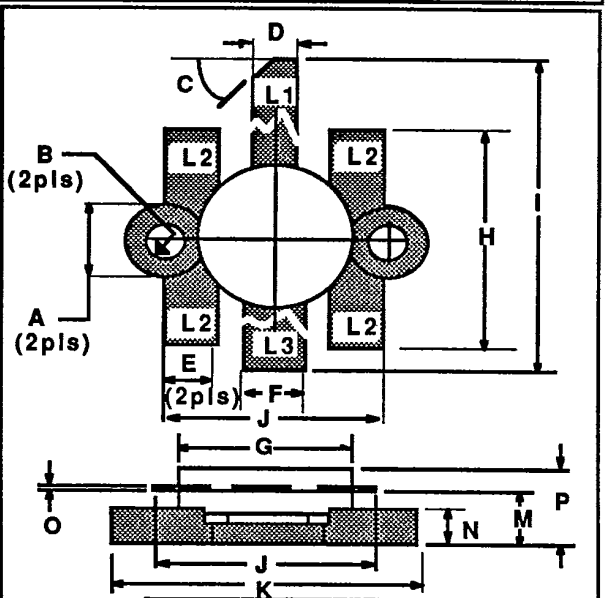


**GENERAL DESCRIPTION**

The BM80-12 is specifically designed to meet rugged mobile radio requirements, providing 80 Watts of RF power output over the frequency band 150-175 MHz.

**BM80-12**  
**80 WATTS - 12.5 VOLTS**  
**150-175 MHz**

**LAND MOBILE**



L1 : C  
 L2 : E  
 L3 : B

DIM	Millimeter	TOL	Inches	TOL
A	6.35 DIA	.13	.250 DIA	.005
B	3.17 DIA	.13	.125 DIA	.005
C	45°	5°	45°	5°
D	4.57	.13	.180	.005
E	5.08	.13	.200	.005
F	5.69	.13	.224	.005
G	12.70 DIA	.13	.500 DIA	.005
H	25.40	.25	1.000	.010
I	36.83	.25	1.450	.010
J	18.41	.13	.725	.005
K	24.76	.13	.975	.005
M	4.32	.13	.170	.005
N	3.17	.13	.125	.005
O	0.13	.02	.003	.001
P	6.73	REF	.265	REF

**ABSOLUTE MAXIMUM RATINGS**

Maximum Power Dissipation @ 25°C Case Temperature 175 W

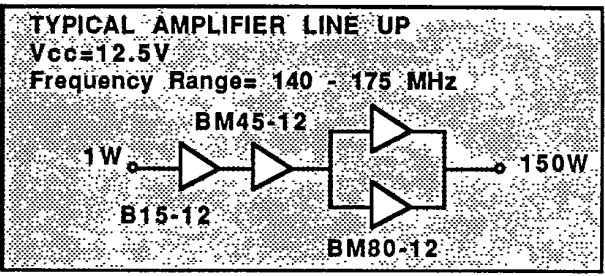
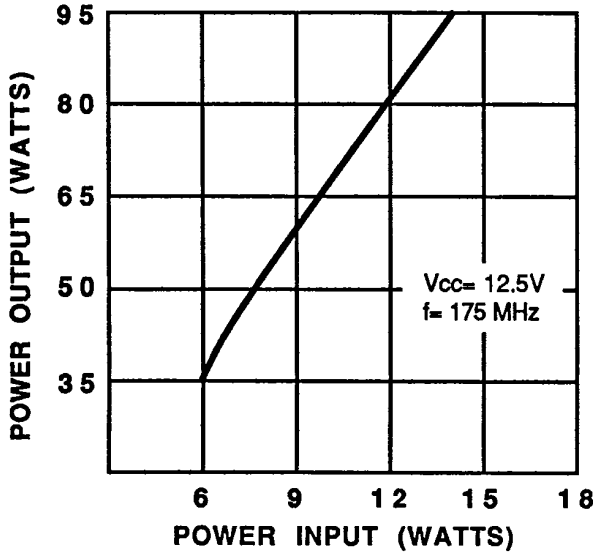
**Maximum Voltage and Current**

BVces Collector to Emitter Voltage 36 V  
 BVebo Emitter to Base Voltage 3.5 V  
 Ic Collector Current 25 A

**Maximum Temperatures**

Storage Temperature -65 to +150 °C  
 Operating Junction Temperature +200 °C

**POWER OUTPUT VS POWER INPUT (TYPICAL)**



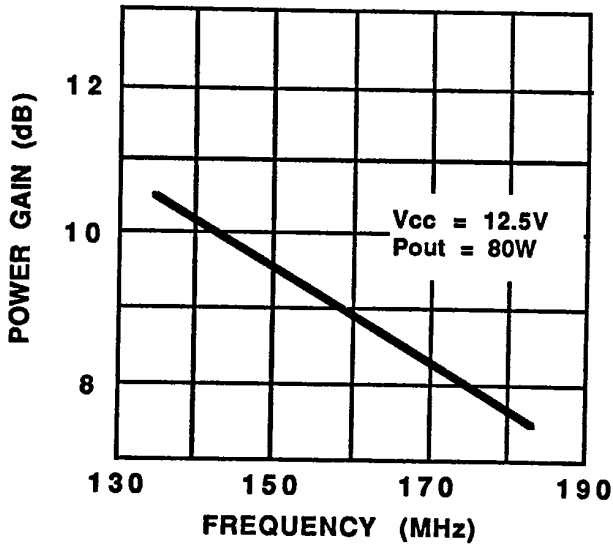
**BM80-12-2**

**ELECTRICAL CHARACTERISTICS<sup>1</sup>**

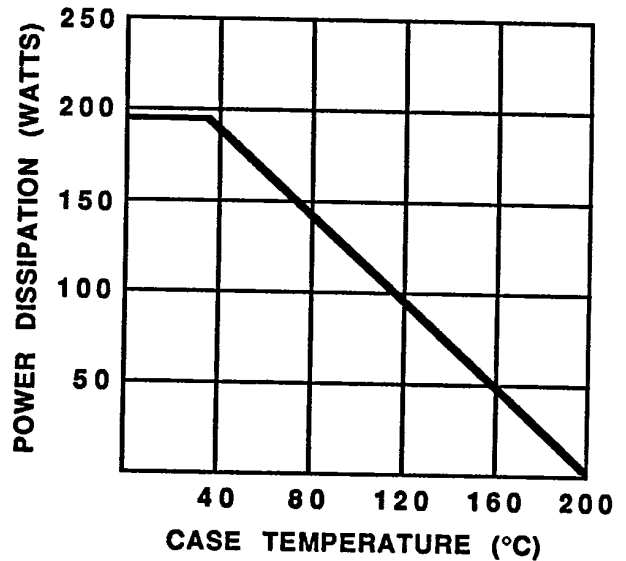
SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN.	TYP.	MAX.	UNITS
P <sub>out</sub>	Power Output	f = 175 MHz V <sub>cc</sub> = 12.5 Volts	80			Watts
P <sub>in</sub>	Power Input				14	Watts
P <sub>g</sub>	Power Gain			8.5		dB
η <sub>c</sub>	Collector Efficiency			60		%
VSWR	Load Mismatch Tolerance				∞:1	
BV <sub>ebo</sub>	Breakdown Voltage (Emitter to Base)	I <sub>e</sub> = 5 mA	4.0			Volts
BV <sub>ces</sub>	Breakdown Voltage (Collector to Emitter)	I <sub>c</sub> = 25 mA	36			Volts
BV <sub>ceo</sub>	Breakdown Voltage (Collector to Emitter)	I <sub>c</sub> = 100 mA	18			Volts
C <sub>ob</sub>	Capacitance-Collector to Base	V <sub>cb</sub> = 12.5V, I <sub>e</sub> = 0, f = 1 MHz		320		pF
h <sub>FE</sub>	DC-Current Gain	V <sub>ce</sub> = 5V, I <sub>c</sub> = 1A	10			
θ <sub>jc</sub>	Thermal Resistance				1.0	°C/W

Note 1: T<sub>c</sub> = +25°C unless otherwise specified

**POWER GAIN VS FREQUENCY (TYPICAL)**



**POWER DERATING CURVE (TYPICAL)**

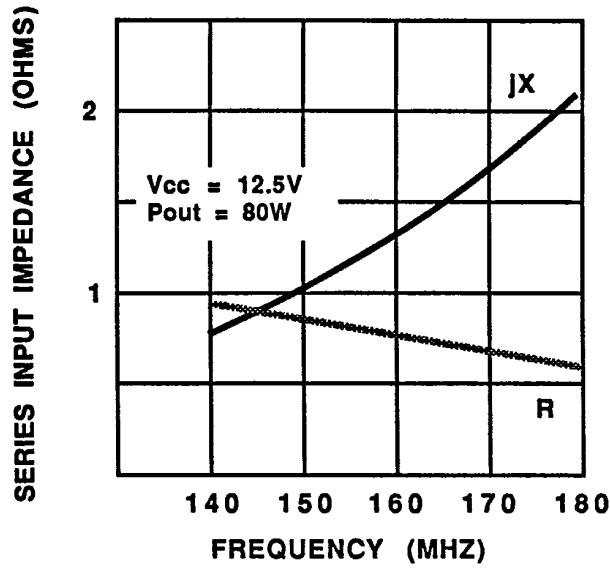


SPECIFICATIONS MAY BE SUBJECT TO CHANGE WITHOUT NOTICE

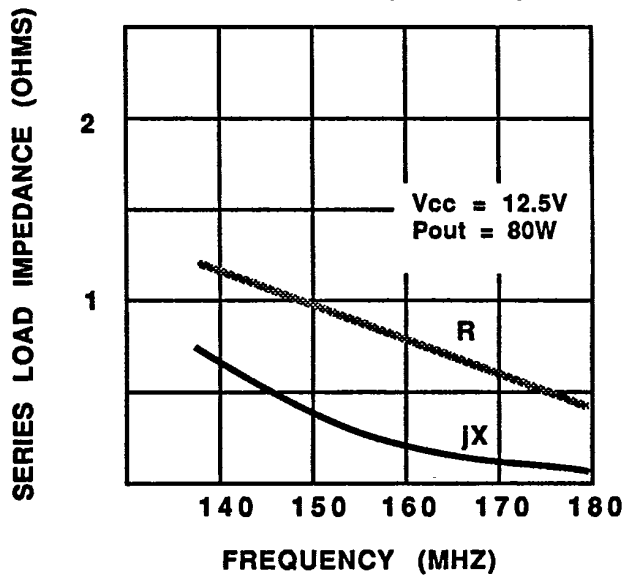
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**BM80-12-3**

**SERIES INPUT IMPEDANCE VS FREQUENCY (TYPICAL)**



**SERIES LOAD IMPEDANCE VS FREQUENCY (TYPICAL)**



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