



# 1000MP

0.6 Watts, 18 Volts, Class A  
Linear to 1150 MHz

<p><b>GENERAL DESCRIPTION</b></p> <p>The 1000MP is a COMMON EMITTER transistor capable of providing 0.6 Watt of Class A, RF output power to 1150 MHz. This transistor is specifically designed for general Class A amplifier applications. It utilizes gold metalization and diffused ballasting to provide high reliability and supreme ruggedness.</p>	<p><b>CASE OUTLINE</b> <b>55FW-2</b> <b>(Common Emitter)</b></p>
<p><b>ABSOLUTE MAXIMUM RATINGS</b></p> <p><b>Maximum Power Dissipation</b> Device Dissipation @ 25°C                      5.3 W</p> <p><b>Maximum Voltage and Current</b></p> <p>Collector to Base Voltage (BV<sub>ces</sub>)                      40 V          Emitter to Base Voltage (BV<sub>ebo</sub>)                      3.5 V          Collector Current (I<sub>c</sub>)                                      300 mA</p> <p><b>Maximum Temperatures</b></p> <p>Storage Temperature                                      -40 to +150 °C          Operating Junction Temperature                      +200 °C</p>	

**ELECTRICAL CHARACTERISTICS @ 25°C**

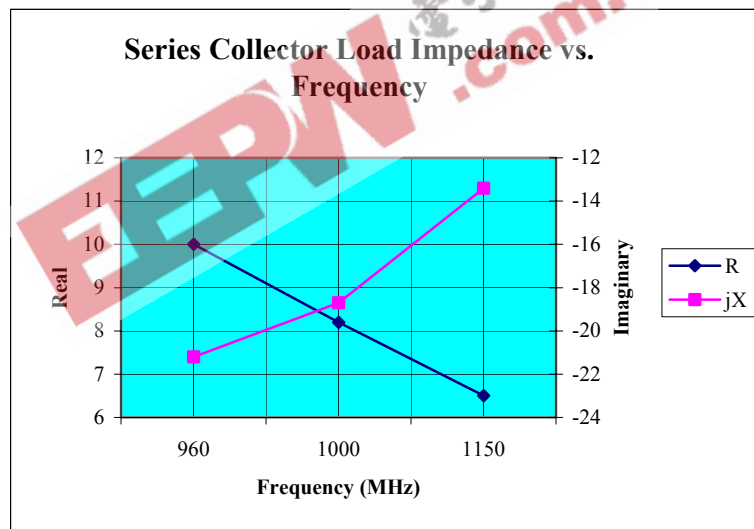
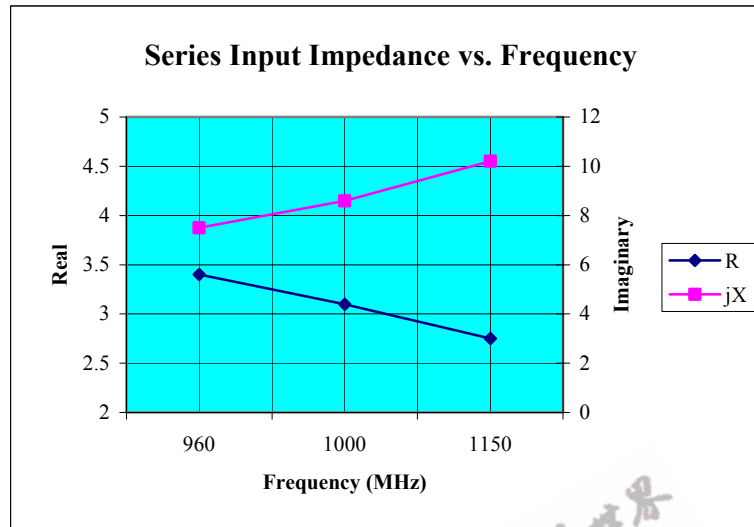
SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN	TYP	MAX	UNITS	
P <sub>OUT</sub>	Power Output	F = 1000 MHz I <sub>C</sub> = 140 mA V <sub>CC</sub> = 18 Volts	0.6	0.8		W	
P <sub>IN</sub>	Power Input				0.05	W	
P <sub>G</sub>	Power Gain			10.8		dB	
F <sub>T</sub>	Transition Frequency			3.4	3.7		GHz
V <sub>SWR</sub>	Load Mismatch Tolerance					10:1	

**FUNCTIONAL CHARACTERISTICS @ 25°C**

BV <sub>EBO</sub>	Emitter to Base Breakdown	I <sub>E</sub> = 1mA	3.5			V
BV <sub>CBO</sub>	Collector to Base Breakdown	I <sub>C</sub> = 1mA	40			V
BV <sub>CER</sub>	Collector to Emitter Breakdown	I <sub>ER</sub> = 5mA, R <sub>BE</sub> = 10	22			V
I <sub>CES</sub>	Collector Leakage Current	V <sub>CE</sub> = 28V				
h <sub>FE</sub>	DC – Current Gain	V <sub>CE</sub> = 5V, I <sub>c</sub> = 100mA	15		120	
C <sub>OB</sub>	Capacitance	V <sub>CB</sub> = 28V, F = 1 MHz		2.0	3.0	pF
θ <sub>JC</sub> <sup>1</sup>	Thermal Resistance				33	°C/W

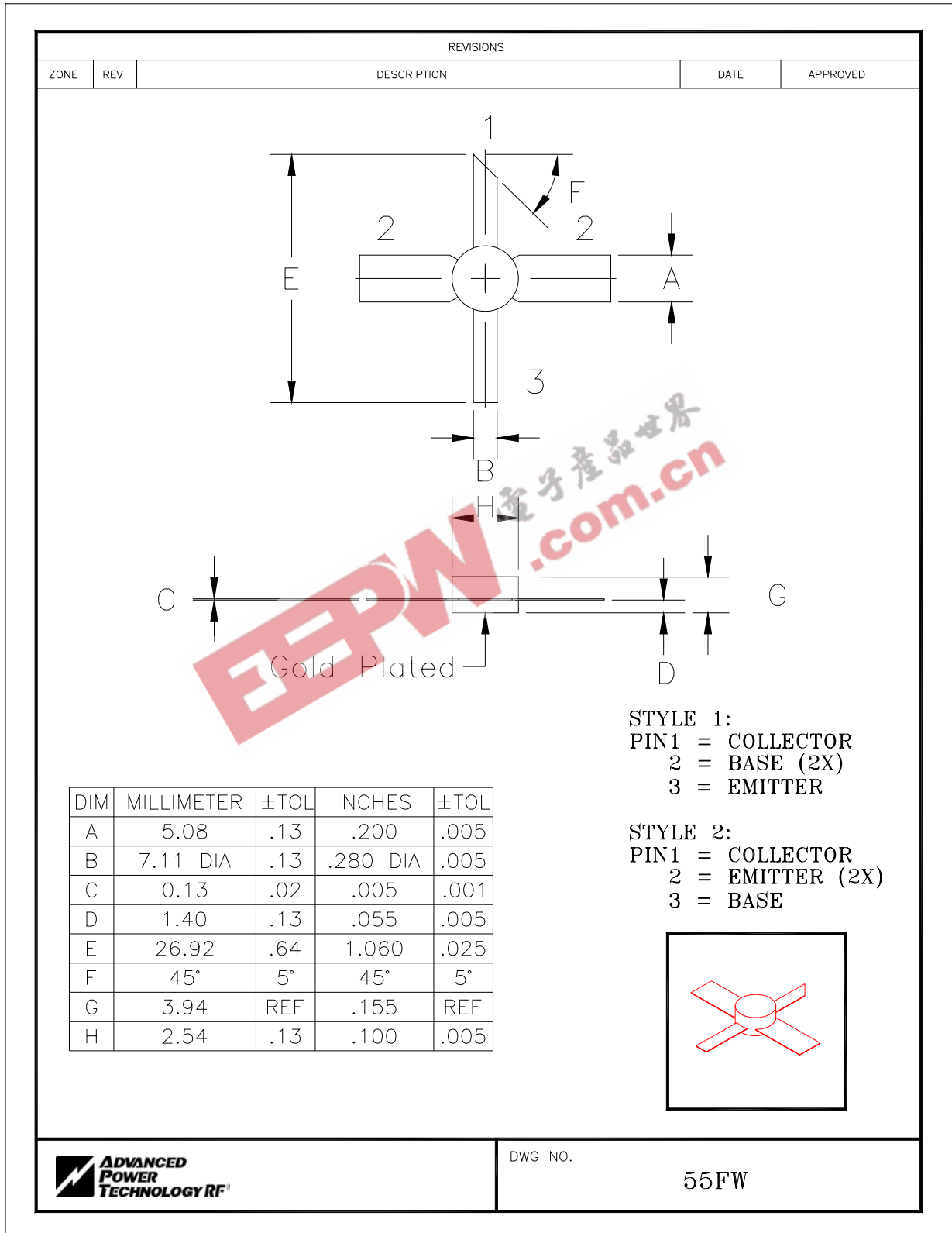
Note 1: At rated output power

Rev A – Aug 2003



Frequency ( MHz )	Z <sub>in</sub>		Z <sub>cl</sub>	
	R	jX	R	jX
960	3.4	7.5	10	-21.2
1000	3.1	8.6	8.2	-18.7
1150	2.75	10.2	6.5	-13.4

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DWG NO.

55FW