

MONOLITHIC AMPLIFIERS 50Ω Drop-In & Surface Mount

BROADBAND DC to 8 GHz



All specifications at 25°C

MODEL NO.	FREQ. GHz f_1 - f_2	GAIN, dB Typical								MAXIMUM POWER, dBm at 2 GHz*		DYNAMIC RANGE at 2 GHz*		VSWR Typ. (:1)				MAXIMUM RATING		DC POWER at Pin 3		THERMAL RESISTANCE	Case Style	CONN. STYLE	Price \$		
		over frequency, GHz								Output (1 dB Comp.) Typ.	Input (no dmg.)	NF dB Typ.	IP3 dBm Typ.	In		Out		I (mA)	P (mW)	Current (mA)	Volt Typ.	θ_{jc} , typ. °C/W	Note B	Qty. (30)			
		0.1	1	2	3	4	6	8	Flatness Min. @ 2 GHz					DC-2 GHz	DC-3 GHz	3- f_1 **	DC-3 GHz								3- f_2 **		
ERA-1	DC-8	11.8	11.7	11.6	11.2	10.9	10.5	9.6	9	± 0.15	13	11	15	7	26	1.6	2.2	1.5	2.1	75	330	50	3.8	531	VV105	cb	1.37
ERA-2	DC-6	16.0	15.6	14.9	13.9	13.1	11.8	--	12	± 0.6	14	12	15	6	27	1.5	1.5	1.5	2.0	75	330	50	3.8	531	VV105	cb	1.52
ERA-3	DC-3	22.2	21.4	20.2	18.2	--	--	--	17	± 1.1	11	8	13	4.5	23	1.7	--	1.8	--	75	330	35	3.8	432	VV105	cb	1.67
ERA-4	DC-4	13.8	14.0	13.9	13.9	13.4	--	--	11	± 0.10	19.1	17	13	5.2	36	1.6	1.5	1.4	1.6	120	650	80	5.0	290	VV105	cb	3.85
ERA-5	DC-4	20.4	20.0	19.0	17.7	15.8	--	--	16	± 0.75	19.6	17.5	13	4.0	36	1.2	1.2	1.3	1.6	120	650	80	5.0	290	VV105	cb	3.85
ERA-1SM	DC-8	11.8	11.6	11.0	10.5	9.8	8.8	8.2	8	± 0.5	13	11	15	7	26	1.8	2.2	1.7	2.2	75	330	50	3.8	536	WW107	cb	1.42
ERA-2SM	DC-6	15.6	15.3	13.1	11.8	11.1	10.0	--	10	± 0.9	13	12	15	6	27	1.8	1.7	1.7	1.9	75	330	50	3.8	536	WW107	cb	1.57
ERA-3SM	DC-3	22.1	21.2	19.4	17.3	--	--	--	16	± 1.5	11	8	13	4.5	23	1.8	--	1.9	--	75	330	35	3.8	437	WW107	cb	1.72
ERA-4SM	DC-4	13.8	14.0	13.9	13.8	13.3	--	--	11	± 0.10	19.1	17	13	5.2	36	1.6	1.5	1.3	1.3	120	650	80	5.0	290	WW107	cb	3.90
ERA-5SM	DC-4	20.4	20.0	19.0	17.6	15.8	--	--	16	± 0.75	19.4	17.5	13	4.0	36	1.3	1.4	1.2	1.2	120	650	80	5.0	295	WW107	cb	3.90

features

- miniature microwave amplifier
- available in drop-in & surface mount (sm) versions
- frequency range, DC to 8 GHz, usable to 10 GHz
- up to 19.6 dBm typ. (17.5 dBm min) output power

marking identification

Model	Alphanumeric Code
ERA-1, ERA-1SM	E1
ERA-2, ERA-2SM	E2
ERA-3, ERA-3SM	E3
ERA-4, ERA-4SM	E4
ERA-5, ERA-5SM	E5

absolute maximum ratings

operating temperature: -25° to 85°C

storage temperature: -65° to 150°C

device voltage: 3.2V min., 4.4V max. for ERA 1,2,3

4.2V min., 6.0V max. for ERA 4,5

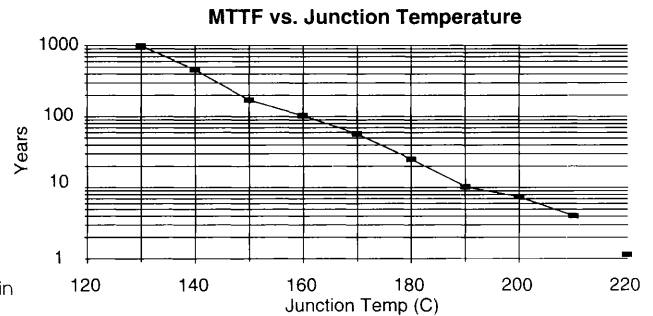
maximum case temperature: 200°C

(for continuous operation)

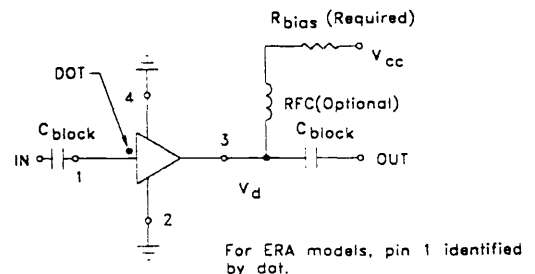
NOTES:

- * at 1 GHz for ERA 4, 5, 4SM, 5SM.
- ** f_u is the upper frequency limit for each model as shown in the table.
- Low frequency cutoff determined by external coupling capacitors.
- A. Environmental specifications and re-flow soldering information available in General Information Section.
- B. Units are non-hermetic unless otherwise noted. For details on case dimensions & finishes see "Case Styles & Outline Drawings".
- C. Prices and Specifications subject to change without notice.

1. Model number designated by alphanumeric code marking.
2. ERA-SM models available on tape and reel.



Typical Biasing Configuration ERA



designers kits available

KIT NO.	Model Type	No. of Units in Kit	Description	Price \$ per kit
K1-ERA	ERA	30	10 of each 1,2,3	49.95
K2-ERA	ERA	20	10 of each 4,5	69.95
K1-ERASM	ERA-SM	30	10 of each 1SM, 2SM, 3SM	49.95
K2-ERASM	ERA-SM	20	10 of each 4SM, 5SM	69.95

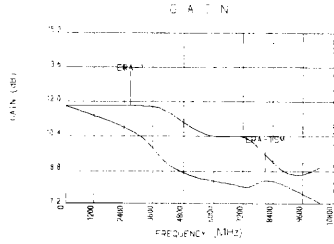


INTERNET <http://www.minicircuits.com>

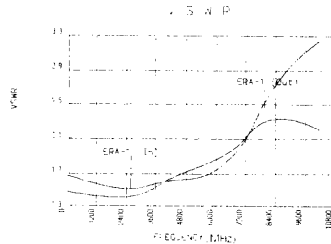
P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661

Distribution Centers/ NORTH AMERICA 800-654-7941 417-335-5935 Fax 417-335-5945 EUROPE 44-1252-835094 Fax 44-1252-837010

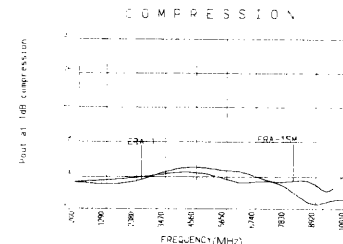
ERA-1/ERA-1SM



GAIN (dB)		
FREQUENCY (MHz)	ERA-1	ERA-1SM
100.00	11.82	11.80
2363.20	11.84	10.90
3494.80	11.80	10.15
4060.60	11.72	8.96
5758.00	10.20	8.27
6889.60	10.45	8.19
7455.40	10.33	7.84
8021.20	9.62	8.52
9152.80	8.28	7.96
10284.40	8.92	7.29

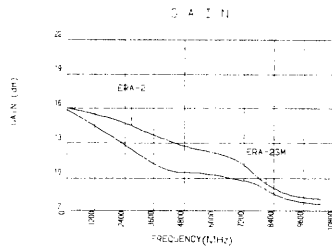


VSWR			
IN	OUT	IN	OUT
ERA-1	ERA-1	ERA-1SM	ERA-1SM
1.67	1.48	1.71	1.54
1.48	1.39	2.06	1.80
1.55	1.48	1.97	1.80
1.62	1.52	2.19	2.12
1.62	1.80	2.35	2.31
1.91	1.96	2.09	2.10
2.12	2.16	1.98	1.97
2.52	2.32	2.27	2.03
2.98	2.35	2.44	2.44
3.23	2.21	2.19	1.77

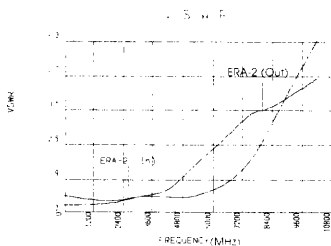


Pout (dBm) (@1dB COMPR)		
FREQUENCY (MHz)	ERA-1	ERA-1SM
200.00	13.30	13.31
2037.80	12.78	13.62
3263.00	14.31	14.14
4488.20	15.32	14.66
5713.40	14.44	13.68
6326.00	14.67	12.88
7551.20	12.77	13.95
8776.40	14.08	10.17
9389.00	11.23	11.15
10001.60	14.43	11.30

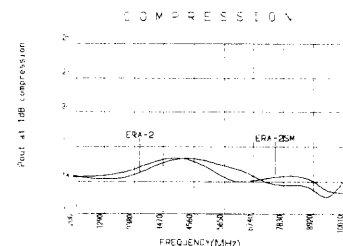
ERA-2/ERA-2SM



GAIN (dB)		
FREQUENCY (MHz)	ERA-2	ERA-2SM
100.00	15.82	15.68
2207.50	14.82	13.02
3050.50	13.88	11.64
4315.00	12.89	10.09
5158.00	12.22	10.32
6857.40	11.71	9.71
7714.80	9.88	9.26
8143.50	9.17	8.65
9000.90	8.15	7.75
10287.00	7.92	7.47

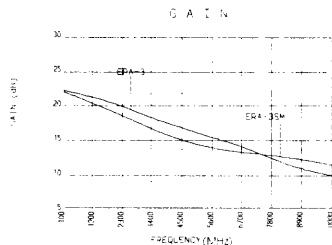


VSWR			
IN	OUT	IN	OUT
ERA-2	ERA-2	ERA-2SM	ERA-2SM
1.56	1.40	1.62	1.45
1.43	1.41	2.00	1.91
1.57	1.57	1.97	2.00
1.55	1.58	1.90	2.03
1.50	2.33	1.45	1.41
1.77	2.55	1.81	1.70
2.22	3.36	2.09	1.73
2.52	3.33	2.77	1.77
3.26	3.23	3.13	1.74
4.26	3.30	5.59	2.36

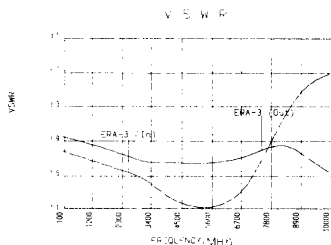


Pout (dBm) (@1dB COMPR)		
FREQUENCY (MHz)	ERA-2	ERA-2SM
200.00	14.21	14.13
2037.80	13.66	14.26
3263.00	15.31	15.72
4488.20	16.06	15.95
5713.40	14.98	13.98
6326.00	14.88	13.52
7551.20	13.05	14.22
8776.40	13.73	14.30
9389.00	11.71	12.79
10001.60	13.65	12.75

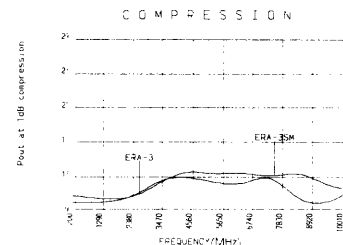
ERA-3/ERA-3SM



GAIN (dB)		
FREQUENCY (MHz)	ERA-3	ERA-3SM
100.00	22.32	22.14
2000.00	20.55	19.11
3263.60	18.38	16.92
4106.00	17.38	15.49
5369.60	15.69	14.10
6212.00	14.83	13.54
7054.40	13.59	13.24
8318.00	11.60	12.69
9160.40	10.64	12.16
10002.80	10.01	11.52



VSWR			
IN	OUT	IN	OUT
ERA-3	ERA-3	ERA-3SM	ERA-3SM
1.79	1.96	1.98	1.95
1.60	1.30	1.74	1.78
1.48	1.34	1.64	1.89
1.21	1.36	1.44	2.11
1.11	1.54	1.46	1.98
1.18	1.57	1.49	1.89
1.36	1.73	1.27	1.61
2.20	1.92	1.66	1.60
2.57	1.92	2.10	1.70
2.68	1.35	4.61	1.41



Pout (dBm) (@1dB COMPR)		
FREQUENCY (MHz)	ERA-3	ERA-3SM
200.00	10.86	10.04
2262.80	10.08	10.03
3294.20	12.21	12.76
4325.60	13.88	13.12
5357.00	13.24	12.39
6388.40	13.66	11.92
7419.80	12.87	13.74
8451.20	13.80	9.88
9482.60	11.96	9.97
10000.00	11.71	10.87

In Stock... Immediate Delivery

For Custom Versions Of Standard Models Consult Our Applications Dept.

