

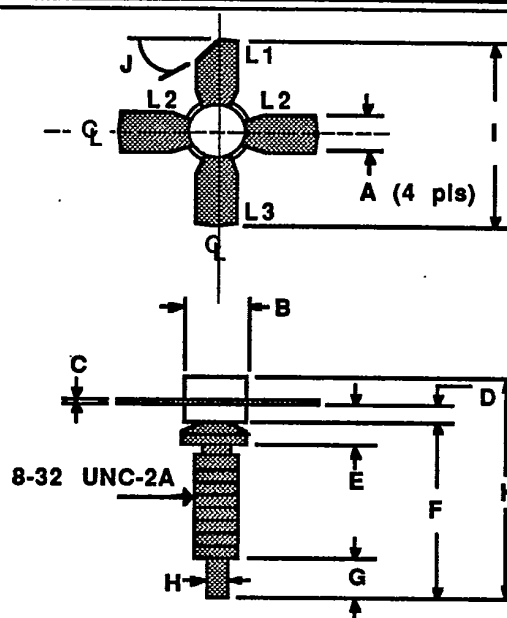
GENERAL DESCRIPTION

The B3-12 is specifically designed for VHF land mobile operation providing 3 watts of RF power output from a 12 volt supply and operating over the frequency band of 150-175 MHz.

B3-12

3 WATTS - 12 VOLTS
150-175 MHz

LAND MOBILE



L1 : C	DIM	Millimeter	TOL	Inches	TOL
L2 : E	A	5.71	.13	.225	.005
L3 : B	B	9.52 DIA	.13	.375 DIA	.005
	C	0.13	.02	.005	.001
	D	1.78	.13	.070	.005
	E	4.06	.13	.160	.005
	F	14.59	.25	.585	.010
	G	3.30	.13	.130	.005
	H	1.52	.13	.060	.005
	I	25.40	.25	1.000	.010
	J	45°	5°	45°	5°
	K	19.00	REF	.748	REF

ABSOLUTE MAXIMUM RATINGS

Maximum Power Dissipation @ 25°C Case Temperature 10 W

Maximum Voltage and Current

BVces Collector to Emitter Voltage 36 V

BVebo Emitter to Base Voltage 4.0 V

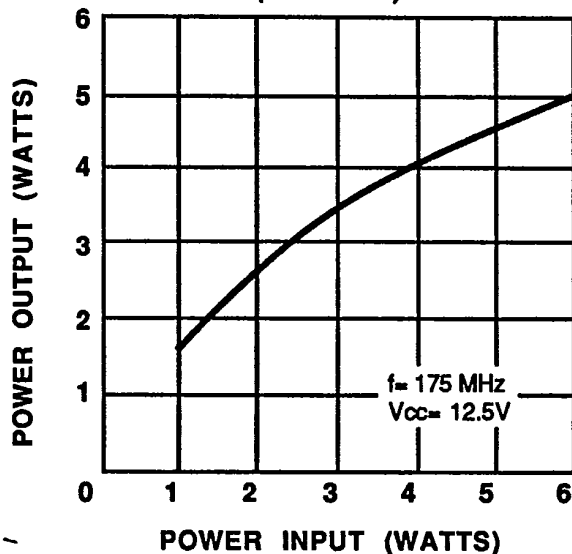
Ic Collector Current 1.0 A

Maximum Temperatures

Storage Temperature -65 to +150°C

Operating Junction Temperature +200°C

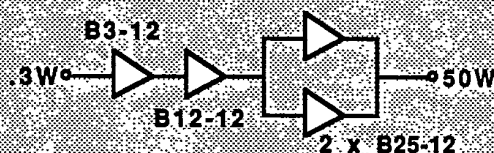
POWER OUTPUT VS POWER INPUT
(TYPICAL)



TYPICAL AMPLIFIER LINE UP

Vcc = 12.5 Volts

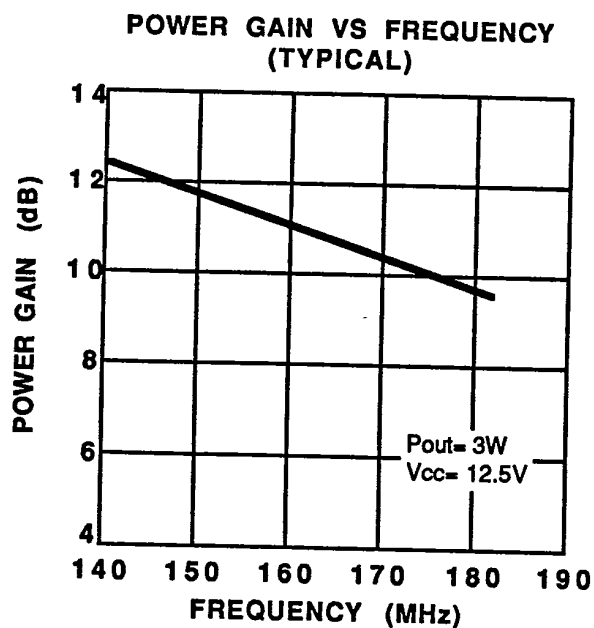
Frequency Range = 175 MHz



B3-12-2

ELECTRICAL CHARACTERISTICS¹

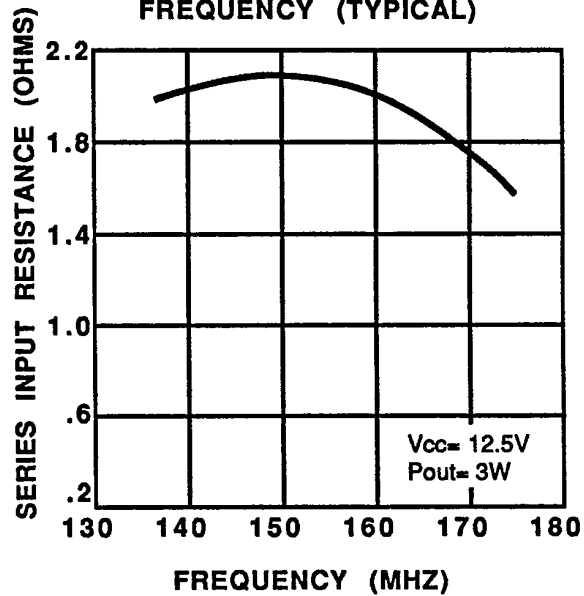
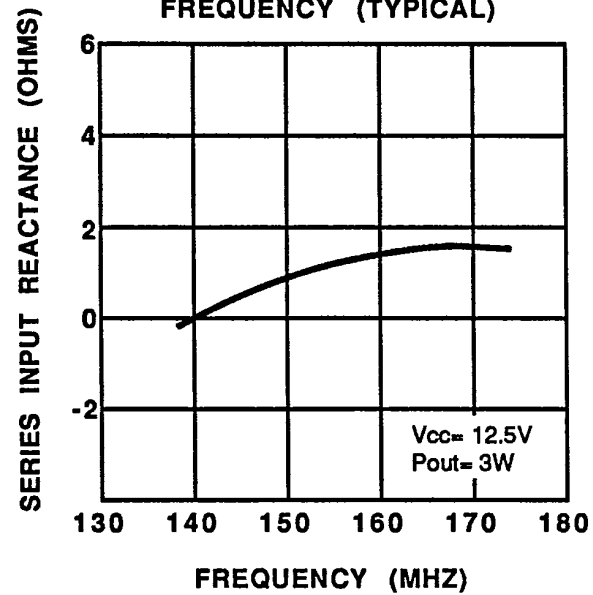
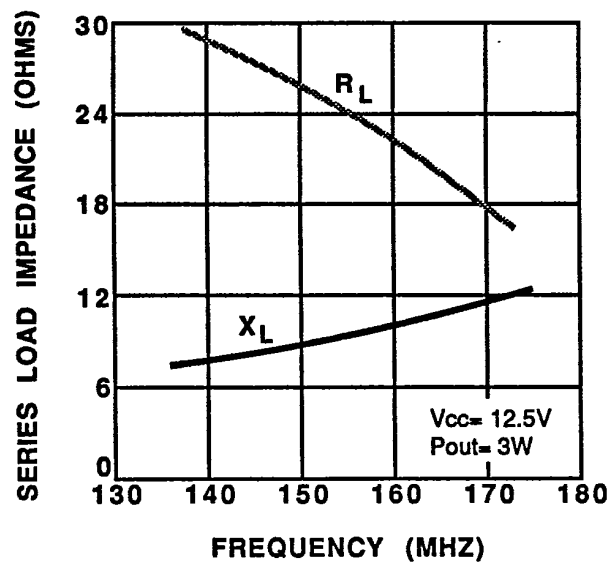
SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN.	TYP.	MAX.	UNITS
P _{out}	Power Output	f = 175 MHz V _{cc} = 12.5V	3.0			Watts
P _{in}	Power Input				0.3	Watts
P _g	Power Gain			11		dB
η_c	Collector Efficiency		60			%
VSWR	Load Mismatch Tolerance				$\infty:1$	
BV _{ebo}	Breakdown Voltage (Emitter to Base)	I _c = 0A, I _e = 5mA	4.0			Volts
BV _{ces}	Breakdown Voltage (Collector to Emitter)	V _{be} = 0A, I _c = 5mA	36			Volts
BV _{ceo}	Breakdown Voltage (Collector to Emitter)	I _b = 0A, I _c = 50mA	18			Volts
C _{ob}	Capacitance-Collector to Base	V _{cb} = 12V, I _e = 0			15	pF
h _{FE}	DC-Current Gain		10			
θ_{jc}	Thermal Resistance				17.5	°C/W

Note 1: T_c = +25°C unless otherwise specified

SPECIFICATIONS MAY BE SUBJECT TO CHANGE WITHOUT NOTICE

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B3-12-3

SERIES INPUT RESISTANCE VS
FREQUENCY (TYPICAL)SERIES INPUT REACTANCE VS
FREQUENCY (TYPICAL)SERIES LOAD IMPEDANCE VS
FREQUENCY (TYPICAL)

B3-12-4

B3-12 TEST AMPLIFIER
175 MHz