

TPT

# BOMAC



## PRODUCT CATALOG

MICROWAVE TUBES AND COMPONENTS



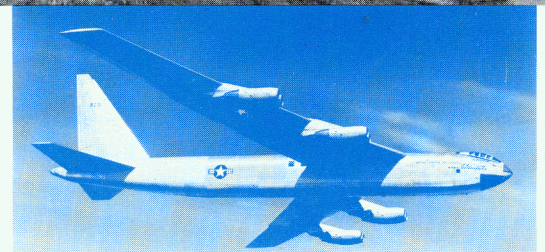
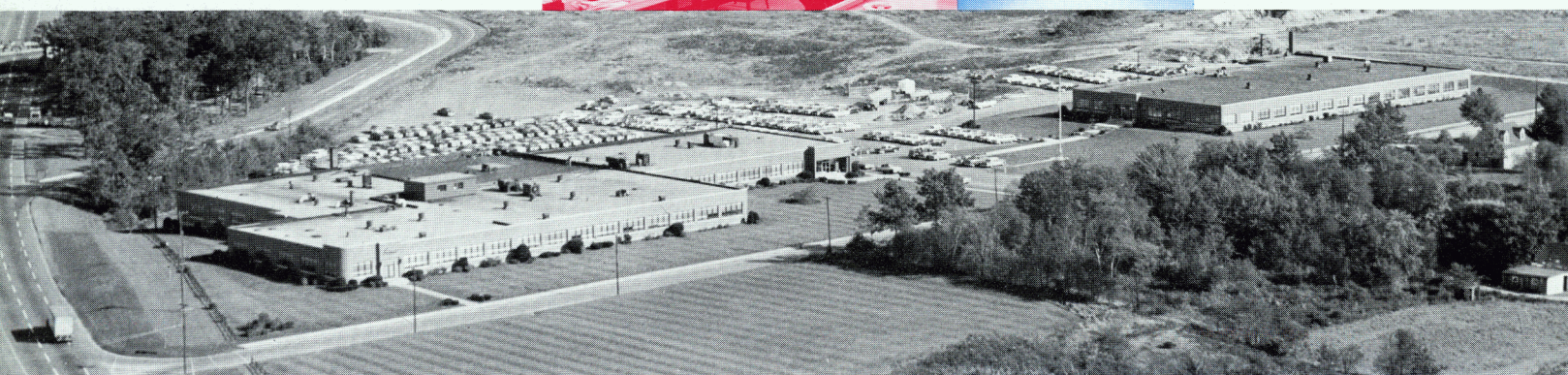
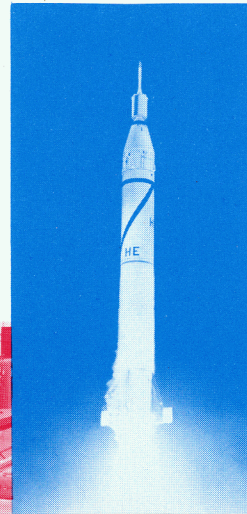
# BOMAC

Since its founding in 1947, Bomac's climb to a position of prominence in the field of microwave has been swift and sure.

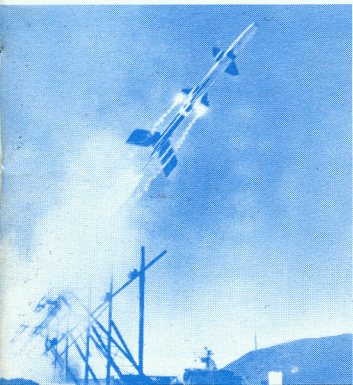
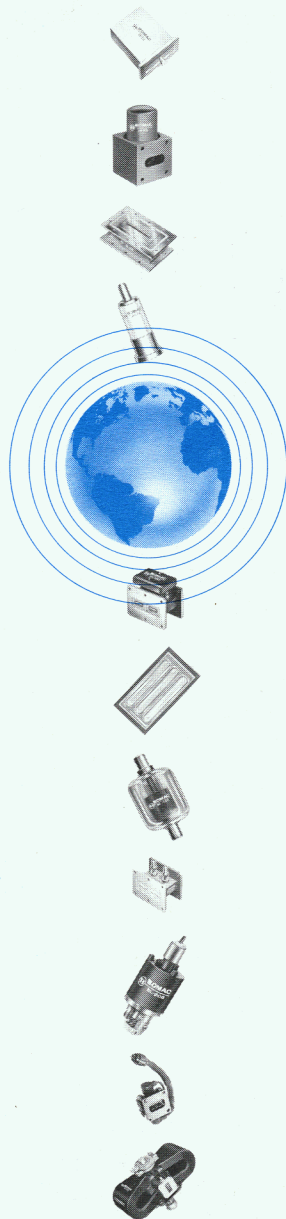
Today, Bomac employs over 800 people, and has over 110,000 square feet of manufacturing space.

On the staff are some of the country's leading microwave tube specialists whose achievement records are outstanding in the industry. Up-to-the-minute facilities include research and development laboratories, extensive areas for manufacturing and assembly, and the most advanced test equipment. Every tube is thoroughly tested to insure maximum uniformity and peak performance before it leaves the plant.

Bomac has been a pioneer in many tube developments, and is continually searching for and producing new and improved products. If you have a problem in engineering, development, or production of microwave tubes or components, Bomac has the experience and facilities to find the answer.



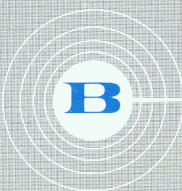




Because of the space limitations of this short-form catalog, it has been impossible for us to include every model or type of tube or component offered by Bomac.

These products are available on order in any required quantity. Further, Bomac Laboratories is well equipped to design and manufacture many other items on special order to meet the customer's specifications.

A letter, wire, TWX, or phone call for information will receive prompt attention. See outside back cover for list of Bomac representatives.



**BOMAC laboratories, inc.**

SALEM ROAD • BEVERLY, MASSACHUSETTS • WAiker 2-6000  
A SUBSIDIARY OF VARIAN ASSOCIATES

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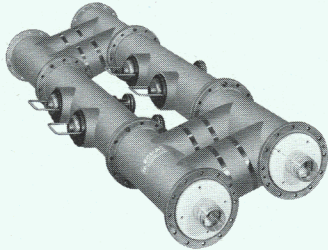




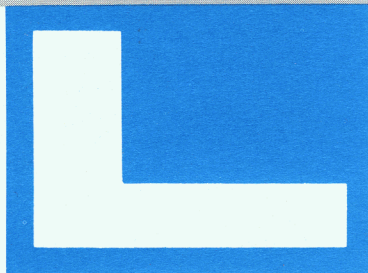
# UHF

## COMPONENTS

Need a single tube? Or 50,000?  
Bomac can meet your needs!



PRODUCT NO.	PRODUCT	FREQUENCY (MC)	LINE SIZE	FEATURE
BLP-013D	Monoplexer	225	7/8" Coaxial	P peak, 5 kw
BL-581	Duplexer	216-225	3 1/8" Coaxial	P peak, 2.5 Mw
BL-549	Duplexer	300-500	3 1/8" Coaxial	P peak, 2.5 Mw
BLP-009D	Duplexer, Branched Coax line	406-450	3 1/8" Coaxial	P peak, 3 Mw max, P average, 5 kw max
BL-595	Duplexer	413	6 1/8" Coaxial	P peak, 2.0 Mw, P average, 10 kw
BLP-024D	Duplexer	425	WR2100	P peak, 2.5 Mw, P average, 150 kw
BLP-036D	Duplexer	406-450	3 1/8" Coaxial	P peak, 2.0 Mw, P average, 4 kw
BLP-010D	Monoplexer	406-450	7/8" Coaxial	P peak, 30 kw, P average, 50 watts
BLP-026H	Hybrid	300-480	3 1/8" Coaxial	P peak, 1.0 Mw
BLP-29H	Hybrid	400-450	3 1/8" Coaxial	P peak, 2.5 Mw
BL-596	Hybrid	400-450	7/8" Coaxial	P peak, 200 kw
BLP-004H	Hybrid	400-450	3 1/8" Coaxial	P peak, 2.0 Mw
BLP-012H	Hybrid	425	Slabline	3 db coupling "N" and 7/8 coaxial fittings
BL-588	Receiver Protector	400-450	1 5/8" Coaxial	P Peak, 40 kw
BL-597	Load, Dry	400-450	1 5/8" Coaxial	P peak, 20 kw, P average, 20 w, VSWR 1.2 max.

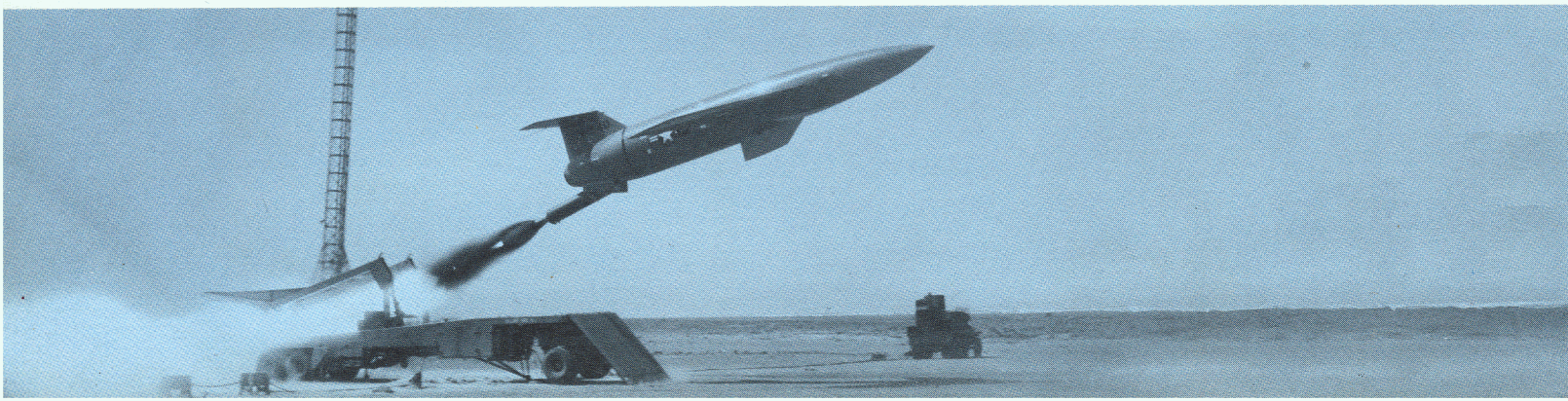


Bomac produces over 750 different types of microwave tubes and components.

## BAND

### L BAND TR

PRODUCT NO.	FREQUENCY RANGE (MC)	CENTER	POWER LEVEL (KW)-MAX.	FEATURE
6633/BL-37A	1220-1365	1292	2000	Broadband TR pressurizable
BL-632	1250-1350	1300	6000	Broadband TR ceramic input window
BL-635	1215-1355	1285	450	Cell tube, for motorized tuning
BL-926	1220-1365	1292	2000	Broadband TR, has folded cylinder window and plug-in gaps
7166/BL-933	1215-1365	1292	2000	Broadband TR, 7" overall length
BL-959	409-417	413	65	For use with 6 1/8" coaxial duplexer
BL-974	1220-1365	1292	2000	"hot-cold" TR, operating temp. ranges from -55° to +125° C, fixed tuned
1B40		1100	1	Electrodeless discharge





**L BAND**  
**ATR**

PRODUCT NO.	CENTER FREQUENCY (MC)	POWER LEVEL (KW) MAX.	FEATURE
BL-628	1300	2000	Tuned in full height guide
BL-634	1285	2000	Tuned in full height guide
BL-637	1350	2000	Tuned in full height guide
BL-640	1300	2000	Tuned in full height guide
BL-640A	1300	2000	Tuned in full height guide, pressurizable
BL-646	1230	2000	High Q window, tuned in full height guide
BL-647	1340	2000	High Q window, tuned in full height guide
BL-648	1285	2000	High Q window, tuned in full height guide
BL-664	1300±5%	2000	Ceramic window
BL-664A	1300±5%	2000	Has flange suitable for pressurization
6962/BL-665	1285±5%	2000	Low Q double iris window, ½ height guide
BL-665A	1285±5%	2000	Has flange suitable for pressurization

**L BAND**  
**Pre-TR**

PRODUCT NO.	FREQUENCY RANGE (MC)	CENTER	POWER LEVEL (KW) - MAX.	FEATURE
6605/BL-96A	1250-1350	1300	2000	Pressurizable, broadband
7152/BL-612	1250-1350	1300	3000	Ceramic window, broadband
BL-612A	1250-1350	1300	3000	Short recovery time, RT 30 μs (max)
BL-612B	1250-1350	1300	3000	Insertion loss 0.3db (max)
BL-920	1250-1350	1300	5000	Dual pre TR, has folded cylinder window
5939	1250-1350	1300	550	Used in pairs, dumbbell type
5939A	1250-1350	1300	550	Additional mounting holes in flange
6260	1250-1350	1300	2000	Dumbbell type
BLW-005	1250-1350	1300	5000	Folded cylinder

**L BAND**  
**Dual TR**

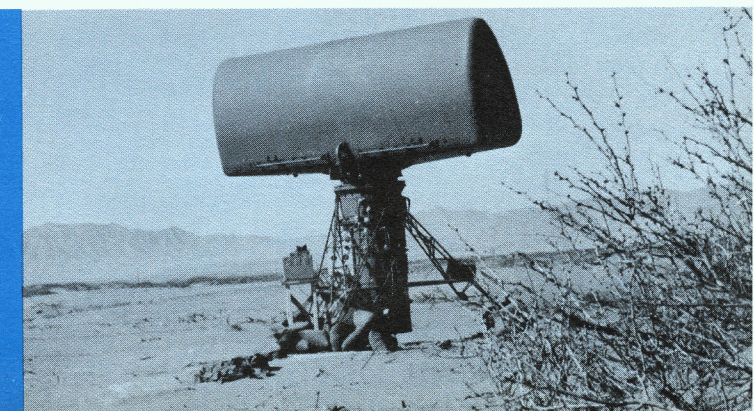
PRODUCT NO.	FREQUENCY RANGE (MC)	CENTER	POWER LEVEL (KW) - MAX.	FEATURE
6634/BL-90	1250-1350	1300	5000	For use with sidewall couplers, bandpass, RT 150 μs
BL-618	1250-1350	1292	2000-5000	May be used for sidewall coupler, RT 150 μs
BL-927	1250-1350	1300	5000	Folded cylinder, 0.001 duty cycle
BL-935	1250-1350	1300	9000	For use with sidewall coupler

**L BAND**  
**Crystal protector**

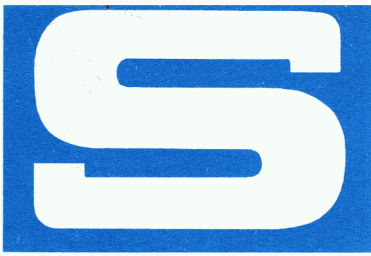
PRODUCT NO.	FREQUENCY RANGE (MC)	CENTER	POWER LEVEL (KW) - MAX.	FEATURE
BL-932	1270-1360	1315	10	Low power, broadband TR
BLS-509	1250-1350	1300	50	Min. firing power 20 watts (peak), 7 in. long
BL-923	1250-1350	1300	10	Broadband for use with pre-TR

**L BAND**  
**Components**

PRODUCT NO.	PRODUCT	FREQUENCY (RANGE KMC)	LINE SIZE (WG)	FEATURE
BL-506	Duplexer, Branch Guide	1.180-1.220	3.41" × 6.66"	P peak, 3 kw, UG 60A/U coaxial input and output
BL-591	Duplexer, Branch Guide	1.250-1.350	3.41" × 6.66"	P peak, 1Mw, P average 3 kw, 1½" coaxial input and output
BLP-005D	Duplexer, Branch Guide	1.250-1.350	3.41" × 6.66"	P peak, 2 Mw







Bomac's 85-man engineering staff is diversified enough to perform r&d in any of the varied fields of microwave

## S BAND

### S BAND TR



PRODUCT NO.	FREQUENCY RANGE (MC)	CENTER	POWER LEVEL (KW) MAX.	FEATURE
6637/BL-31		3300	50	Ruggedized TR, no tuner knob
6635/BL-57	2690-2710	2700	5	Tunable, integral cavity
6638/BL-99		3300	50	Positive ignitor operation
BL-602	2885 ± 5%	2885	20	Integral cavity
BL-603	2664-2964	2802	750	High Q windows
BL-696	2800-3330	3000	350	1000 Hr. fixed tuned
BL-902	2900-3200	3050	1200	High power ceramic window, broadband
BL-913	2600-3000	2800	1200	Ceramic window
BL-969	2600-3000	2800	750	Coaxial output TR, output window not used, type N output used
BL-975	2600-3000	2800	750	"Hot-cold" TR, operating temp. range: -55° to +125° C
1B27		3000	50	Cell type, tunable, 2 disc
1B55	3365-3740	3550	750	Broadband
1B58A	2600-3000	2800	750	Band pass, fixed tuned
1B62	2700-3300	3000	350	Cell type, fixed tuned
5853	2900-3200	3050	750	Broadband
5927	3100-3500	3300	750	Broadband
6117	2689-2939	2802	750	Broadband, pressurizable mounting
721B	2700-3300	3000	350	Cell type, fixed tuned

### S BAND ATR

PRODUCT NO.	CENTER FREQUENCY (MC)	POWER LEVEL (KW) MAX.	FEATURE											
1B44	2750	750	Fixed tuned											
1B52	3625	750	Fixed tuned											
1B53	3479	750	Fixed tuned											
1B56	2850	750	Fixed tuned											
1B57	3325	750	Fixed tuned											
5792	2950	750	Fixed tuned											
5793	3050	750	Fixed tuned											
5921	3200	750	Fixed tuned											
5922	3400	750 </tr <tr> <td>6024</td> <td>2800</td> <td>750</td> <td>Fixed tuned</td> </tr> <tr> <td>BL-36</td> <td>2800</td> <td>750</td> <td>Fixed tuned</td> </tr> <tr> <td>BL-40</td> <td>2850</td> <td>750</td> <td>Fixed tuned. R. T. = 15μs.</td> </tr>	6024	2800	750	Fixed tuned	BL-36	2800	750	Fixed tuned	BL-40	2850	750	Fixed tuned. R. T. = 15μs.
6024	2800	750	Fixed tuned											
BL-36	2800	750	Fixed tuned											
BL-40	2850	750	Fixed tuned. R. T. = 15μs.											

### S BAND

### Microwave Mixer Diodes

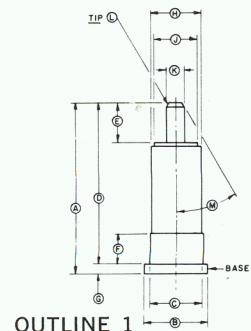
FORWARD POLARITY	REVERSE POLARITY	MATCHED PAIR (4) FORWARD & REVERSIBLE POLARITY (3)			TEST FREQUENCY (MC)	MAX. CONVERSION LOSS (db)
1N21B	1N21BR	1N21BM	1N21BMR	1N416B	3060	6.5
1N21C	1N21CR	1N21CM	1N21CMR	1N416C	3060	5.5
1N21D	1N21DR	1N21DM	1N21DMR	1N416D	3060	5.0
1N21E	1N21ER	1N21EM	1N21EMR	1N416E	3060	—
1N21WE (5)	1N21WER	1N21WEM	1N21WEMR	1N21WE	3060	5.5

#### NOTES:

- Normal polarity — The path of easy current flow (conventional) is from base to pin. The base is positive with respect to the pin.
- Reverse polarity — The path of easy current flow (conventional) is from pin to base. The base is negative with respect to the pin.
- Types with letters ending in MR consist of one normal and one reverse polarity diode.
- Eccentricity between tip and base shall not exceed 0.0075.
- Metal parts shall be gold plated a minimum of 10 MSI.
- As alternate design, base may have set screw. Dimension M = 10° to 45° from vertical.

#### REF. DIMENSION

A	0.820 ± 0.020
B	0.294 ± 0.002
C	0.250 + 0.000 — 0.004
D	0.768 ± 0.015
E	0.187 Min.
	0.190 Max.
F	0.196 ± 0.003
G	0.052 ± 0.005
H	0.240 Max.
J	0.205 ± 0.010
K	0.093 ± 0.001
L	0.015 — 0.030 Chamfer
M	30° — 45° From Vertical





**S BAND**  
**ATR**

PRODUCT NO.	CENTER FREQUENCY (MC)	POWER LEVEL (KW) MAX.	FEATURE
BL-41	2750	750	Fixed tuned — 15μs R. T. Fixed tuned-High Q Fixed tuned, window ¼ in. high approx. High Q.
BL-623	2800	1000	
BL-630	2800	1000	
BL-642	2800	1000	
BL-660	2800	1000	Quartz wool window
BL-963	2950	1 Mw	
BL-964	3050	1 Mw	
BL-946	2850	1000	

**S BAND**  
**Pre-TR**

PRODUCT NO.	FREQUENCY RANGE (MC)	CENTER	POWER LEVEL (KW) MAX.	FEATURE
1B38	2650-2950	2800	750	Broadband
1B54	3300-3700	3500	750	Broadband

**S BAND**  
**Dual TR**

PRODUCT NO.	FREQUENCY RANGE (MC)	CENTER	POWER LEVEL (KW) MAX.	FEATURE
6636/BL-87	2700-2900	2800	750	Broadband for use with sidewall couplers
BL-638	2900-3200	3050	750	
BL-652	3400-3700	3550	750	Duty cycle 0.10
BL-938	2700-2900	2800	10	

**S BAND**  
**Dual TR and Shutter**

PRODUCT NO.	FREQUENCY RANGE (MC)	POWER LEVEL (KW) MAX.	SHUTTER CIRCUIT VOLTAGE (VOLTS)	FEATURE
BL-346	2700-2900	750	28	BL87 with Shutter
BL-357	3400-3700	750	28	BL652 with Shutter

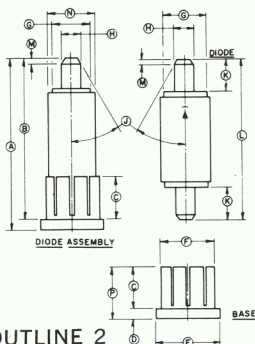
**S BAND**  
**TR and Shutter**

PRODUCT NO.	FREQUENCY RANGE (MC)	POWER LEVEL (KW) MAX.	SHUTTER CIRCUIT VOLTAGE (VOLTS)	FEATURE
6602/BL-329	3100-3500	750	28	5927 + Shutter
BL-345	2664-2964	750	28	1B58 + Shutter
BL-351	2900-3200	750	28	5853 + Shutter
BL-381	2900-3200	750	28	Shortened 1B58

**S BAND**  
**Pressurizing Windows**

PRODUCT NO.	FREQUENCY RANGE (KMC)	CENTER (MC)	VSWR (MAX.)	PEAK POWER (KW)	WAVE-GUIDE SIZE (RG)	MATES WITH (UG)	MOUNTING
BL-741	2.7-2.9	2800	1.20	750	48/U	53/U	Flange
BL-712	2.8-3.2	3000	1.20	1000	48/U	53/U	Flange
BL-713	2.6-3.7	3150	1.20	1000	48/U	54A/U	Flange
BL-124	2.675-2.925	2800	1.10	1000	48/U		Solder
BL-739	2.6-3.7	3100	1.30		48/U		Solder
BL-743		3300	1.10	1mw	48/U		Solder

MAX. OUTPUT NOISE RATIO (TIMES)	MAX. VSWR IN STD MIXER	POWER LEVEL (MW)	BURNOUT (ERGS)	CALC. OVERALL RECEIVER NOISE FIGURE	IF IMP. (OHMS)	STANDARD MIXER	OUTLINE NO.
2.0	—	0.5	2.0	10.3	200-800	JAN 124	1
1.5	—	0.5	2.0	8.3	200-800	JAN 124	1
1.3	1.5	0.5	2.0	7.34	350-450	JAN 124	1
	1.3	0.5	5.0	7.0	350-450	JAN 124	1
1.5	1.3	0.5	5.0	7.0	350-450	JAN 264	2



**REF. DIMENSION**

A	0.820 ± 0.020
B	0.768 ± 0.015
C	0.196 ± 0.003
D	0.053 Ref.
E	0.294 D ± 0.002
F	0.248 D ± 0.002
G	0.205 D ± 0.010
H	0.093 D ± 0.001
J	10° - 45° From Vert.
K	0.187 Min. 0.190 Max.
L	0.790 ± 0.018
M	0.015 - 0.030 Chamfer
N	0.240 D Max.
P	0.250 + 0.000 - 0.004

- NOTES:**
- Overall noise figure calculated from formula  $N = CL (NiF + NR - 1)$  NiF is assumed as 1.5 db (30 mc/s1F)
  - Jan 124 coaxial mixer will soon be replaced with an equivalent waveguide mixer.
  - The reversible polarity cartridge types are electrically and mechanically identical to their fixed polarity counter parts and are directly interchangeable with the indicated fixed polarity types.
  - Matched pairs of Bomac mixer diodes are available and are matched to the following limits.  
If impedance 25 ohms  
Conversion Loss 0.3 db  
Current 5% max. Signal Loss to L.O. Feed Arm
  - 1N23WE & 1N21WE are environmentally tested under extreme conditions according to MIL-E-1/1117 & MIL-E-1/1115 JAN. Spec. Resp.



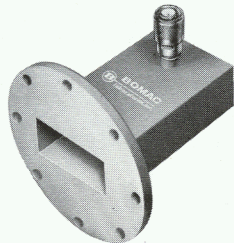
**S BAND**  
**Carcinotron**

PRODUCT NO.	FREQUENCY RANGE (MC)	MIN. PEAK POWER (WATTS)	MIN. AVERAGE POWER (WATTS)	OUTPUT MATES WITH	FEATURE
BL-857	2500-3300	180	180	UG45/U	Carcinotron Tunable

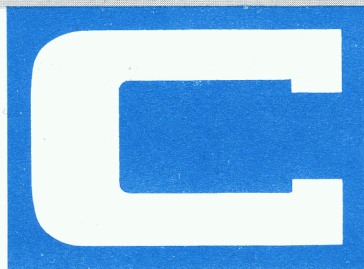
**S BAND**  
**Crystal Protector**

PRODUCT NO.	FREQUENCY RANGE (MC)	CENTER	POWER LEVEL (KW) MAX.	FEATURE
BL-670	2700-2900	2800	10	Max. overall length 6.640"

**S BAND**  
**Components**



PRODUCT NO.	PRODUCT	FREQUENCY (KMC)	LINE SIZE (WG)	FEATURE
BLP-061	Power Divider Variable	2.6-3.9	1½" × 3"	P peak 2.7 Mw pressurized 2.2 Mw unpressurized
BL-584	Diplexer	2.72-2.98	1½" × 3"	P peak 750 kw, insertion loss, .3db max., Isolation 25 db min.
BL-585	Diplexer	2.84-3.00	1½" × 3"	P peak 750 kw, Insertion Loss .3 db max. Isolation 25 db min.
BL-520	Duplexer, Branch Guide	2.98-3.02	1½" × 3"	P peak, 20 kw, UG46/U coaxial input and output
BLP-066	Directional Coupler, Crossguide	2.6-3.4	1½" × 3"	Incident power 1.1 Mw coupling 20, 30, or 40 db; directivity, 15 db
BLP-071	Directional Coupler, Sidewall	2.6-3.4	1½" × 3"	Incident power, 2.2 Mw coupling 20, 30, or 40 db; directivity, 20 db min.
BLP-076	Directional Coupler, Topwall	2.6-3.4	1½" × 3"	Incident power, 1.1 Mw, coupling, 10 or 20 db; directivity, 40 db min.
BLP-057L	Waterload	2.6-3.4	1½" × 3"	VSWR, 1.06 max., P peak 2.7 Mw pressurized, 1.2 Mw unpressurized
BLP-057LP	Waterload With Pulling Slug	2.6-3.4	1½" × 3"	VSWR, 1.50 to 1.70 max.



Specify Bomac for maximum uniformity and peak performance

**B BAND**

**C BAND**  
**TR**



PRODUCT NO.	FREQUENCY RANGE (MC)	CENTER	POWER LEVEL (KW) MAX.	FEATURE
6568/BL-28	5395-5905	5650	3000	Phase controlled ± 5°
6639/BL-46	5540-5560	5550	20	Tunable
BL-605	5370-5430	5400	100	Contact mounting seat
6906/BL-643	5393-5905	5650	5	Phase controlled ± 5° Tracks with 6905/BL-613
BL-972	5395-5905	5650	500	
BL-976	5395-5905	5650	300	"Hot-cold" TR, operating temp. range -55° to +125° C., broadband
5865	5395-5905	5650	300	
5925	5200-5530	5365	1000	
6624	5350-5450	5400	85	3 Element TR, contact type input mount

**C BAND**  
**ATR**

PRODUCT NO.	CENTER FREQUENCY (MC)	POWER LEVEL (KW) MAX.	FEATURE
BL-52	5435	300	Fixed tuned
6455/BL-61	5640	300	Fixed tuned, contact mount flange
BL-83	5280	300	Fixed tuned, contact mount
BL-606	5400	100	Special mounting flange
6022	5365	1000	Fixed tuned
6081	5640	300	Fixed tuned
6591	5400	150	Contact mount flange

**C BAND**  
**Pre-TR**

PRODUCT NO.	FREQUENCY RANGE (MC)	CENTER	POWER LEVEL (KW) MAX.	FEATURE
BL-954	5395-5755	5575	3000	Will not sustain ionization below 10 watts CW
BL-982	5400-5900	5650	40	Will not sustain ionization below 10 watts CW
BL-997	5250-5750	5500	1000	Dual pre-TR has folded cylinder window, 1½ in. long



**C BAND**  
**Dual TR**

PRODUCT NO.	FREQUENCY RANGE (MC)	CENTER	POWER LEVEL (KW) MAX.	FEATURE
6640/BL-60	5400-5900	5650	700	Ceramic windows, phase control, tracks with TR6906/BL643
6641/BL-86	5150-5410	5280	1000	
6905/BL-613	5400-5900	5650	3000	
BL-644	5250-5310	5280	1000	Ceramic input window, water cooled flange, high duty cycle 0.030
BL-957	5400-5900	5650	100	

**C BAND**  
**TR and Shutter**

PRODUCT NO.	FREQUENCY RANGE (MC)	POWER LEVEL (KW) MAX.	SHUTTER CIRCUIT VOLTAGE (VDC)	FEATURE
6592/BL309	5200-5530	1000	28	Ceramic window Shutter circuit uses AN connector, Shortened ignitor.
6594/BL-311	5395-5905	300	28	
BL-337	5395-5905	3000	28	
BL-350	5340-5450	300	28	
BL-366	5395-5905	300	6	Phase control $\pm 5^\circ$ Input flange has all 8 holes tapped to .190 - 32 NF 2B
BL-373	5250-5750	50	48	
BL-377	5395-5905	3000	28	

**C BAND**  
**Shutter (only)**

PRODUCT NO.	FREQUENCY RANGE (MC)	POWER LEVEL	SHUTTER CIRCUIT VOLTAGE	FEATURE
BL-353	5395-5905	1 Watt	28	Low power switching only

**C BAND**  
**Dual TR and Shutter**

PRODUCT NO.	FREQUENCY RANGE (MC)	POWER LEVEL (KW) MAX.	SHUTTER CIRCUIT VOLTAGE (VDC)	FEATURE
BL-336	5400-5900	700	28	Has AN Connectors Contains 12 Struts Between Flanges, Terminal Board Incapsulated Built-in Power Rectifier
BL-352	5400-5900	700	28	
7447/BL-352A	5400-5900	700	28	
BL-362	5400-5900	700	115 (ac) 60 ~	

**C BAND**  
**Microwave Cavities**

PRODUCT NO.	FREQUENCY RANGE (MC)	QL	IL (db)	FEATURE
BL-467	5400-5900	1400	13 max cavity only	Direct reading tunable dual mode cavity with input transition and attenuator, output attenuators and crystal detectors, calibrated in 0.5 Mc increments
BL-476	5400-5900	1400	13 max	Same as above, but without input transition, attenuator or output crystal detectors

**C BAND**  
**Pressurizing Windows**

PRODUCT NO.	FREQUENCY RANGE (KMC)	CENTER (MC)	VSWR (MAX.)	PEAK POWER (KW)	WAVE-GUIDE SIZE (RG)	MOUNTING
BL-704	4.9-5.1	5000	1.15	100	49/U	Solder
BL-730	4.9-5.1	5000	1.15	100	49/U	Solder
BL-769	4.9-5.1	5000	1.15	100	49/U	Solder
BL-141	5.1-5.32	5210	1.10	100	49/U	Solder
BL-746	5.25-5.31	5280	1.05	500	49/U	Solder
BL-747		5975		250	50/U	Solder
BL-780	5.35-5.45	5400	1.12	750	49/U	Solder
BL-738	5.1-5.9	5500	1.25	100	49/U	Solder
BL-134	5.2-5.9	5550	1.20	75	59/U	Solder
BL-742	5.45-5.825	5637	1.12	750	49/U	Solder

**C BAND**  
**Magnetrons**



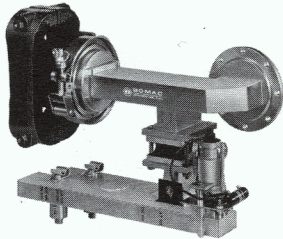
PRODUCT NO.	FREQUENCY RANGE (MC)	MIN. PEAK POWER (WATTS)	MIN. AVERAGE POWER (WATTS)	OUTPUT MATES WITH	FEATURE
7088/BL-212	5400-5900	100	0.2	UG699/U	Tunable
BL-250	5400-5900	150	0.3	TNC	Tunable
BL-243	5400-5900	200	0.4	UG699/U	Tunable
BL-242	5400-5900	400	0.8	N	Tunable, pressurizing flange
BLM-008	5400-5900	400	0.8	TNC	Tunable
BLM-022	5400-5900	500	1.0	TNC	Tunable, high stability
BLM-026	5400-5900	500	1.0	TNC	Tunable
BLM-020	5400-5900	700	1.4	TNC	Tunable
BL-245	5400-5900	900	1.8	TNC	Tunable, high stability
7444/BL-230	5400-5900	1000	2.0	TNC	Tunable



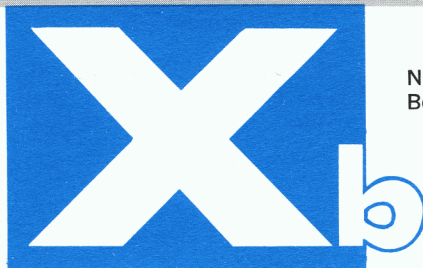
**C BAND**  
**Crystal Protector**

PRODUCT NO.	FREQUENCY RANGE (MC)	CENTER	POWER LEVEL (KW) MAX.	FEATURE
BL-971	5450-5825	5640	5	Broadband low noise figure
BL-973	5395-5755	5575	10	Choke flange on low power

**C BAND**  
**Components**



PRODUCT NO.	PRODUCT	FREQUENCY (KMC)	LINE SIZE (WG)	FEATURE
BLP-060	Power divider, variable	5.2-5.9	1" x 2"	P Peak 1.7 Mw pressurized, .9 Mw unpressurized
BLP-087E	Diplexer	5.2-5.9	1" x 2"	P peak 1.7 Mw pressurized, .9 Mw unpressurized; isolation 25 db min.
BLP-003D	R. F. package for AN/SPS-21	5.48-5.62	1" x 2"	Noise figure 10.5db, includes: 2 diodes (1N23C), magnetron, (BL-244); klystron, TR (6115); (6639/BL-46) duplexer & mixer
BLP-048T	Transition to coaxial line	5.4-5.9	1" x 2"	Includes Sm plug, VSWR 1.10 max.
BLP-049-T	Transition to coaxial line	5.2-6.0	1" x 2"	Includes TNC plug, VSWR 1.10 max.
BLP-050T	Transition to coaxial line	5.2-5.9	1" x 2"	Includes N jack, VSWR 1.10 max.
BLP-065	Directional coupler, Crossguide	5.2-5.9	1" x 2"	Incident power, 470 Kw, coupling, 20, 30, or 40 db, directivity, 15 db min.
BLP-070	Directional coupler, Sidewall	5.2-5.9	1" x 2"	Incident power, 940 Kw, coupling, 20, 30, or 40 db, directivity 20 db min.
BLP-075	Directional coupler, Topwall	5.2-5.9	1" x 2"	Incident power, 470 Kw, coupling 10, or 20 db, directivity 40 db min.
BLP-056L	Waterload	5.2-5.9	1" x 2"	VSWR, 1.06 max., P peak 1.7 Mw pressurized, .9 Mw unpressurized
BLP-056LP	Waterload with pulling slug	5.2-5.9	1" x 2"	VSWR, 1.50 min. to 1.70 max.
BL-570	Waterload, ridge guide	4.95-10.5	D19 Ridge	VSWR, 1.20 max. through C, Xb, XI and X bands
BL-594	Duplexer, balanced	5.25-5.75	1" x 2"	P peak, 1 Mw



Need a single tube? Or 50,000?  
Bomac can meet your needs!

**Xb BAND**

**Xb BAND**  
**TR**

PRODUCT NO.	CENTER FREQUENCY (MC)	POWER LEVEL (KW) MAX.	FEATURE
1B50	6550	200	Tunable

**Xb BAND**  
**ATR**

PRODUCT NO.	CENTER FREQUENCY (MC)	POWER LEVEL (KW) MAX.	FEATURE
1B51	6425	200	Fixed tuned

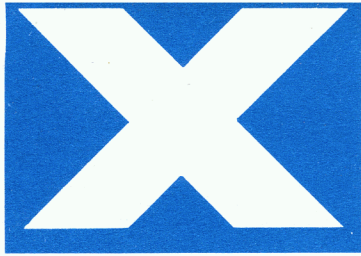
**Xb BAND**  
**Pressurizing Windows**

PRODUCT NO.	FREQUENCY RANGE (KMC)	CENTER	VSWR (MAX.)	PEAK POWER (KW)	WAVE-GUIDE SIZE (RG)	MOUNTING
BL-123	6.15-6.85	6500	1.30	100	50/U	Solder

**Xb BAND**  
**Components**

PRODUCT NO.	PRODUCT	FREQUENCY RANGE (KMC)	LINE SIZE	FEATURE
BL-570	Waterload, ridge guide	4.95-10.5	D19 Ridge	VSWR, 1.20 max. through C, Xb, XI, band X bands.

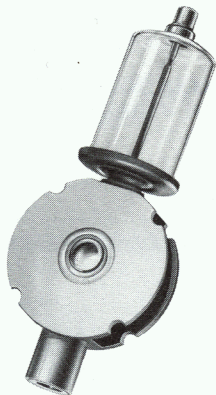
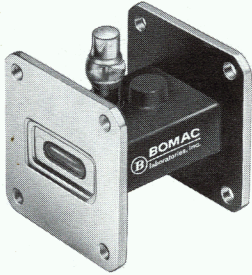




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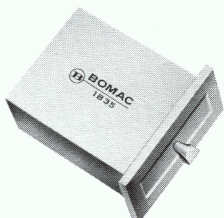
## BAND

### X BAND TR



PRODUCT NO.	FREQUENCY RANGE (MC)	CENTER	POWER LEVEL (KW) MAX.	FEATURE
BL-9	8700-8900	8800	10	Fast recovery time
BL-10	9285-9335	9310	750	Crossed guide duplexer for high duty cycle
BL-20	9375±.1%	9375	20	Tunable, side arm ignitor
BL-29	9325-9425	9375	40	Crossed guide duplexer, fixed tuned
BL-47	9325-9425	9375	10	Crossed guide duplexer, for beacon application, low firing power
6378/BL-62	8490-9600	9375	30	No reservoir, miniaturized tunable
BL-80	8490-9578	9000	200	Tapped holes on input flange, clearance holes on output flange
BL-82	8490-9578	9000	250	Full RG-51/U flanges, no struts
6644/BL-95	8490-9578	9000	100	Short RT, 1.5 μs
BL-95A	8490-9578	9000	100	Short RT, 1.5 μs, extended temperature operation, no heater
1B63B	8490-9578	9000	200	1000 Hr. life
5863	8490-9578	9000	250	Bandpass for RG51/U guide, 5 element tube, input flange cut, Bell Lab. flanges
6035	8490-9578	9000	200	Fixed tuned, special mechanical dimensions
6164	8490-9560	9000	250	Controlled phase shift
6232	8490-9578	9000	250	For use in RG51/U guide; Bell Lab. input, X output
6368	8490-9578	9000	1000	Tuned for small guide
6795	8490-9578	9000	200	Miniaturized reversible contact type mounting, 3 elements
724B	8541-9862	9300	75	Cell, 2 disc fixed tuned
6645/BL-95H	8490-9578	9000	100	Extended temperature operation, heater mounted on tube
BL-611H	8490-9578	9000	200	Contains thermostat and heaters
BL-666	8490-9578	9000	200	Ignitors encapsulated, RT 9 to 14 μs
BL-909	9300-9450	9375	250	RT, 6 μs
7115/BL915	9000-9400	9200	40	Weather radar, 3 element, RT 10 μs
BL-916		8850	.5	Contains sweeping electrode
BL-919H	8490-9578	9000	100	Has heater and ceramic window
BL-921	8490-9578	9000	7 watts	Recovery RT 0.75 μs max.
BL-924	9250-9350	9300	.2	Crossed guide duplexer, RT 6 μs max.
BL-948	8490-9578	9000	100	Has phase control
BL-953	9300-10000	9650	7 watts	Recovery time 0.5 μs max.
BL-965	8500-9600	8900	10	For use on in-line crystal protection, used in RG/52 waveguide, "hot-cold," -55° C. to +85° C.
BL990	8490-9578	9000	250	VSWR 1.5 max., "hot-cold," -55° C. to +125° C.
BLT-001		9375	100	Has phase control ±5°
BLT-006	8750-8850	8800	1 watt	4 element TR with struts 1.070 in. long
BLT-011	9325-9425	9375	20	Min. firing power 100 mw (max.)
BLT-012		9245	100	-55° C. to +125° C. operation
BLT-058	8490-9578	9000	4	Operates at +125° C., has phase control
1B24A		9375	30	Tunable
1B63A	8490-9578	9000	200	Fixed tuned

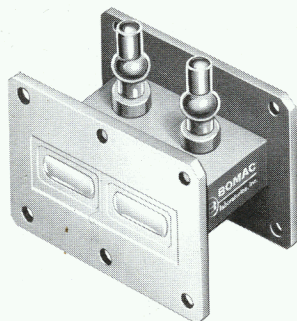
### X BAND ATR



PRODUCT NO.	CENTER FREQUENCY (MC)	POWER LEVEL (KW) MAX.	FEATURE
6304/BL-43	9300	250	Contact type flange
BL-45	9375	250	Fixed tuned
BL-49	9430	250	
6629/BL-54	8800	250	Used with RG-51/U Guide
6630/BL-55	9375	250	Used with RG-51/U Guide
6393/BL-68	9300	250	Miniaturized
BL-69	8800	250	Miniaturized
BL-70	9375	250	Miniaturized, used with RG-51/U guide
BL-72	9600	250	
BL-73	9500	250	
BL-74	9550	250	
BL-75	9150	250	
BL-76	8900	250	
BL-77	8900	250	Used in half-height RG-52/U guide
6396	9300	250	Used in half-height RG-52/U guide



**X BAND**  
**Dual TR**



PRODUCT NO.	FREQUENCY RANGE (MC)	CENTER	POWER LEVEL (KW) MAX.	FEATURE
6334/BL-27	8490-9578	9000	200	
6564/BL-71	8500-9600	9000	250	4 Element, used with RG-51/U guide
BL-78	8490-9578	9000	250	8-32 tapped flanges both ends
6642/BL-600	8490-9578	9000	250	RG-51/U input, RG-52/U output
6646/BL-604	8490-9578	9000	100	Rec. Time 1.5 μs (max.)
6647/BL-604H	8490-9578	9000	100	Has thermal control heaters
6648/BL-615	8490-9578	9000	200	Has special saddle type flange, supplied with gasket
BL-624	8500-9600	9000	200	11/64 inch thick flange, only 4 mounting holes
6805/BL-625	8490-9578	9000	200	Encapsulated ignitor, special saddle type flange
BL-631	8500-9600	9000	500	Has heavy flanges, to mate with choke flanges, RG-51/U guide in, RG-52/U guide out
BL-651H	8490-9578	9000	250	Supplied with heaters and thermostat, RT 3 μs
BL-668	8490-9578	9375	30	Dual 1B24, tunable
BL-669	8490-9578	9000	200	Encapsulated ignitor, controlled RT 9 to 14 μs
BL-682	8500-9600	9000	200	Output flange has 6 tapped holes; input flange has 6 clearance holes
BL-686	8500-9600	9050	40	RT, 50 μs 1 mu flat, 0.04 erg spike
BL-911	8490-9600	9000	250	Mounting flange has 2 holes instead of 4
BL-947	8490-9578	9000	100	Has phase control
BL-952	8490-9578	9000	500	Special input flange
BL-970	8490-9578	9000	300	Shortened tube (1.20 in. between flanges)
7381	8490-9610	9000	150	"hot - cold" TR, operating temp. range: -55° C. to +125° C.
BL-998	8500-9600	9000	500	Has phase control, special input flange
BLT-014	8490-9578	9000	200	Operates at +125° C., has phase control
6581	8500-9600	9050	250	5 element for large X guide
6796	8500-9600	9000	200	Short tube
6797	8500-9600	9000	200	Miniaturized for use in balanced duplexer

**X BAND**  
**Pre-TR**

PRODUCT NO.	FREQUENCY RANGE (MC)	CENTER	POWER LEVEL (KW) MAX.	FEATURE
BL-962	8500-9600	9000	250	Dual Pre TR tube used with short slot coupler with RG51/U input RG52/U output

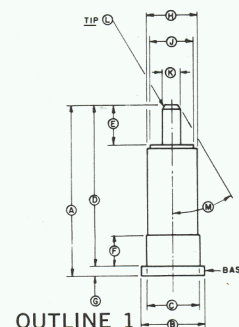
**X BAND**  
**Microwave Mixer Diodes**

FORWARD POLARITY	REVERSE POLARITY	MATCHED PAIR (4)		REVERSIBLE POLARITY (3)	TEST FREQUENCY (MC)	MAX. CONVERSION LOSS (db)
		FORWARD	FORWARD & REVERSE			
1N23B	1N23BR	1N23BM	1N23BMR	1N415B	9375	6.5
1N23C	1N23CR	1N23CM	1N23CMR	1N416C	9375	6.0
1N23D	1N23DR	1N23DM	1N23DMR	1N416D	9375	5.0
1N23E	1N23ER	1N23EM	1N23EMR	1N416E	9375	—
1N23WE(2)	1N23WER	1N23WEM	1N23WEMR	1N23WE	9375	6.0
1N149	1N149R	1N149M	1N149MR	1N149	9375	5.5
BL173	BL173R	BL173M	BL173MR	BL173	9375	5.5
BL169(5)	BL169R	BL169M	BL169MR	BL169	—	6.0

**NOTES:**

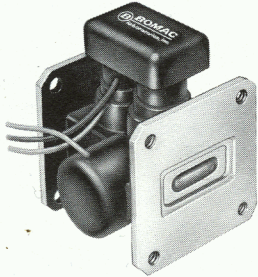
- Polarity is indicated by the standard diode symbol:
  - Normal polarity is obtained with the base secured to the end opposite the symbol, which points toward the pin in the direction of easier (conventional) current flow.
  - Reverse polarity is obtained with the base secured to the other end of the cartridge. The arrow indicating direction of easier current flow then points toward the base.
- Eccentricity between tip and base shall not exceed 0.0075.
- Metal parts shall be gold plated, min. 10 MSI. Note: M and J alternate design permissible, 0.010 to 0.046 radius.

REF.	DIMENSION
A	0.820 ± 0.020
B	0.294 ± 0.002
C	0.250 + 0.000 - 0.004
D	0.768 ± 0.015
E	0.187 Min. 0.190 Max.
F	0.196 ± 0.003
G	0.052 ± 0.005
H	0.240 Max.
J	0.205 ± 0.010
K	0.093 ± 0.001
L	0.015 - 0.030 Chamfer
M	30° - 45° From Vertical





**X BAND**  
**TR and**  
**Shutter**

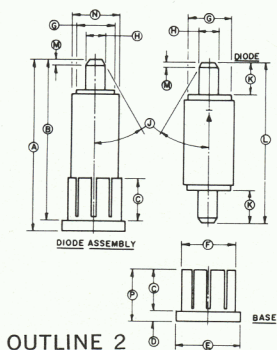


PRODUCT NO.	FREQUENCY RANGE (MC)	POWER LEVEL (KW) MAX.	SHUTTER CIRCUIT VOLTAGE (VDC)	FEATURE
6593/BL-310	8490-9578	250	28	Contains one 14 volt coil plus dropping resistor for 28 volt operation, tunable 60 ~ ac, tunable
6615/BL-312	8490-9578	250	28	
6565/BL-313	8490-9600	30	14	
6595/BL-316	8490-9600	30	3 (ac-dc)	Contains 28 volt heater and thermostat Contains heater RT 7 $\mu$ s at $-55^{\circ}$ C. Reversed ignitor, ignitor on right side facing tube output with shutter mechanism in upright direction RG-51/U input; RG-52/U output Contains input saddle flange, RT-1.5 $\mu$ s BL-312 with ignitor moved to opposite side, has phase control Shutter and ignitor incapsulated, three lead wires for terminals Has heater and thermostat Shutter and ignitor incapsulated, three lead wires in place of terminals Fast RT, low temp. operation
6597/BL-320	8490-9578	250	6 (ac-dc)	
6616/BL-326	8490-9578	250	28	
BL-326H	8490-9578	250	28	
BL-338H	8490-9578	100	28	
BL-349	8490-9487	250	28	
BL-356	8490-9578	250	28	
BL-359	8490-9578	200	28	
BL-361	8490-9578	250	28	
BL-363	8490-9578	4	28	
BL-367	8490-9578	250	28	Shutter and ignitor incapsulated, three lead wires for terminals
BL-367H	8490-9578	250	28	
BL-368	8500-9600	200	28	Shutter and ignitor incapsulated, three lead wires in place of terminals Fast RT, low temp. operation
BL-371	9280-9320	10	28	
BL-372	8490-9578	10	28	One shutter only, ignitor on top of tube rather than on side Phase control, extended temp. $-55^{\circ}$ C. to $+125^{\circ}$ C. Single shutter, 20 db closed. Extended temp. $-55^{\circ}$ C. to $+85^{\circ}$ C.
BL-375	9300-10,000	7 watts	14	
BL-385	8490-9578	250	28	
BL-388	8490-9578	250	28	
BL-391	8500-9600	10	14	

**X BAND**  
**Dual TR and**  
**Shutter**

PRODUCT NO.	FREQUENCY RANGE (MC)	POWER LEVEL (KW) MAX.	SHUTTER CIRCUIT VOLTAGE (VDC)	FEATURE
BL-307	8490-9578	250	28	Tapped holes both flanges, ignitor lead extended through cap
6596/BL-317	8490-9578	250	28	

MAX. OUTPUT NOISE RATIO (TIMES)	MAX. VSWR IN STD MIXER	POWER LEVEL (MW)	BURNOUT (ERGS)	CALC. OVERALL RECEIVER NOISE FIGURE (1)	IF IMP. (OHMS)	STANDARD MIXER	OUTLINE NO.
2.7	—	1.0	0.3	—	200-800	JAN 105	1
2.0	—	1.0	1.0	9.8	325-475	JAN 105	1
1.7	1.30	1.0	1.0	8.3	350-450	JAN 105	1
—	1.30	1.0	2.0	7.5	335-465	JAN 105	1
1.4	1.30	1.0	2.0	7.5	335-465	JAN 105	2
1.5	1.50	1.0	1.0	8.3	325-475	JAN 105	1
1.4	1.30	1.0	2.0	7.0	335-465	JAN 105	2
2.0	1.50	—	2.0	9.8	325-475	—	2



REF.	DIMENSION
A	0.820 $\pm$ 0.020
B	0.768 $\pm$ 0.015
C	0.196 $\pm$ 0.003
D	0.053 Ref.
E	0.294 D $\pm$ 0.002
F	0.248 D $\pm$ 0.002
G	0.205 D $\pm$ 0.010
H	0.093 D $\pm$ 0.001
J	10 $^{\circ}$ - 45 $^{\circ}$ From Vert.
K	0.187 Min. 0.190 Max.
L	0.790 $\pm$ 0.018
M	0.015 - 0.030 Chamfer
N	0.240 D Max.
P	0.250 + 0.000 - 0.004

**NOTES:**

- Overall noise figure calculated from formula  $N = CL (NiF + NR - 1)$  NiF is assumed as 1.5 db (30 mc/s1F).
- 1N23WE & 1N21WE are environmentally tested under extreme conditions according to MIL-E-1/1117 & MIL-E-1/1117 JAN. Spec. Resp.
- The reversible polarity cartridge types are electrically and mechanically identical to their fixed polarity counter parts and are directly interchangeable with the indicated fixed polarity types.
- Matched pairs of Bomac Lab. mixer diodes are available and are matched to the following limits:  
If impedance, 25 ohms  
Conversion, Loss 0.3 db  
Current 5% max. Signal loss to L.O. Feed arm.
- BL169 diodes are specially designed for Doppler Radar Systems requiring relatively constant overall noise figures over large L.O. power levels. Freq. range 8600 mc-9700 mc.



## X BAND Dual TR and Shutter

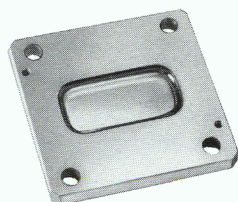


PRODUCT NO.	FREQUENCY RANGE (MC)	POWER LEVEL (KW) MAX.	SHUTTER CIRCUIT VOLTAGE (VDC)	FEATURE
6599/BL-322	8490-9578	250	6 (ac-dc)	
6613/BL-324	8490-9578	250	28	Short ignitor to reduce overall length
6601/BL-327	8490-9578	250	28	RG 51/U Input; RG 52/U output
BL-335	8490-9578	250	28	Controlled recovery time leads encapsulated
BL-339H	8490-9578	100	28	Contains heater
BL-341	8490-9578	250	28	RG 51/U input RG 52/U output
BL-344	8490-9578	250	28	Saddle type input flange not for use with hybrids
6904/BL-348	8490-9578	250	28	Heavy flange construction
BL-354	8490-9578	250	28	Contains special terminal board
BL-360H	8490-9578	100	28	Tubulation on reverse side, contains heater
BL-374	8490-9578	250	28	Cadmium plated flanges
BL-387	8500-9600	500	28	
BL-389	8490-9578	250	28	Clearance holes on input flange, ignitor resistors encapsulated, 25 to 85° C. operating temperature

## X BAND Shutter (only)

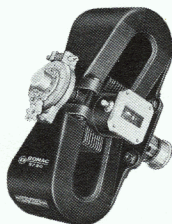
PRODUCT NO.	FREQUENCY RANGE (MC)	POWER LEVEL (KW) MAX.	SHUTTER CIRCUIT VOLTAGE (VDC)	FEATURE
6600/BL-323	8490-9600	1	3 (ac-dc)	May use 6 volt ac-dc supply with 5 watt, 5 ohm resistor in series, tunable
BL-325	8490-9578	1	28	
BL-334	9375	1	14	May be operated on 28 Vdc with a 100 ohm, 5 watt resistor in series
BL-364	9600-10,000	1	28	
BL-365	8490-9578	1	28	Dual
BL-384	8200-8600	1	28	
BL-390	9600-10,400	1	20-29	

## X BAND Pressurizing Windows



PRODUCT NO.	FREQUENCY RANGE (KMC)	CENTER (MC)	VSWR (MAX.)	PEAK POWER (KW)	WAVE-GUIDE SIZE (RG)	MATES WITH (UG)	MOUNTING
BL-119	8.7-8.9	8800	1.10	200	52/U	40/U	Flange
BL-132	8.49-9.578	9000	1.12	200	52/U	40A/U	Flange
BL-722	8.49-9.578	9000	1.12	200	51/U	52A/U	Flange
BL-710	8.5-9.6	9050	1.12	200	52/U	52A/U	Flange
BL-112	8.83-9.33	9080	1.10	200	52/U	40/U	Flange
BL-117	8.83-9.33	9080	1.10	200	52/U	40A/U	Flange
BL-122	8.645-9.555	9100	1.15	200	52/U	40A/U	Flange
BL-139	8.49-9.6	9100	1.15	250	51/U	52A/U	Flange
BL-106	8.55-9.95	9245	1.20	52/U	40/U	Flange	
BL-105	9.15-9.6	9375	1.10	430	51/U	52/U	Flange
BL-145	9.15-9.6	9375	1.10	200	52/U	40A/U	Flange
BL-755	8.85-9.15	9000	1.20	100	52/U		Solder
BL-794	8.4-9.6	9000	1.20	200	52/U		Solder
BL-789	8.99-9.21	9100	1.10	150	52/U		Solder
BL-107	9.21-9.41	9310	1.10	100	51/U		Solder
BL-114	9.2-9.42	9310	1.10	150	52/U		Solder
BL-125	9.2-9.42	9310	1.10	150	52/U		Solder
BL-764	9.2-9.4	9375	1.10	150	52/U		Solder
BL-788	9.29-9.51	9400	1.10	150	52/U		Solder
BL-136	9.4-9.6	9500	1.20	150	52/U		Solder
BL-774	9.6-10.2	9800	1.10	150	52/U		Solder

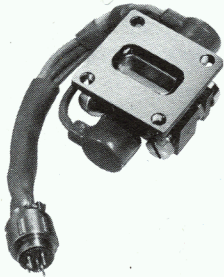
## X BAND Magnetrans



PRODUCT NO.	FREQUENCY RANGE (MC)	MIN. PEAK POWER (WATTS)	MIN. AVERAGE POWER (WATTS)	OUTPUT MATES WITH	FEATURE
BLM-003	9000-9500	150	0.3	TNC	Tunable, high efficiency and stability
BLM-014	8500-9000	150	0.3	TNC	Tunable, high efficiency and stability
BLM-015	9000-9500	350	0.7	TNC	Tunable, high efficiency
7503/BLM-024	9300-9500	100	0.3	TNC	Tunable
7446/BL-233	9375 ± 30	800	0.8	UG40A/U	Fixed tuned, waveguide output
BLM-012	8900-9400	1000	2.0	TNC	Tunable
BLM-021	8900-9400	1000	2.0	UG40A/U	Tunable
5780	8500-9600	250Kw	83	UG52A	Tunable, high power



**X BAND**  
**Klystrons**

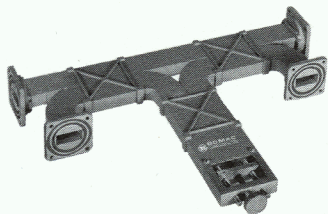


PRODUCT NO.	TUNING	FREQUENCY RANGE (MC)	AVERAGE POWER (MW)	RESONATOR POTENTIAL (dc Volts)	FEATURE
BL-801	Tunable	8500-9600	30	300	3 pin base and reflector cap; external cavity tuning
6316/BL-800A	Tunable	8500-10,000	20	200	Moulded flexible leads to viking connector; operates into a 1.5:1.0 mismatch
6781/BL-803	Tunable	8500-10,000	20	200	Moulded flexible leads to viking connector; operates into a 1.5:1.0 mismatch
6780/BL-800	Tunable	8500-10,000	25	200	Moulded flexible leads to viking connector
BL-811	Fixed	8500-10,000	25	210	Moulded flexible leads to viking connector; temp. comp. 0.008 Mc/° C.
6310	Tunable	8500-10,000	70	300	3 pin base and reflector cap
6312	Tunable	8500-10,000	70	300	Moulded flexible leads
BL-806	Tunable	8500-10,000	300	500	3 pin base and reflector cap
BL-825	Tunable	8500-10,000	500	500	Moulded flexible leads
BL-807	Tunable	8500-10,500	120	350	Moulded flexible leads to viking connector
BL-818	Tunable	8500-10,500	120	350	Winchester connector M9P
BL-830	Tunable	8690-8790	15	250	3 pin base and reflector cap; external cavity tuning
BL-815	Fixed	9142-9152	30	200	Moulded flexible leads
BL-831	Fixed	9260	80	300	Moulded flexible leads
BL-832	Fixed	9340	80	300	Moulded flexible leads
BL-814	Tunable	10,400-12,300	200	400	3 pin base and reflector cap
BL-812	Tunable	8500-9600	60	300	External cavity tuning; moulded flexible leads, severe environmental
BL-829	Fixed	8000-9500	500	525	Exceptional frequency stability under vibration; moulded flexible leads, severe environmental
BL-802	Tunable	8800-9200	30	250	External cavity tuning; moulded flexible leads, severe environmental
BL-819	Tunable	9000-9200	60	300	External cavity tuning; moulded flexible leads, severe environmental
BL-820	Tunable	9050-9250	60	300	External cavity tuning; moulded flexible leads, severe environmental
BL-824	Tunable	9200-9500	60	300	External cavity tuning; moulded flexible leads, severe environmental

**X BAND**  
**Noise Source**

PRODUCT NO.	FREQUENCY RANGE (KMC)	NOISE (db)	OPERATING CURRENT	RECOMMENDED MODE OF OPERATION
BL-721	8.400-12.500	15.28 ± .25	200 ma	DC
6357	8.200-12.400	15.28 ± .25	200 ma	DC

**X BAND**  
**Components**



PRODUCT NO.	PRODUCT	FREQUENCY (KMC)	LINE SIZE	FEATURE
BLP-055L	Waterload	8.5-9.6	½" × 1"	VSWR, 1.06 Max., P peak 400 Kw pressurized, 200 Kw unpressurized
BLP-055LP	Waterload With Pulling Slug	8.5-9.6	½" × 1"	VSWR, 1.50 min. to 1.70 Max.
BL-570	Waterload, Ridge Guide	4.95-10.5	D19 Ridge	VSWR, 1.20 max. through C, Xb, XI, and X bands
BLP-044D	Duplexer, Balanced	8.490-9.578	½" × 1"	P peak, 200 Kw Max.
BL-507	Duplexer, Balanced, Less Hybrid Arms	8.490-9.578	½" × 1"	P peak, 250 Kw
BL-509	Duplexer, Balanced, Less Hybrid Arms	8.490-9.578	½" × 1"	P peak, 250 Kw; includes 28 V shutter
BL-515	Duplexer, Balanced	8.490-9.578	½" × 1"	P peak, 250 Kw; includes termination
BL-539	R. F. Package	8.5-9.7	½" × 1"	P peak, 250 Kw; includes balanced Duplexer, balanced receiver mixer and balanced AFC mixer
BL-528	Antenna	9.2-9.4	½" × 1"	VSWR, 1.2 max.
BL-543	Discriminator	9.150	½" × 1"	Q, 1900-2400, P peak, 180 watts
BL-568	Filter	9.839-9.843	½" × 1"	Insertion loss, 2.0 db max. 9.839-9.843, 45.0 db min. at 9.790
BLP-059	Power Divider, Variable	8.5-9.6	½" × 1"	400 Kw pressurized, 200 Kw unpressurized
BLP-051E	Diplexer	8.5-9.6	½" × 1"	Isolation, 25 db min.
BL-592	Noise Source	8.5-10.0	½" × 1"	Excess noise ratio 14.5-15.0 db. Includes termination
BLP-045T	Transition To Coaxial Line	8.3.8.7	½" × 1"	Includes TNC plug, VSWR, 1.10 max.
BLP-046T	Transition To Coaxial Line	8.7-9.1	½" × 1"	Includes TNC plug, VSWR, 1.10 max.
BLP-047T	Transition To Coaxial Line	9.1-9.5	½" × 1"	Includes TNC plug, VSWR, 1.10 max.



# X BAND Components

PRODUCT NO.	PRODUCT	FREQUENCY (KMC)	LINE SIZE	FEATURE
BLP-063	Directional Coupler Crossguide	8.5-9.6	1/2" x 1"	Incident power, 100 Kw, coupling, 20, 30, or 40 db, Directivity, 15 db min.
BLP-068	Directional Coupler, Sidewall	8.5-9.6	1/2" x 1"	Incident power, 200 Kw, coupling 20, 30, or 40 db, directivity, 20 db min.
BLP-073	Directional Coupler, Topwall	8.5-9.6	1/2" x 1"	Incident power, 100 Kw, coupling, 10, or 20 db, directivity, 40 db min.

# X BAND Microwave Cavities



PRODUCT NO.	FREQUENCY (MC)	QL	IL (db)	FEATURE
1Q22	9250	1900-2400	4-6	Transmission, copper body, aluminum mounting block temperature coefficient .015 Mc/°C.
1Q23	9280	1900-2400	4-6	
1Q24	9310	1900-2400	4-6	
5846	9280	2100	4-6	
6040	9308	2100	4-6	
6041	9312	2100	4-6	

The IQ series shown above may be made to order in the frequency range of 9230 to 9330 and with a maximum QL of 3000 and a corresponding min. IL of 10 db. With relaxed temperature coefficient the frequency range may be expanded to cover 9000 to 10,000 mc.

1Q26A	9280	1000-1500	4-8	Small invar transmission cavity with temperature coefficient of .006 Mc/°C.
6301	9270	1000-1500	5-8	Small invar transmission cavity with temperature coefficient of .006 Mc/°C.
6452	9350	1500-2000	4-8	Small invar transmission cavity with temperature coefficient of .006 Mc/°C.
BL-441	9280	2000-3000	4-8	Small invar transmission cavity with temperature coefficient of .006 Mc/°C.
BL-468	X-band	1950 Nominal	5-8	Transmission cavity six positions detent, fixed tuned up to 25 Mc separation. Temperature coefficient .009 Mc/°C.
BL-469	X-band	1200-2500	7-13	Dual mode six position detent, fixed tuned up to 100 Mc separation. Temperature coefficient .005 Mc/°C.
BL-436	6200	15,000	20 Max.	Tunable ± 30 Mc for D19 ridged waveguide systems, temperature coefficient .0125 Mc/°C.
BL-437	7300	15,000	20 Max.	Tunable ± 30 Mc for D19 ridged waveguide systems, temperature coefficient .0125 Mc/°C.
BL-438	8800	15,000	20 Max.	Tunable ± 30 Mc for D19 ridged waveguide systems, temperature coefficient .0125 Mc/°C.
BL-439	10,500	15,000	20 Max.	Reference cavity fixed tuned. VSWR 1.4 max. temperature coefficient .0038 Mc/°C. Controlled input and output reference plane location.
BL-470	X-band	2000-2500	6 Max.	
BL471	X-band	90,000 (approx.)	"Echo Box"	Dual frequency fixed tuned ring time in excess of 20 μsec. Difference in ring time between frequencies less than 3 μsec.
BL472	X-band	1000-1400	8-10	"Plug-In" transmission cavity for quick change of frequency over a 8500 to 9600 Mc range, temperature coefficient .006 Mc/°C.
BL-459	8800	1200-1800	8 Max.	Transmission cavity, fixed tuned, light-weight model temperature coefficient, .007Mc/°C.
BL-466	9790	6000	10 Max.	Dual mode discriminator, fixed tuned, small size peak-to-peak frequency difference 3-6 Mc
BL-435	9280-9355	1950 Nominal	5-8	Similar to BL-468. Six frequencies 15.0 Mc apart.
BL-414	11,000	2150	4-6	



A problem in gas switching tube design? Ask Bomac!

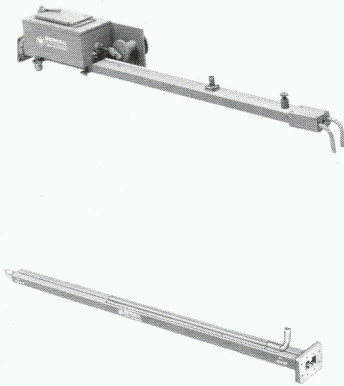
**BAND**

# XL BAND Components

PRODUCT NO.	PRODUCT	FREQUENCY KMC	LINESIZE (WG)	FEATURE
BLP-083	Power divider, variable	8.5-9.6	5/8" x 1 1/4"	P peak, 700 Kw pressurized, 350 Kw unpressurized



## XL BAND Components



PRODUCT NO.	PRODUCT	FREQUENCY KMC	LINESIZE (WG)	FEATURE
BLP-084E	Diplexer	8.5-9.6	5/8" x 1 1/4"	P peak, 700 Kw pressurized, 350 Kw unpressurized, isolation 25 db min.
BLP-064	Directional coupler, crossguide	8.5-9.6	5/8" x 1 1/4"	Incident power 175 Kw, coupling, 20, 30, or 40 db, directivity 15 db min.
BLP-069	Directional coupler, sidewall	8.5-9.6	5/8" x 1 1/4"	Incident power, 350 Kw, coupling, 20, 30, or 40 db, directivity, 20 db min.
BLP-074	Directional coupler, topwall	8.5-9.6	5/8" x 1 1/4"	Incident power, 175 Kw, coupling, 10, or 20 db, directivity, 40 db min.
BLP-085L	Waterload	8.5-9.6	5/8" x 1 1/4"	VSWR, 1.06 max., P peak, 700 Kw pressurized, 350 Kw unpressurized
BLP-085LP	Waterload with pulling slug	8.5-9.6	5/8" x 1 1/4"	VSWR, 1.50 min. to 1.70 max.
BL-570	Waterload, ridge guide	4.95-10.5	D19 Ridge	VSWR, 1.20 max. through C, Xb, X1, and X bands
BL-516	Duplexer, balanced less hybrid arms	8.5-9.6	5/8" x 1 1/4"	P peak, 250 Kw
BL-542	Duplexer, balanced	8.490-9.578	5/8" x 1 1/4" input 1/2" x 1" output	P peak, 200 Kw, includes 28 V shutter

## Ku BAND

At Bomac, flexible production techniques permit single unit or volume production to the same high standards.

### Ku BAND TR

PRODUCT NO.	FREQUENCY RANGE (MC)	CENTER	POWER LEVEL (KW) MAX.	FEATURE
BL-16	16,200-16,800	16,500	40	Tunable, integral cavity
6649/BL-56	15,000-17,000	16,000	100	Bandpass, fixed tuned
BL-908	15,500-17,500	16,500	100	Fixed bandpass, tuned
BL-967	16,000-17,000	16,500	10	Cad. plated, ± 3° phase control, operating temperature 100° C.
BL-993	16,000-17,000	16,500	10	Crystal protector TR, - 37° C. to + 83° C. operating temperature

### Ku BAND ATR

PRODUCT NO.	CENTER (MC)	POWER LEVEL (KW) MAX.	FEATURE
BL-15	16,500	40	Fixed tuned

### Ku BAND Dual TR

PRODUCT NO.	FREQUENCY RANGE (MC)	CENTER	POWER LEVEL (KW) MAX.	FEATURE
6560/BL-35	15,000-17,000	16,000	100	Bandpass
BL-667	15,675-17,325	16,500	100	
BL-907	15,500-17,500	16,500	100	Bandpass
BL-934	16,000-17,000	16,500	100	Cad. plated flanges
BL-934A	16,000-17,000	16,500	100	± 3° phase control

### Ku BAND Microwave Cavities

PRODUCT NO.	FREQUENCY RANGE (MC)	QL	IL (db)	FEATURE
BL-473	Ku band	3200-4000	4.0 Max.	Transmission cavity weight, 4 oz. Temperature coefficient, .02 Mc/° C.
BL-474	16,280	5000-8000	15 Max.	Fixed tuned, dual-mode cavity Temperature coefficient, .02 Mc/° C.
BL-452	16,230-16,330	5000-8000	15 Max.	Tunable, dual-mode cavity with micrometer calibration. Temperature coefficient. .02 Mc/° C.



## Ku BAND

### Pressurizing Windows

PRODUCT NO.	FREQUENCY RANGE (KMC)	CENTER (MC)	VSWR (MAX.)	PEAK POWER (KW)	WAVEGUIDE SIZE (RG)	MOUNTING
BL-777	12.4-18.0	15,200	1.12	100	91/U	Flange
BL-144	15.84-16.16	16,000	1.08	100	91/U; 107/U	Flange
BL-133	15.0-17.0	16,000	1.15	75	91/U	Flange
BL-711	12.5-13.5	13,000	1.25	50	91/U	Solder
BL-707	13.45-13.55	13,500	1.10	50	91/U	Solder
BL-729	13.51-13.48	13,500	1.07	50	91/U	Solder
BL-731	13.45-13.55	13,500	1.10	50	91/U	Solder
BL-143	15.92-16.08	16,000	1.10	50	91/U	Solder
BL-754	16.0-16.2	16,100	1.10	80	91/U	Solder
BL-116	16.3-16.7	16,500	1.10	50	91/U	Solder

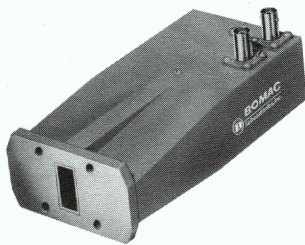
## Ku BAND

### Magnetrons

PRODUCT NO.	FREQUENCY RANGE (MC)	MIN. PEAK POWER	MIN. AVERAGE POWER (WATTS)	OUTPUT MATES WITH	FEATURE
BL-216	15,900-16,100	100KW	100	UG541/U	Fixed Tuned, Compact
BLM-027	16,000-16,400	500W	1.5	UG541/U	Tunable, Lightweight

## Ku BAND

### Components



PRODUCT NO.	PRODUCT	FREQUENCY RANGE (KMC)	LINE SIZE (WG)	FEATURE
BL-579	Noise source	12.4-18.0	.391" x 702"	Excess noise ratio 14.5-15.0 db Includes termination.
BLP-062	Directional coupler, crossguide	16.0-17.0	.391" x 702"	Incident power, 60 Kw coupling, 20, 30, or 40 db, directivity, 15 db Min.
BLP-067	Directional coupler, sidewall	16.0-17.0	.391" x 702"	Incident power, 120 Kw, coupling, 20, 30, or 40 db, directivity, 20 db min.
BLP-072	Directional coupler, topwall	16.0-17.0	.391" x 702"	Incident power, 60 Kw, coupling, 10, or 20 db, directivity 40 db min.
BLP-054L	Waterload	16.0-17.0	.391" x 702"	VSWR, 1.06 max., P peak, 240 Kw pressurized 120 Kw unpressurized
BLP-054LP	Waterload with pulling slug	16.0-17.0	.391" x 702"	VSWR, 1.50 min. to 1.70 max.
BLP-058	Power divider, variable	16.0-17.0	.391" x 702"	P peak, 240 Kw pressurized, 120 Kw unpressurized
BL-557	R. F. package	15.9-16.9	.391" x 702"	P peak, 100 Kw includes balanced duplexer, balanced receiver mixer and balanced AFC mixer
BLP-086E	Diplexer	16.0-17.0	.391" x .702"	P peak, 240 Kw, pressurized, 120 Kw unpressurized; isolation, 25 db min.



Bomac products are used wherever radar serves

**BAND**

## K BAND

### TR tubes

PRODUCT NO.	FREQUENCY RANGE (MC)	CENTER	POWER LEVEL (KW) MAX.	FEATURE
6282/BL-11	23,350-24,950	24,000	35	Bandpass, fixed tuned
6650/BL-67	23,630-24,500	23,984	100	No reservoir
BL-621	23,630-24,580	23,984	24	Miniaturized reservoir
BLT-002	23,350-24,950	24,000	40	Fast recovery time
1B26	23,630-24,580	23,984	24	Tunable



**K BAND**  
**ATR**

PRODUCT NO.	CENTER FREQUENCY (MC)	POWER LEVEL (KW) MAX.	FEATURE
BL-627	24,000	30	Reduced overall length, countersunk exhaust tube
BLA-001	24,000	40	Fast recovery time
1B36	24,000	30	Fixed tuned

**K BAND**  
**Dual TR**

PRODUCT NO.	FREQUENCY RANGE (MC)	CENTER	POWER LEVEL (KW) MAX.
BL-645	23,200-24,800	24,000	30

**K BAND**  
**Shutter (only)**

PRODUCT NO.	FREQUENCY RANGE (MC)	POWER LEVEL (KW) MAX.	SHUTTER CIRCUIT VOLTAGE	FEATURE
6588/BL/315	23,750-24,250	1	14	14 volt coil with resistor for 28 volt operation

**K BAND**  
**Magnetrons**

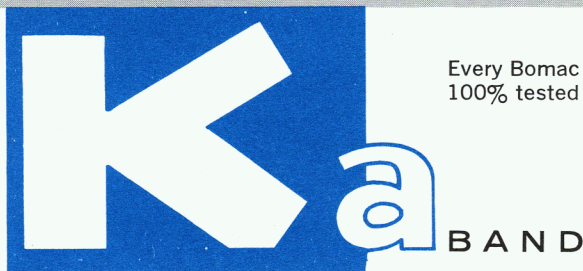
PRODUCT NO.	FREQUENCY RANGE (MC)	MIN. PEAK POWER (KW)	MIN. AVERAGE POWER (WATTS)	OUTPUT MATES WITH	FEATURE
6551	23,800-24,270	40	24	UG596/U*	Fixed tuned
BLM-006	23,800-24,270	40	12	UG596/U*	Fixed tuned, very short pulse *Modified per Bomac Spec.

**K BAND**  
**Pressurizing Windows**

PRODUCT NO.	FREQUENCY RANGE (MC)	CENTER FREQUENCY (KMC)	VSWR (MAX.)	PEAK POWER (KW)	WAVEGUIDE SIZE (RG)	MOUNTING
BL-715	24,000	23.1-24.9	1.20	50	53/U	Solder

**K BAND**  
**Components**

PRODUCT NO.	PRODUCT	FREQUENCY RANGE (KMC)	LINE SIZE (WG)	FEATURE
BLP-053L	Waterload	23.5-24.5	¼" × ½"	VSWR, 1.06 max.
BLP-053LP	Waterload with pulling slug	23.5-24.5	¼" × ½"	VSWR, 1.50 min. to 1.70 max.
BLP-027D	R. F. Package	23.7-24.3	¼" × ½"	P Peak 38 to 50 Kw, includes duplexer, balanced receiver and AFC mixers



Every Bomac tube and component is 100% tested before shipment

**Ka BAND**  
**TR**

PRODUCT NO.	FREQUENCY RANGE (MC)	CENTER	POWER LEVEL (KW) MAX.	FEATURE
BL-639	33,500-35,500	34,500	20	Broadband TR
BL-904	33,700-35,700	34,700	20	Broadband TR
6545	33,814-35,906	34,860	100	Tunable

**Ka BAND**  
**Dual TR**

PRODUCT NO.	FREQUENCY RANGE (MC)	CENTER	POWER LEVEL (KW) MAX.
6685/BL-616	33,500-36,250	34,500	20



## Ka BAND Pressurizing Windows

PRODUCT NO.	FREQUENCY RANGE (MC)	CENTER (KMC)	VSWR (MAX.)	PEAK POWER (KW)	WAVEGUIDE SIZE (RG)	MATES WITH (UG)	MOUNTING
BL-737	34,500	34.2-34.8	1.15	20	96/U	600/U	Solder
BL-760	34,900	34.6-35.2	1.15	20	96/U	600/U	Solder

## Ka BAND Components

PRODUCT NO.	PRODUCT	FREQUENCY RANGE (KMC)	LINE SIZE (WG)	POWER LEVEL (KW) MAX.	FEATURE
BL-527	Dual TR balanced duplexer with short slot hybrids	33.50-36.25	.112 x .224	20	Integral design with hybrids permanently attached



Bomac maintains fully staffed engineering departments for research and development.

## BAND

## V BAND Magnetrons

PRODUCT NO.	FREQUENCY RANGE (MC)	MINIMUM PEAK POWER (KW)	MINIMUM AVERAGE POWER (W)	OUTPUT MATES WITH	FEATURE
BL-235	51,000-54,000	8	5.6	UG385/U*	Fixed tuned
BL-236	54,000-57,000	8	5.6	UG385/U*	Fixed tuned
BL-237	57,000-60,000	8	5.6	UG385/U*	Fixed tuned

\*Modified per Bomac spec.

## V BAND Components

PRODUCT NO.	PRODUCT	FREQUENCY RANGE (KMC)	LINE SIZE (WG)	FEATURE
BLP-052L	Waterload	69.0-71.0	.154" x .228"	VSWR, 1.06 max.
BLP-052LP	Waterload with pulling slug	69.0-71.0	.154" x .228"	VSWR, 1.50 min. to 1.70 max.

## cell types

The electrical characteristics of cell type tubes largely depend upon the parameters of the cavity in which the tube is used. The test frequency shown is not the only usable frequency. The engineering department should be consulted for information about applications for other frequencies.



PRODUCT NO.	TEST FREQUENCIES	PEAK POWER LEVEL	FEATURE
6638/BL-99	3300	50 Kw	Positive ignitor operation
BL-8	2700-3400	50 Kw	Attenuator type
1B27	2600-3000	50 Kw	Tunable
6637/BL-31	3300	50 Kw	Tunable, ruggedized
BL-966	1215-1355	450 Kw	Tunable, special disc
6322/BL-25	1215-1355	450 Kw	Tunable
BL-635	1215-1355	450 Kw	Motorized tuning
BL-622	400-450	2 Mw	Fixed tuned, flange mount, 3 1/8 coax.
BL-7309/693	400-450	2 Mw	" " " " 3 1/8 coax.
BL-929	400-450	2 Mw	" " " " 3 1/8 coax.
BL-930	400-450	20 Kw	" " " " 3 1/8 coax.
7324/BL-931	400-450	2 Mw	Fixed tuned, plug-in mount, 3 1/8 coax.
BL-931A	400-450	2 Mw	" " " " 3 1/8 coax.
BL-984	409-417	20 Kw	" " " " 6 1/8 coax.
BL-991	400-450	2 Mw	Fixed tuned, plug-in mount, 3 1/8 coax.



# cell types (cont'd)

PRODUCT NO.	TEST FREQUENCIES	POWER LEVEL	FEATURE
BL-994	400-450	20 Kw	Fixed tuned, plug-in mount, 3/8 coax.
BL-995	400-450	2 Kw	" " " " " 7/8 coax.
BL-999	400-450	2 Kw	" " " " " 7/8 coax.
BLT-004	400-450	2 Mw	" " " " " 3/8 coax.
BLT-005	400-450	2 Mw	" " " " " 3/8 coax.
BLT-018	400-450	2 Kw	" " " " " 7/8 coax.
BLT-019	400-450	2 Mw	" " " " " 3/8 coax.
			Metal reservoir
BLT-020	400-450	20 Kw	Fixed tuned, plug-in mount, 3/8 coax.
BLT-021	400-450	20 Kw	" " " " " 7/8 coax.
BL-960A	400-450	10 Kw	" " " " " 7/8 coax.
BL-690	400-450	2 Mw	Tunable, plug-in mount, external cavity
BL-696	2800-3330	350 Kw	Fixed tuned
BL-959	409-417	2 Mw	Fixed tuned, plug-in mount, 6/8 coax.

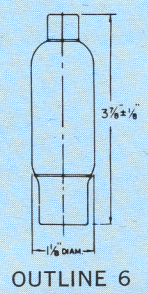
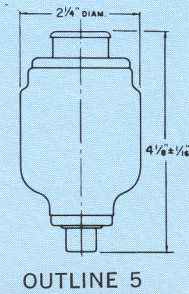
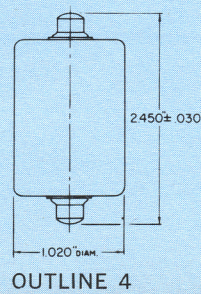
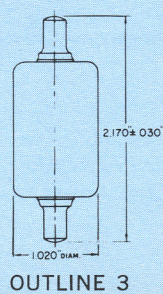
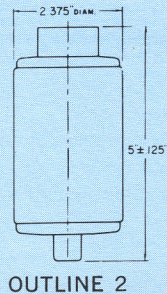
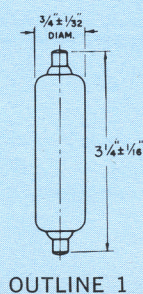
# special devices

PRODUCT NO.	SPECIAL DEVICES
BL813	Thermal fuse switch (1 normally open circuit), cantilever spring-type construction
BLN-004	Transistorized Ignitor Supply, Input — 28 V DC (nom). output 750 V at $\mu$ A (nom) Miniaturized
BLN-008	Network switching tube, improved BL-148, coil housing, 0.054 greater dia. than BL-148
BLN-009	Ignitor supply, input 115 V — 60 cycle AC 800 V at 200 micro-amperes, (max.) output
5675	Pencil tube 3000 megacycles Cw, low Mu
5876	Pencil tube triode, 3000 megacycles Cw, high Mu

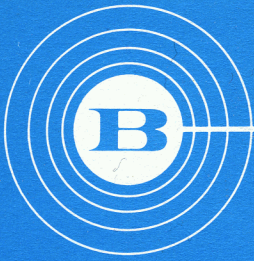
# surge protectors



OUTLINE NO. 1			OUTLINE NO. 2			OUTLINE NO. 4		
TUBE TYPE	BREAKDOWN (KV)		TUBE TYPE	BREAKDOWN (KV)		TUBE TYPE	BREAKDOWN (VOLTS)	
	MIN.	MAX.		MIN.	MAX.		MIN.	MAX.
BL-745	5	6	1B41	8.7	10.2	BL-779	200	300
BL-752	5.5	6.5	1B45	14.5	16.5			
BLN-005	6.5	7.5	BL-735	16	18	OUTLINE NO. 5		
BL-724	7.2	7.7	BL-784	19	21	TUBE TYPE	BREAKDOWN (KV)	
BL-717	8.5	10	BL-785	23	25		MIN.	MAX.
BL-718	10.5	12	BLN-010	39	45	1B31	6.8	9.9
BL-787	11.5	12.6	OUTLINE NO. 3			OUTLINE NO. 6		
BL-778	14	16	TUBE TYPE	BREAKDOWN (KV)		TUBE TYPE	BREAKDOWN (KV)	
BLN-001	16	18		MIN.	MAX.		MIN.	MAX.
BL-700	18	20	BL-744	1.5	2.5	1B22	2	3
BL-716	24	27	BLN-006	2.3	3.0			
BLN-003	31	40						
BL-146	32	35						







# BOMAC laboratories, inc.

SALEM ROAD • BEVERLY, MASSACHUSETTS  
A SUBSIDIARY OF VARIAN ASSOCIATES

The following information outlines recommended procedures for the procurement of Bomac products.

## ORDERING

Orders for microwave tubes and related components are normally placed through the Bomac representative in your area, but may be placed directly with the factory. It is to your advantage to place orders through your Bomac representative . . . by so doing, you can take advantage of a complete local order service. The Bomac type number must be specified when possible.

## SPECIFICATIONS

Bomac tubes are fully specified and copies of the Bomac test specifications, which are usually printed in the same format as used by government services (MIL-E-1), are available upon request. Proper system operation should not depend upon tube characteristics which are not covered by the tube specifications. Bomac guarantees only those characteristics covered in our specifications. If additional specification items are required for your application, please contact your Bomac field representative. Your specifications and/or drawings should be referenced on your order only if approved by Bomac.

## MILITARY SPECIFICATIONS

Most Bomac tubes can be supplied fully tested in accordance with military test specifications. Detailed information gladly furnished.

## SHIPPING

Air Express and Air Parcel Post is generally recommended for light weight shipments and will insure careful handling. Truck or rail handling are recommended for large shipments.

## DELIVERY

Delivery schedules vary depending on the tube and quantity ordered. Prompt shipment from stock on orders for small quantities of most standard tube types is general practice. However, we recommend that you contact the nearest Bomac representative for delivery information at the time you place an order. Orders for large quantities require from 90 to 120 days lead time depending on tube type and size of order. Full information will be provided by your Bomac representative.

## RETURNS

Items should be returned to the factory *only* after authorization has been obtained from the factory or your Bomac representative. In requesting authorization give the Bomac type number, serial number and complete information concerning the reason for return. Items which have exceeded the applicable warranty period should not be returned. When authorization is received the tube should be shipped to Salem Road, Beverly, Mass. prepaid. A copy of the authorization should be returned with the tube. Allow 30 days for testing and analysis. Adjustments on tubes with manufacturing defects are made on a pro-rata basis, provided the tube has been operated within published limits and is within the warranty period.

## SERVICE

Your Bomac representative will be glad to provide whatever information and technical data you may require and is authorized to handle all sales and services required.

## PRICES

All prices are net and are not subject to trade or other discounts. Quantity prices are offered on most standard production items. Multiple orders for a single tube type must be mailed simultaneously in order to qualify for quantity prices. Additional information on quantity pricing may be obtained from your Bomac representative.

## TERMS

Payment terms are net 30 days. When credit can not be established shipment will be made C.O.D., shipping charges collect, or on receipt of advance payment. Prices are all f.o.b. shipping point. Inquiries and orders for export should be sent directly to our foreign representatives.

## WARRANTIES

All Bomac products are fully tested before shipment and are warranted to perform satisfactorily. Should any product prove unsatisfactory, please contact your Bomac field representative.

## APPLICATIONS ENGINEERING

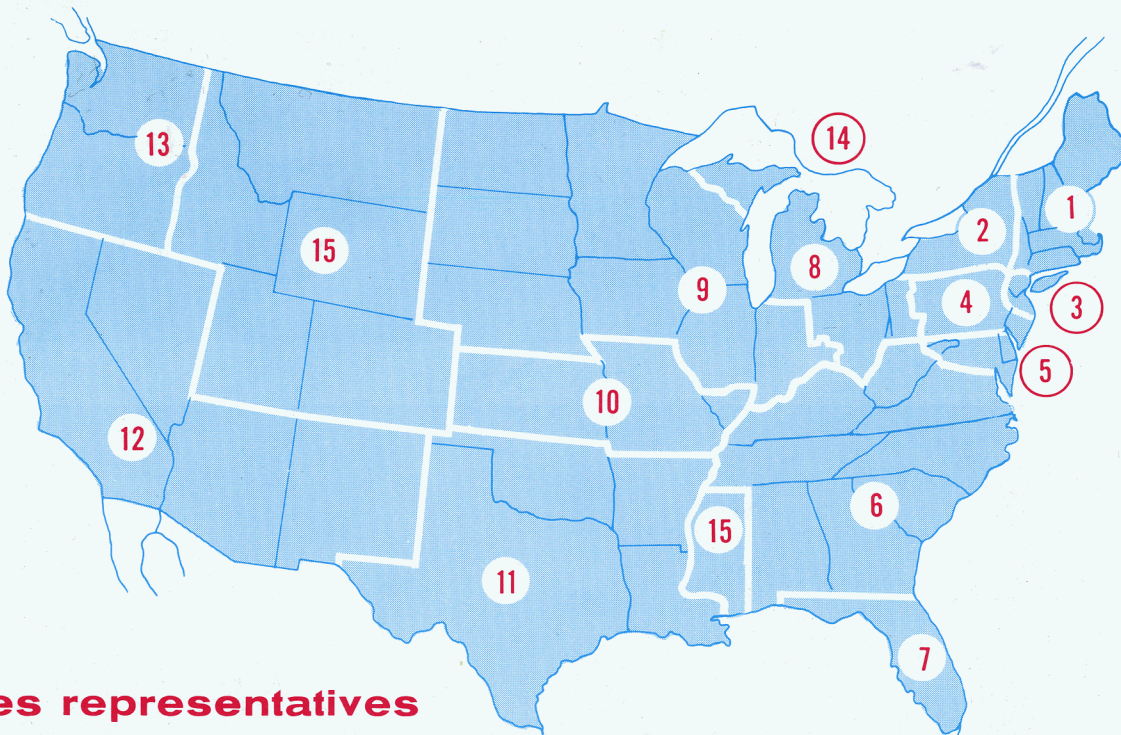
A staff of engineers specially qualified in the application of microwave tubes to modern systems is available to assist you with your special applications problems. This service is offered not only to the designer of new systems, but to the manufacturer during production and to the end-user of Bomac products.



# PRODUCT INDEX

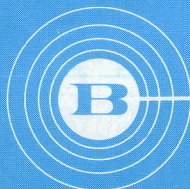
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✓1N149MR	10	✓6638/BL-99	4	✓BL-169MR	10	✓BL-539	13	✓BL-738	7	✓BL-971	8	✓BLP-084E	15
✓1N149R	10	✓6639/BL-46	6	✓BL-169R	10	✓BL-542	15	✓BL-739	5	✓BL-972	6	✓BLP-085L	15
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✓1N416B	4	✓6641/BL-86	7	✓BL-173M	10	✓BL-549	2	✓BL-742	7	✓BL-974	2	✓BLP-086E	16
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✓5675	19	✓6781/BL-803	13	✓BL-307	11	✓BL-588	2	✓BL-769	7	✓BL-998	10	✓BLT-018	19
✓5780	12	✓6795	9	✓BL-325	12	✓BL-591	3	✓BL-774	12	✓BL-999	19	✓BLT-019	19
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✓5846	14	✓6805/BL-625	10	✓BL-335	12	✓BL-595	2	✓BL-779	19	✓BLM-006	17	✓BLT-058	9
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