

Surface Mount

25 to 1025 MHz



JTOS

MODEL NO	FREQ. MHz Min. Max.	POWER OUTPUT dBm Typ.	PHASE NOISE dBc/ Hz SSB at offset frequencies: Typ.				PULLING MHz pk-pk 012 dB Typ.	PUSHING MHz/V Typ.	TUNING SENSITIVITY MHz/V Typ.	HARMONICS dBc		3 dB MODULATION BANDWIDTH KHz Typ.	POWER SUPPLY		CAPD DATA Page	Case Style Note 5	CONNECTION	Price \$ Qty. (5-49)
			1 kHz	10 kHz	100 kHz	1 MHz				Typ.	Max.		VOLTAGE V	CURRENT mA Max.				
NEW JTOS-50	25 - 47	+8.5	-88	-108	-127	-147	0.06	0.04	2.0 - 2.6	-19	-12	50	12	20	159	BK377	jc	13.95
NEW JTOS-75	37.5 - 75	+8.0	-89	-110	-130	-140	0.15	0.11	2.8 - 4.0	-27	-20	125	12	20	159	BK377	jc	13.95
NEW JTOS-100	50 - 100	+8.3	-83	-108	-128	-140	0.6	0.2	3.7 - 4.8	-35	-20	100	12	18	160	BK377	jc	13.95
NEW JTOS-150	75 - 150	+9.5	-82	-106	-127	-147	0.8	0.3	5.8 - 6.7	-23	-17	112	12	20	161	BK377	jc	13.95
NEW JTOS-200	100 - 200	+10.0	-84	-105	-124	-145	1.0	0.2	6 - 10	-25	-20	110	12	20	162	BK377	jc	13.95
NEW JTOS-300	150 - 280	+9.0	-82	-102	-122	-142	1.0	0.2	9 - 14	-28	-20	120	12	20	163	BK377	jc	15.95
NEW JTOS-400	200 - 380	+9.0	-82	-102	-122	-142	1.4	0.4	10.5 - 17.1	-25	-20	130	12	20	164	BK377	jc	15.95
NEW JTOS-535	300 - 525	+9.5	-75	-97	-117	-137	2.0	0.5	10 - 24	-28	-20	115	12	20	165	BK377	jc	15.95
NEW JTOS-765	485 - 765	+8.0	-75	-98	-118	-138	2.0	0.5	20 - 30	-30	-20	100	12	20	166	BK377	jc	16.95
NEW JTOS-1025	685 - 1025	+8.6	-70	-94	-114	-134	5.0	0.6	21 - 36	-28	-20	100	12	22	167	BK377	jc	18.95

features

- wide frequency range
- linear tuning characteristics
- excellent harmonic suppression
- low phase noise

NOTES:

- Environmental specifications and re-flow soldering information available in General Information Section.
- Units are non-hermetic unless otherwise noted. For details on case dimensions & finishes see "Case Styles & Outline Drawings".
- Prices and Specifications subject to change without notice.
 - Tuning Voltage 1V to 16V (1V to 15V for JTOS-50) required to cover frequency range.
 - Absolute Max. Supply Voltage (V_{cc}): +16V
 - Absolute Max. Tuning Voltage (V_{tune}): +18V. (+17V for JTOS-50)
- Operating Temperature: -55°C to +85°C

pin connections

see case style outline drawings

PORT	jc	hx
RF OUT	13	2
V-CC	2	1
V-TUNE	5	8
GROUND EXT	1,3,4,6,7,8,9, 10,11,12,14	3,4,5,6,7

In Stock... Immediate Delivery
For Custom Versions Of Standard Models Consult Our Applications Dept.



Available
Tape & Reel

case styles

outline dimensions (inch/mm)

case no.	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T	wt. grams.	NOTES*
BB48	.50 12.70	.39 9.91	.225 5.72	.025 0.63	.07 1.78	.100 2.54	.250 6.35	.350 8.89	.06 1.52	.31 7.87									3.0	A1, E1
BG291	.870 22.09	.800 20.32	--	.100 2.54	.250 6.35	.100 2.54	.100 2.54	.047 1.19	.065 1.65	.065 1.65	.890 22.60								4.0	A27, F21
BG419	.870 22.09	.800 20.32	--	.100 2.54	.400 10.16	.100 2.54	.100 2.54	.047 1.19	.065 1.65	.065 1.65	.890 22.60								6.4	A27
BH292	.280 7.11	.310 7.87	--	.100 2.54	.225 5.71	.055 1.39	.100 2.54	.047 1.19	.065 1.65	.060 1.52	.300 7.62								.45	A24, F24
BJ293	.395 10.10	.500 12.70	--	.100 2.54	.230 5.84	.100 2.54	.100 2.54	.047 1.19	.065 1.65	.060 1.52	.425 10.41								.80	A19, F23
BJ398	.305 7.75	.390 9.91	--	.100 2.54	.100 2.54	.045 1.14	.100 2.54	.047 1.19	.065 1.65	.065 1.65	.325 8.26								.20	A19, F29
BK276	.470 11.94	.803 20.40	--	.100 2.54	.250 6.35	.102 2.59	.100 2.54	.047 1.19	.065 1.65	.065 1.65	.490 12.45								3.0	A27, F22
BK343	.460 11.68	.768 19.51	--	.100 2.54	.155 3.94	.084 2.13	.100 2.54	.047 1.19	.065 1.65	.065 1.65	.480 12.19								1.5	A27, F27
BK377	.517 13.13	.789 20.04	--	.100 2.54	.250 6.35	.102 2.59	.100 2.54	.047 1.19	.065 1.65	.065 1.65	.540 13.72								3.0	A27, F28
BL301	.940 23.88	1.260 32.00	--	.100 2.54	.390 9.91	.080 2.59	.100 2.54	.047 1.19	.065 1.65	.065 1.65	.970 24.64								7.2	A19, F2
BN333	1.680 42.27	2.130 54.10	3.6 91.44	7.5 190.50	.740 18.80	.42 10.67	1.32 33.53	.30 7.62	.55 13.97	.14 3.56									755	A22, D17
BR386	3.25 82.55	1.38 35.05	1.25 31.75	.71 18.03	1.13 28.70	.125 3.18	2.25 57.15	.71 18.03	.41 10.41	.98 24.89	1.28 32.51	2.950 74.93	.15 3.81	1.100 27.94	.14 3.56	.150 3.81			180	A4,A18,D17
BU413	1.00 25.40	.75 19.05	.58 14.73	.50 12.70	.29 7.37	.38 9.65	1.40 3.56	--	.687 17.45	--	.32 8.13	.13 3.30	.10 2.54	.16 4.06	--	--			25	A4,C1,D6
BV278	6.00 152.40	4.50 114.30	1.38 35.05	.15 3.81	5.700 144.78	.15 3.81	4.200 106.68	.38 9.65	2.25 57.15	.75 19.05	.156 3.96								960	A8,D16
BW459	1.00 25.40	.75 19.05	.61 15.49	.38 9.65	.29 7.37	.25 6.35	.26 6.60	.35 8.89	.65 16.51	.688 17.48	.156 3.96	.13 3.30	1.07 27.18	.140 3.56					25	A4,A18,D17

tolerance .x±.1 .xx±.03 .xxx±.015 inch

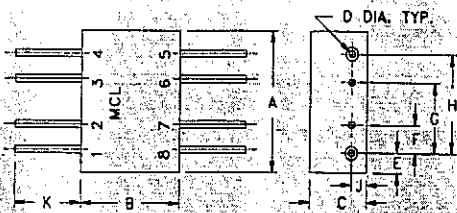
oz. = grams x.0353

*NOTES:

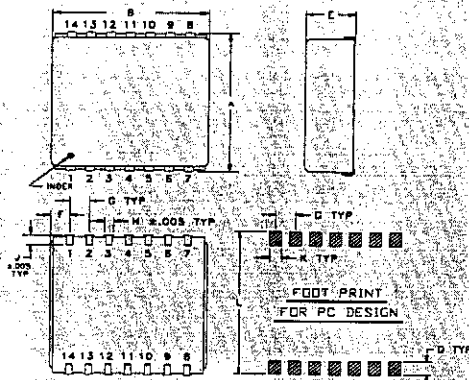
- A. MATERIAL AND FINISH
- A1. Header material: C. R. S. Pin material: #52 alloy. Finish: electro fin, hot oil flowed. Cover material: cupro-nickel.
 - A4. Case material: aluminum alloy. Finish: irridite per MIL-C-5541
 - A8. Case material: aluminum alloy. Finish: case irridite. Heat sink black anodize.
 - A18. Mounting bracket finish: irridite or clear anodize.
 - A19. Case material: plastic, G-10 base. Termination finish: solder plate
 - A22. Case material: aluminum alloy. finish: nickel plate. Heat sink: black anodize.
 - A24. Case material: ceramic. Lead finish: tin plate
 - A27. Header: Glass epoxy laminate. Cover: Cupro-nickel, bright-burnish. Leads: Solder-plated iron-nickel alloy.
- C. MARKING:
- C1. For part markings 1,2, and 3 see specification data sheet.
- D. CONNECTORS
- D6. Connectors: female SMA only. Male SMA available on request, consult factory.
 - D16. Connectors: please specify. Unless otherwise noted SMA is standard for ZHL-2-12; for all other models BNC is standard. TNC, N, SMA available on request, consult factory.
 - D17. Connectors: Female SMA only.
- E. SPECIAL TOLERANCES
- E1. Pin diameter ±.005 inch.
- F. PACKAGING
- F1-29. Tape and reel packaging available. See Tape & Reel packaging information for details. To order Tape & Reel version add -TR suffix to model.

BB

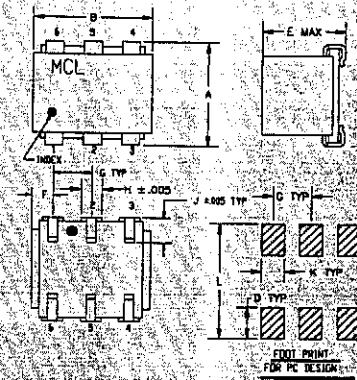
NOTE: PIN NUMBERS DO NOT APPEAR ON UNIT. FOR REFERENCE ONLY



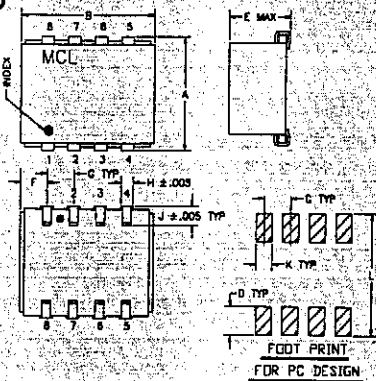
BG



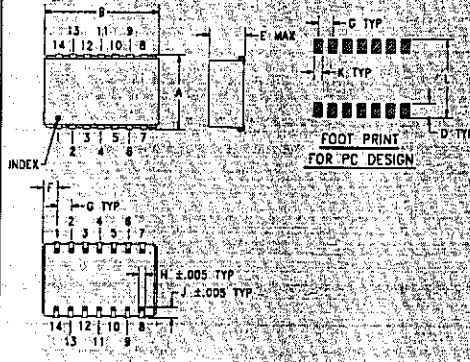
BH



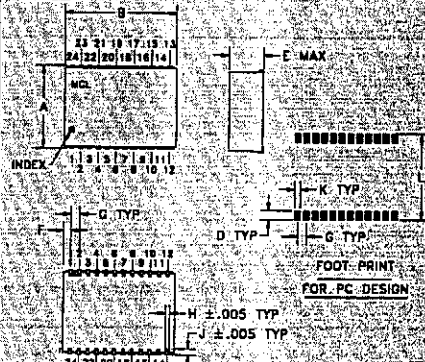
BJ



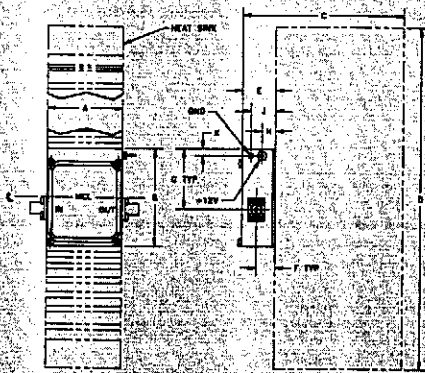
BK



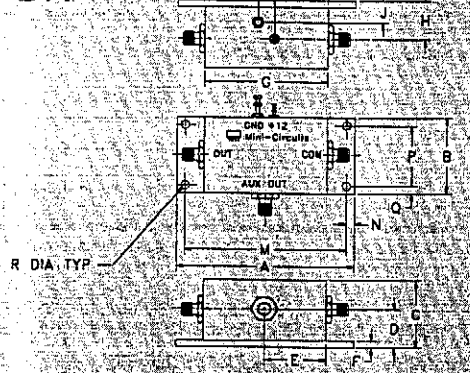
BL



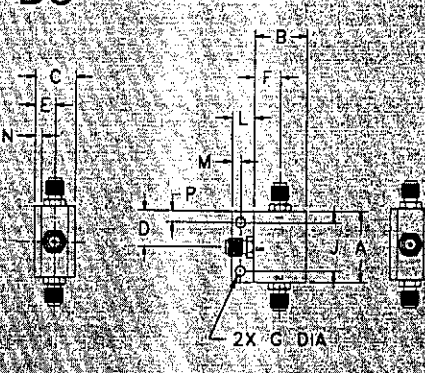
BN



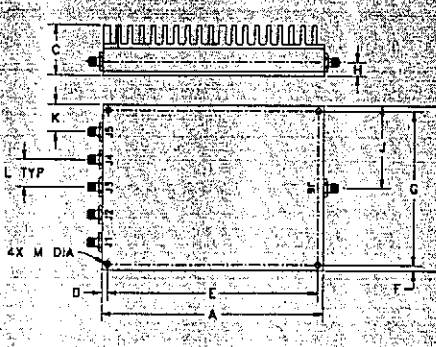
BR



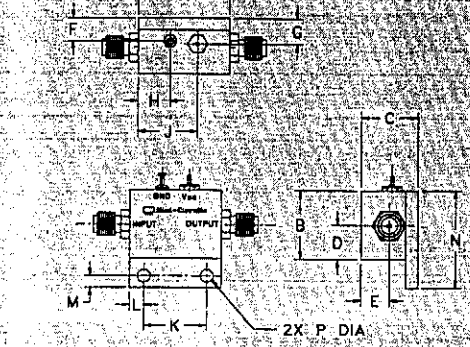
BU



BV



BW



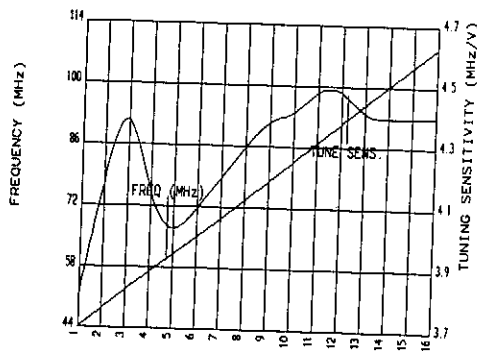
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VOLTAGE CONTROLLED OSCILLATORS

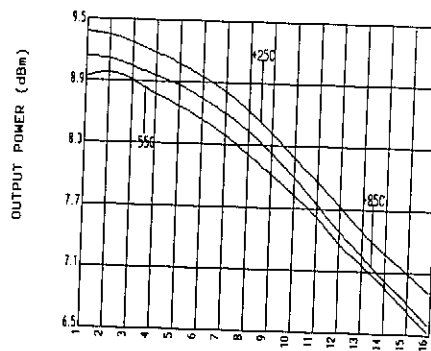
POS-100/JTOS-100

TUNING CHARACTERISTICS



V-TUNE	FREQUENCY (MHz)	TUNING SENSITIVITY
1.0	44.4	3.8
2.0	48.6	4.2
3.0	53.2	4.5
4.0	57.3	4.1
5.0	61.3	4.0
6.0	65.4	4.1
7.0	69.6	4.2
8.0	73.9	4.3
9.0	78.3	4.4
10.0	82.8	4.4
11.0	87.2	4.5
12.0	91.7	4.5
13.0	96.1	4.4
14.0	100.5	4.4
15.0	104.8	4.4
16.0	109.2	4.4

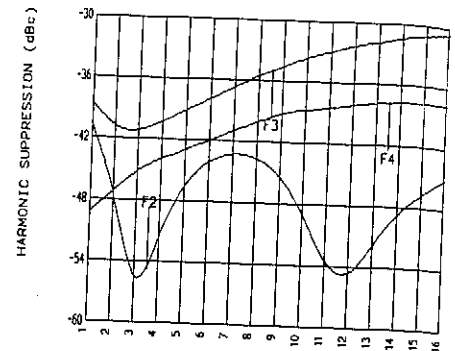
POWER OUTPUT



Tuning Voltage (V)	Pout (dBm)		
	-55°C	+25°C	+85°C
1	8.98	9.42	9.17
2	9.05	9.40	9.17
3	8.95	9.32	9.08
4	8.80	9.22	8.99
5	8.71	9.12	8.91
6	8.57	8.99	8.78
7	8.43	8.86	8.64
8	8.24	8.67	8.48
9	8.06	8.46	8.26
10	7.86	8.22	8.04
11	7.67	8.00	7.78
12	7.38	7.77	7.51
13	7.21	7.52	7.30
14	6.99	7.31	7.04
15	6.76	7.13	6.85
16	6.54	6.93	6.61

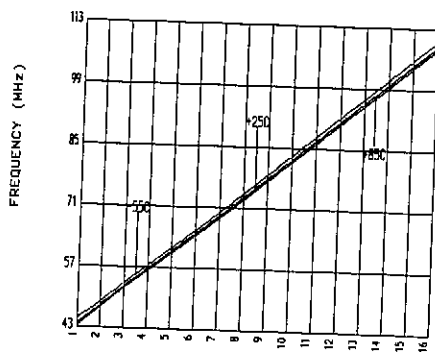
50 to 100 MHz

HARMONICS SUPPRESSION



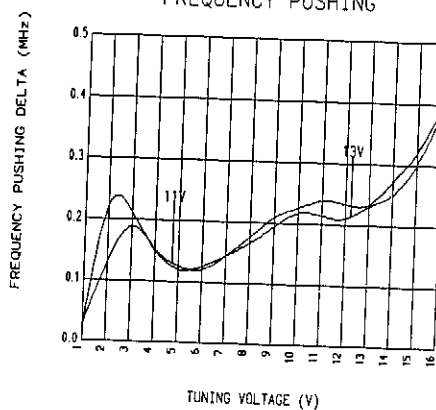
Tuning Voltage (V)	Harmonics (dBc)		
	F2	F3	F4
1	-40.4	-38.2	-48.7
2	-46.4	-40.8	-46.6
3	-58.4	-40.9	-44.5
4	-50.3	-39.8	-43.4
5	-45.6	-38.6	-42.5
6	-43.4	-37.4	-41.5
7	-42.6	-36.2	-40.5
8	-43.1	-35.0	-39.6
9	-44.7	-34.1	-38.7
10	-48.5	-33.1	-38.3
11	-53.8	-32.5	-38.1
12	-54.9	-31.8	-37.7
13	-51.1	-31.5	-37.4
14	-48.0	-30.9	-37.3
15	-46.2	-30.6	-37.3
16	-44.6	-30.2	-37.3

FREQ. VARIATION WITH TEMPERATURE



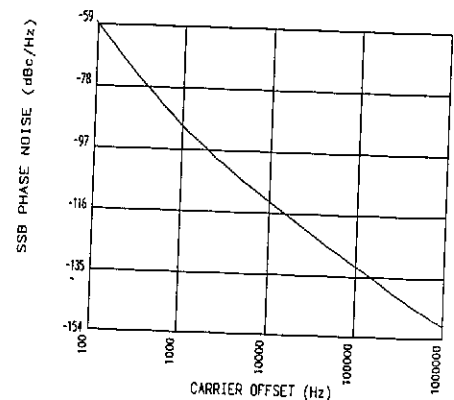
V-TUNE	FREQUENCY (MHz)		
	-55°C	+25°C	+85°C
1.0	45.55	44.40	43.93
2.0	49.41	48.60	48.31
3.0	53.98	53.15	52.83
4.0	58.08	57.27	56.90
5.0	62.10	61.31	60.88
6.0	66.20	65.43	64.96
7.0	70.43	69.62	69.13
8.0	74.80	73.93	73.43
9.0	79.26	78.33	77.81
10.0	83.78	82.77	82.25
11.0	88.26	87.23	86.68
12.0	92.73	91.69	91.10
13.0	97.13	96.06	95.46
14.0	101.53	100.45	99.81
15.0	105.98	104.84	104.18
16.0	110.43	109.22	108.55

FREQUENCY PUSHING



FREQUENCY PUSHING (MHz)	
(REFERRED TO V _{CC} =12V)	
11V	13V
0.02	0.03
0.28	0.14
0.22	0.22
0.15	0.15
0.13	0.12
0.12	0.13
0.15	0.15
0.18	0.17
0.22	0.20
0.23	0.23
0.25	0.22
0.24	0.21
0.23	0.24
0.28	0.25
0.32	0.30
0.40	0.39

PHASE NOISE



PHASE NOISE	
CARRIER OFFSET (Hz)	SSB PHASE NOISE (dBc/Hz)
100	-59
1000	-91
10000	-112
100000	-131
1000000	-149