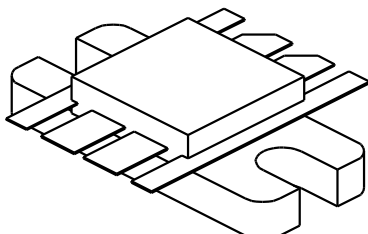


0204-125

125 Watts, 28 Volts, Class AB
Defcom 225 - 400 MHz

<p>GENERAL DESCRIPTION</p> <p>The 0204-125 is a double input matched COMMON EMITTER broadband transistor specifically intended for use in the 225-400 MHz frequency band. It may be operated in Class AB or C. Gold metallization and silicon diffused resistors ensure ruggedness and high reliability.</p>	<p>CASE OUTLINE 55JT- Style 2</p> 
<p>ABSOLUTE MAXIMUM RATINGS</p> <p>Maximum Power Dissipation @ 25°C 270 Watts</p> <p>Maximum Voltage and Current</p> <p>BVces Collector to Emitter Voltage 65 Volts BVebo Emitter to Base Voltage 4.0 Volts Ic Collector Current 16.0 A</p> <p>Maximum Temperatures</p> <p>Storage Temperature - 65 to +150°C Operating Junction Temperature +200°C</p>	

ELECTRICAL CHARACTERISTICS @ 25 °C

SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN	TYP	MAX	UNITS
Pout	Power Output	F = 400 MHz	125			Watts
Pin	Power Input	Vcc = 28 Volts			25	Watts
Pg	Power Gain		7.0	8.5		dB
η_c	Efficiency			60		%
VSWR	Load Mismatch Tolerance				5:1	

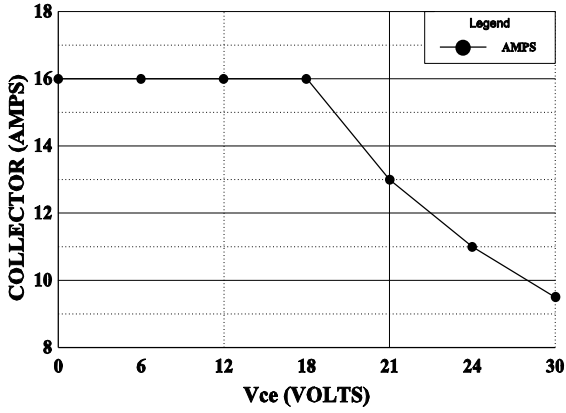
BVebo ²	Emitter to Base Breakdown	Ie = 10 mA	4.0			Volts
BVces ²	Collector to Emitter Breakdown	Ic = 100 mA	60			Volts
BVceo ²	Collector to Emitter Breakdown	Ie = 100 mA	32			Volts
Cob ²	Output Capacitance	Vcb = 28 V, F = 1 MHz		70		pF
h_{FE} ²	DC - Current Gain	Vce = 5 V, Ic = 1 A	20		100	
θ_{jc}	Thermal Resistance				0.65	°C/W

Note 2: Per side

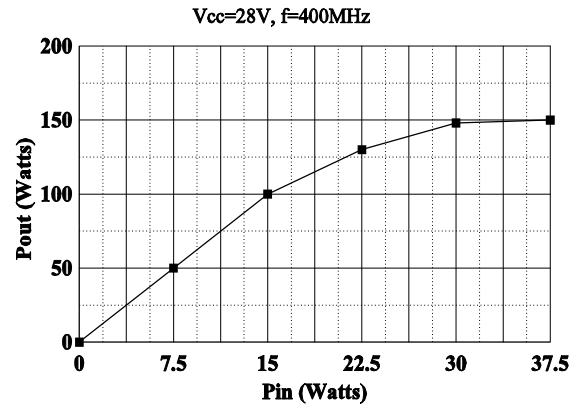
Issue August 1996

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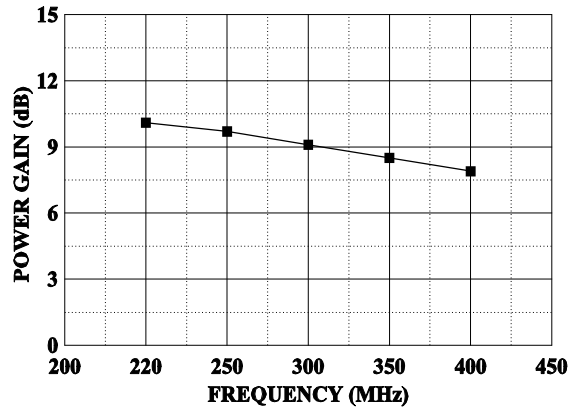
DC SAFE OPERATING AREA



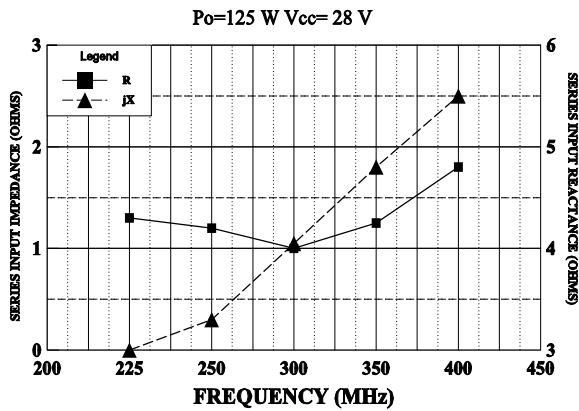
POWER OUTPUT vs POWER INPUT



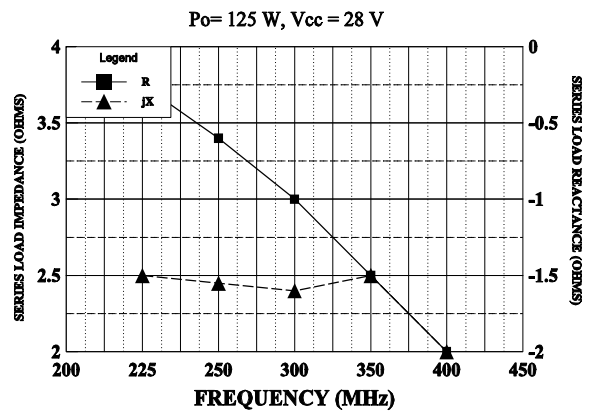
POWER GAIN VS FREQUENCY

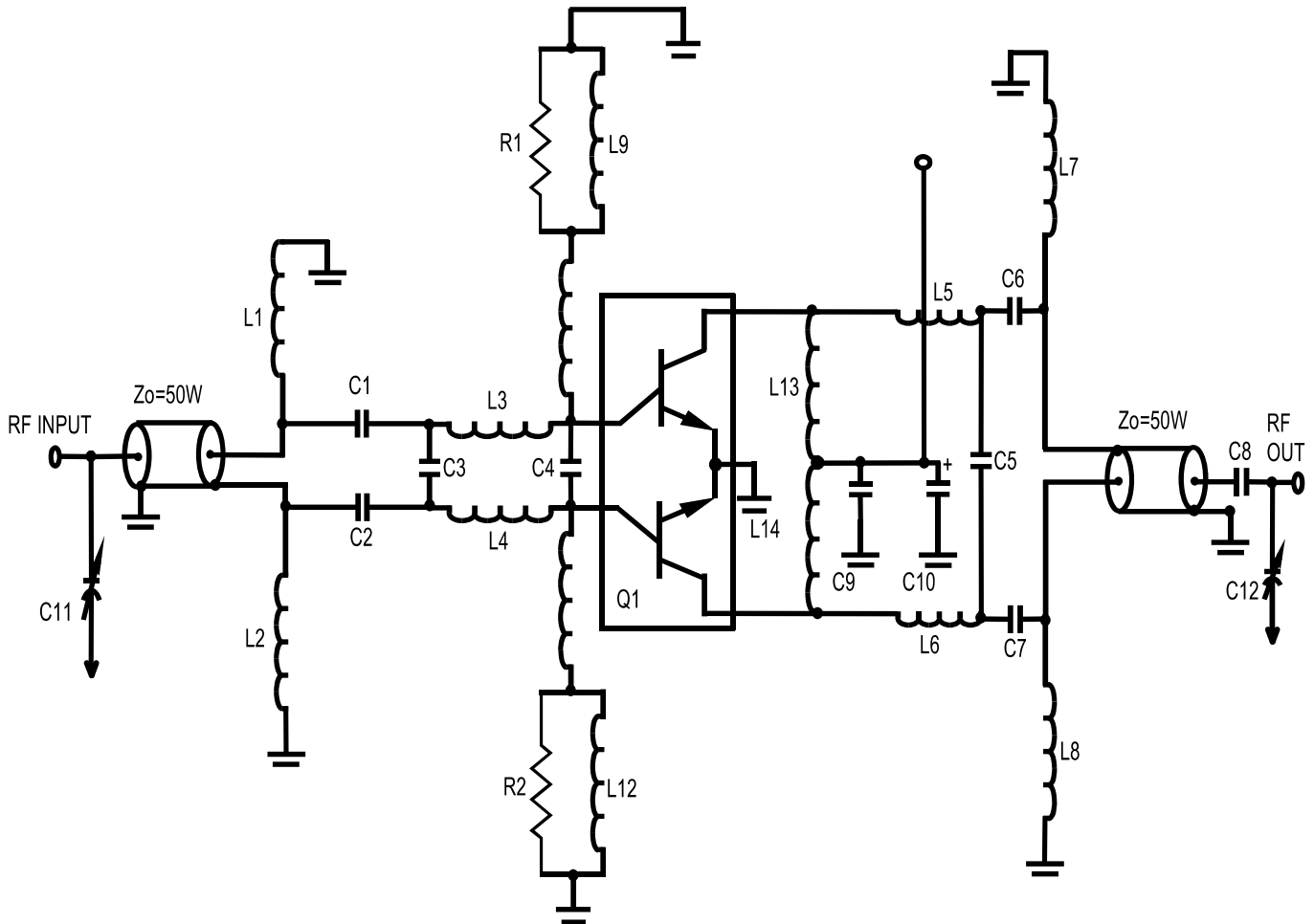


SERIES INPUT IMPEDANCE vs FREQUENCY



SERIES LOAD IMPEDANCE vs FREQUENCY





CAPACITORS

C1,C2=39pF ceramic chip capacitor
 C3=33pF ceramic chip capacitor
 C4=56pF ceramic chip capacitor
 C5=18pF ceramic chip capacitor
 C6,C7,C8=27pF ceramic chip capacitor
 C9=0.1mF ceramic capacitor
 C10=10mF electrolytic capacitor
 C11,C12=.5-10pF Johanson

INDUCTORS

L1,L2,L3,L4,L5,L6,L7,L8=printed
 on the circuit board
 L9,L12=4.7mH RF choke
 L10,L11,L13,L14=0.1mH RF choke

RESISTORS

R1,R2=10 OHM, 1/4 W

TRANSISTOR

Q1=0204-125