

T-74-13-01

捷多邦，专业PCB打样工厂，24小时加急出货

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WJ-A15

WATKINS-JOHNSON CO 73 DE

9621629 0006089

5 TO 1000 MHz TO-8 CASCADABLE AMPLIFIER

- MEDIUM LEVEL: +8.5 dBm OUTPUT (TYP.)
- WIDE POWER SUPPLY RANGE: +8 TO +15 VOLTS



Specifications

Characteristic	Typical	Guaranteed*	
		0°-50°C	-54°C - +85°C
Frequency (Min.)	1-1100 MHz	5-1000 MHz	5-1000 MHz
Small Signal Gain (Min.)	14.5 dB	14 dB	13 dB
Gain Flatness (Max.)	±0.3 dB	±1.0 dB	±1.2 dB
Noise Figure (Max.)	5.4 dB	6.5 dB	7 dB
Power Output at 1 dB Compression (Min.)	+8.7 dBm	+7 dBm	+6.5 dBm
VSWR (Max.) Input/Output	< 1.4:1	1.9:1	2.0:1
DC Current (Max.) at 15 Volts	24 mA	27 mA	29 mA

* Measured in a 50-ohm system at +15 Vdc Nominal.

Typical Intermodulation Performance at 25°C

Second Order Harmonic Intercept Point	+38 dBm (Typ.)
Second Order Two Tone Intercept Point	+33 dBm (Typ.)
Third Order Two Tone Intercept Point	+21 dBm (Typ.)

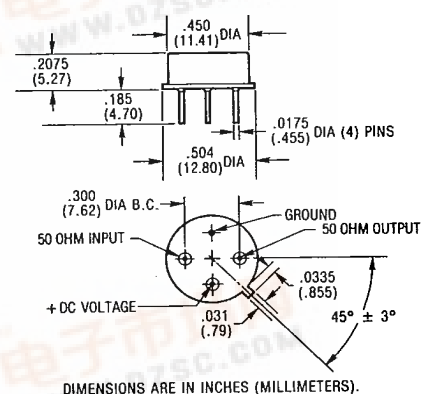
Absolute Maximum Ratings

Ambient Operating Temperature	-54°C to +100°C
Storage Temperature	-62°C to +125°C
Maximum Case Temperature	125°C
Maximum DC Voltage	+17 Volts
Maximum Continuous RF Input Power	+13 dBm
Maximum Short Term RF Input Power	50 Milliwatts (1 Minute Max.)
Maximum Peak Power	0.5 Watt (3 μsec Max.)
“S” Series Burn-In Temperature	125°C

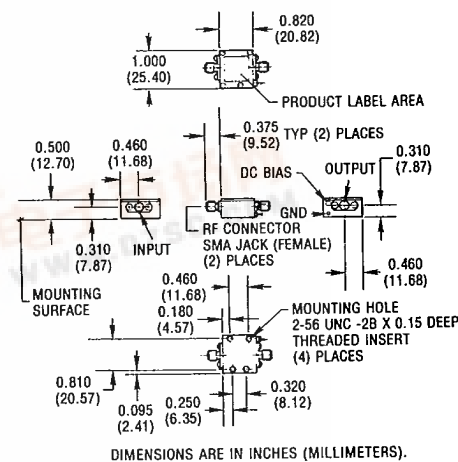
Weight 2.27 grams (0.08 oz.) maximum

Outline Drawings

A15



CA15

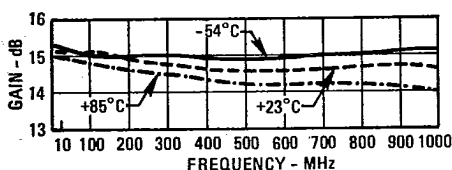
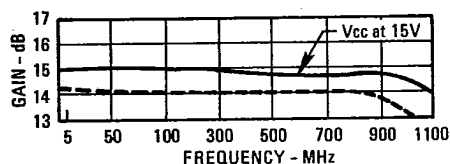


*WJ-CA15 is standard WJ A15 installed in miniature SMA connector housing and guaranteed over 0°C to 50°C temperature range. See Cascaded Thin Film Amplifiers.

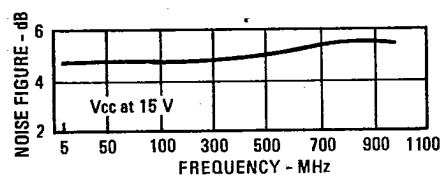
Typical Performance at 25°C

Typical Automatic Test Data

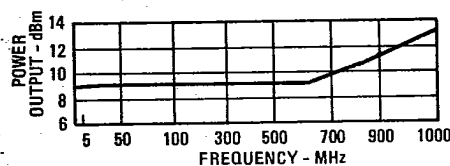
Gain



Noise Figure

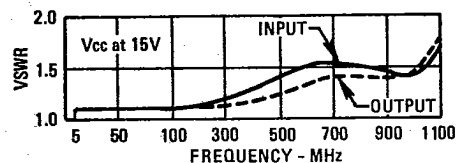


Power Output*



* at 1 dB Gain Compression

VSWR



Vcc = 15 V

FREQ MHZ	VSWR IN	VSWR OUT	GAIN DB
100.	1.2	1.2	14.9
200.	1.2	1.2	14.9
300.	1.1	1.1	14.9
400.	1.0	1.1	14.7
500.	1.1	1.1	14.6
600.	1.2	1.1	14.5
700.	1.2	1.1	14.5
800.	1.2	1.2	14.6
900.	1.3	1.2	14.7
1000.	1.3	1.4	14.6
1100.	1.6	1.7	14.1

Linear S-Parameters

FREQ MHZ	MAG S11	ANG S11	MAG S21	ANG S21	MAG S12	ANG S12	MAG S22	ANG S22
100.	.10	164.7	5.53	157.2	.09	-5.1	.11	163.0
200.	.07	140.5	5.54	137.8	.09	-11.1	.08	144.4
300.	.04	109.6	5.56	119.1	.09	-15.0	.07	126.2
400.	.02	-8.9	5.44	102.3	.09	-21.7	.06	98.3
500.	.05	-56.9	5.38	84.3	.09	-27.9	.07	77.6
600.	.08	-84.2	5.30	64.1	.10	-35.3	.06	75.9
700.	.10	-108.1	5.33	43.8	.10	-41.6	.06	81.9
800.	.11	-138.1	5.38	22.8	.10	-50.1	.07	93.5
900.	.11	179.1	5.41	-.4	.11	-60.1	.10	98.7
1000.	.15	119.9	5.38	-24.8	.11	-71.6	.17	83.1
1100.	.24	66.8	5.04	-51.1	.12	-87.0	.25	61.0
1200.	.35	24.6	4.39	-79.4	.12	-102.8	.31	33.9

Deviation from Linear Phase, Gain and Group Delay

FREQ MHZ	DEV LIN DEG	REL 0 DEG	GAIN DEV DB	ABS GAIN DB	GROUP DELAY N-SEC
100.	.24	.00	.12	14.91	.50
200.	-.37	-18.07	.11	14.90	.49
300.	-.13	-35.28	.11	14.89	.47
400.	.40	-52.21	.07	14.85	.49
500.	-.14	-70.20	-.12	14.67	.50
600.	-.37	-89.83	-.16	14.58	.55
700.	3.08	-109.79	-.09	14.64	.56
800.	2.06	-130.26	-.05	14.60	.61
900.	-1.61	-153.37	-.05	14.69	.65
1000.	-6.08	-177.28	-.19	14.55	.66