ces</sub>) 50 V Emitter to Base Voltage (BV<sub>ebo</sub>) 3.5 V Collector Current ( $I_c$ ) 300 mA

**Maximum Temperatures** 

Storage Temperature  $-40 \text{ to } +150 \text{ }^{\circ}\text{C}$ Operating Junction Temperature  $+200 \text{ }^{\circ}\text{C}$ 



### **ELECTRICAL CHARACTERISTICS @ 25°C**

SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN	TYP	MAX	UNITS
P <sub>out</sub>	Power Output	F = 1090  MHz	4.0	4.5		W
P <sub>in</sub>	Power Input	$V_{cc} = 35 \text{ Volts}$			0.5	W
$P_{g}$	Power Gain	$PW = 10\mu s, DF = 1\%$	7.0	9.0		dB
$\eta_c$	Collector Efficiency		40	45		%
VSWR	Load Mismatch Tolerance				30:1	

### FUNCTIONAL CHARACTERISTICS @ 25°C

$\mathrm{BV}_{\mathrm{ebo}}$	Emitter to Base Breakdown	Ie = 1  mA	3.5			V
$\mathrm{BV}_{\mathrm{ces}}$	Collector to Emitter Breakdown	Ic = 10  mA	50			V
$h_{ m FE}$	DC – Current Gain	Vce = 5V, Ic = 100  mA	20			
$C_{ob}$	Capacitance	Vcb = 28V, f=1 MHz		3.3	5.0	pF
θjc <sup>1</sup>	Thermal Resistance				25	°C/W

