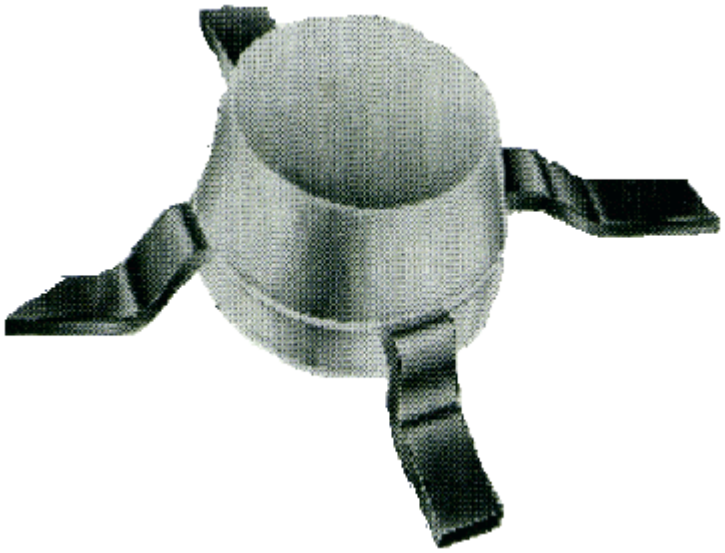
Comparison of MAR-7SM and ERA-1SM



The ERA-1SM Amplifier which is specified up to 8 GHz has a much flatter gain over a given frequency range than the MAR-7SM, which is specified only up to 2 GHz. Typical flatness of the ERA-1SM up to 2 GHz is -0.5 dB and the MAR-7SM is -2.5 dB. Above 2 GHz, the gain for the MAR-7SM drops sharply while ERA-1SM's gain stays reasonably flat. The ERA-1SM at 30 mA has a closer resemblance to the MAR-7SM than the ERA-1SM is gain at 40 mA, which is the rated current in the catalog. The output power and IP3 are slightly higher for ERA-1SM at 30 mA than for MAR-7SM at 22 mA. The input VSWR for the MAR-7SM is better than the ERA-1SM and output VSWR is the same for both.

In summary, when operated at 30 mA the ERA-1SM offers a much larger frequency range, much better gain flatness, a better 1-dB compression point, and a better IP3 than the MAR-7SM.

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Features	MAR-7SM @ 22mA	ERA-1SM @ 30 mA	ERA-1SM @ 40mA
Frequency Range	DC-2 GHz	DC-8 GHz	DC-8 GHz
Typ Gain @ 100 MHz	13.5 dB	12.3 dB	12.3 dB
Typ Gain @ 1GHz	12.5 dB	12.1 dB	12.1 dB
Typ Gain@ 2 GHz	11.0 dB	11.8 dB	11.8 dB
Typ Gain@ 4 GHz	5.2 dB	10.3 dB	10.8 dB

Typ Gain @ 6 GHz	2.5 dB	8.9 dB	10.0 dB
Min Gain @ 2 GHz	8.5 dB	9.0 dB	9.0 dB
Typ 1dB Output @ 1 GHz	5.0 dBm	5.4 dBm	11.0 dBm
Typ 1dB Output @ 2 GHz	4.0 dBm	5.6 dBm	11.0 dBm
Typ IP3 @ 2 GHz	18 dBm	20 dBm	26 dBm
Typ VSWR In	1.2:1	1.6:1	1.6:1
Typ VSWR Out	1.5:1	1.5:1	1.5:1
Typ Device Voltage	4.0 V	3.5 V	3.6 V
Typ Noise Figure	5.0 dB	5.5 dB	5.5 dB

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