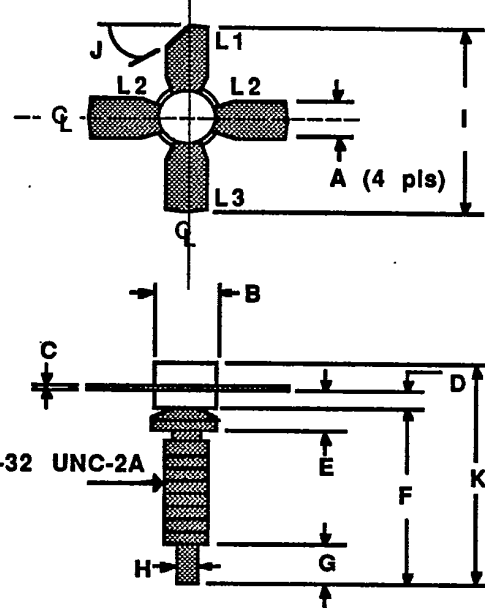


GENERAL DESCRIPTION

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



ABSOLUTE MAXIMUM RATINGS

Maximum Power Dissipation @ 25°C Case Temperature 10 W

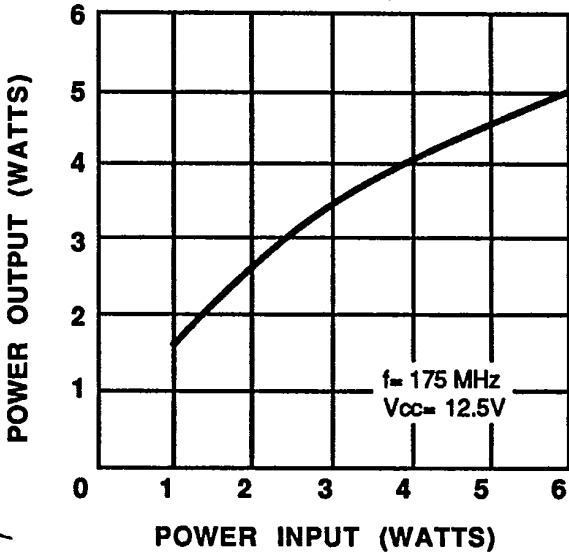
Maximum Voltage and Current

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

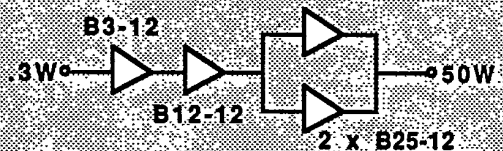
POWER OUTPUT VS POWER INPUT (TYPICAL)



DIM	Millimeter	TOL	Inches	TOL	
L1 : C					
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

TYPICAL AMPLIFIER LINE UP

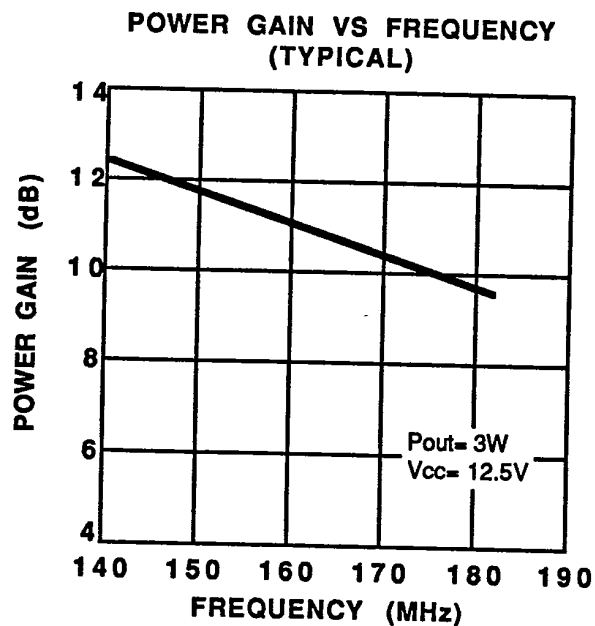
Vcc = 12.5 Volts
 Frequency Range = 175 MHz



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		%
V _{SWR}	Load Mismatch Tolerance				$\infty:1$	
B _{Vebo}	Breakdown Voltage (Emitter to Base)	I _c = 0A, I _e = 5mA	4.0			Volts
B _{Vces}	Breakdown Voltage (Collector to Emitter)	V _{be} = 0A, I _c = 5mA	36			Volts
B _{Vceo}	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

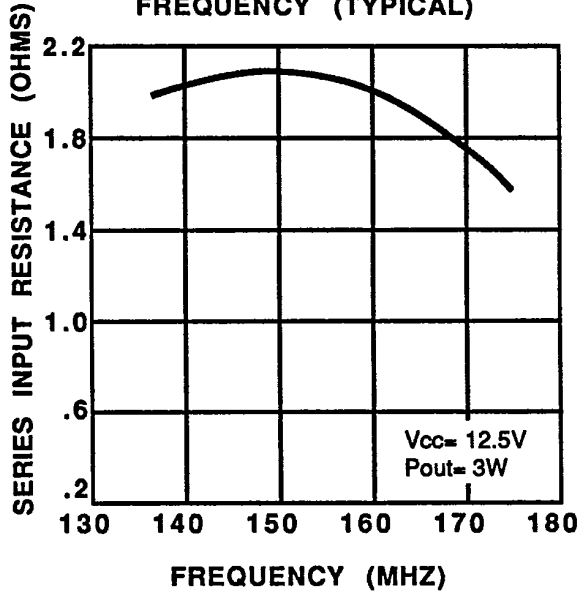
Note 1: T_c = +25°C unless otherwise specified

SPECIFICATIONS MAY BE SUBJECT TO CHANGE WITHOUT NOTICE

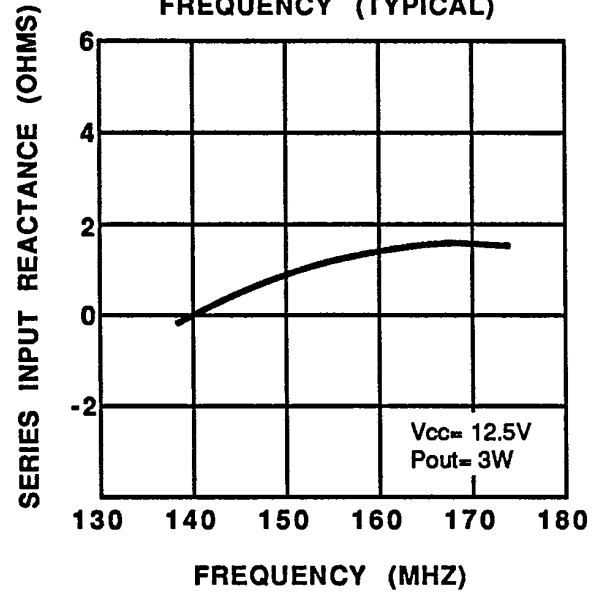
265

B3-12-3

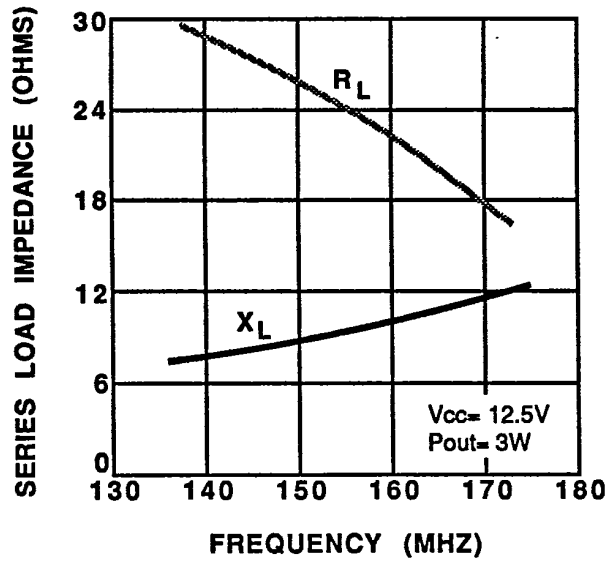
SERIES INPUT RESISTANCE VS FREQUENCY (TYPICAL)



SERIES INPUT REACTANCE VS FREQUENCY (TYPICAL)



SERIES LOAD IMPEDANCE VS FREQUENCY (TYPICAL)



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B3-12-4

B3-12 TEST AMPLIFIER 175 MHz

