

REPLACEMENT PART REFERENCE GUIDE:

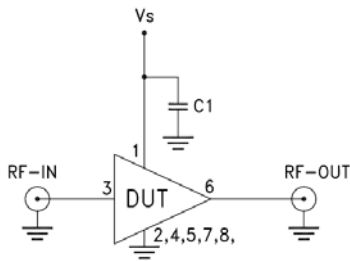
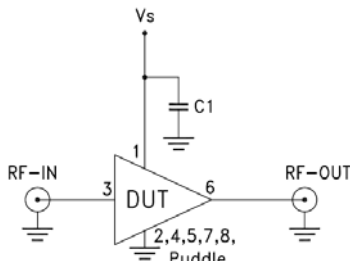

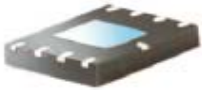
AN-60-065

ORIGINAL PART: VNA-28

REPLACEMENT PART: VNA-28A+

This replacement part has been judged by Mini-Circuits Engineering as a suitable replacement part.

APPLICATION CIRCUITS

<p>ORIGINAL PART: VNA-28 APPLICATION CIRCUIT</p>  <p>Vs=Supply Voltage</p>	<p>REPLACEMENT PART: VNA-28A+ APPLICATION CIRCUIT</p>  <p>Vs=Supply Voltage</p>
<p>ORIGINAL PART: VNA-28 CASE STYLE-SOIC-8 LEAD</p> 	<p>REPLACEMENT PART: VNA-28A+ CASE STYLE- 5x6mm MCLP (FOOT PRINT COMPATIBLE)</p> 

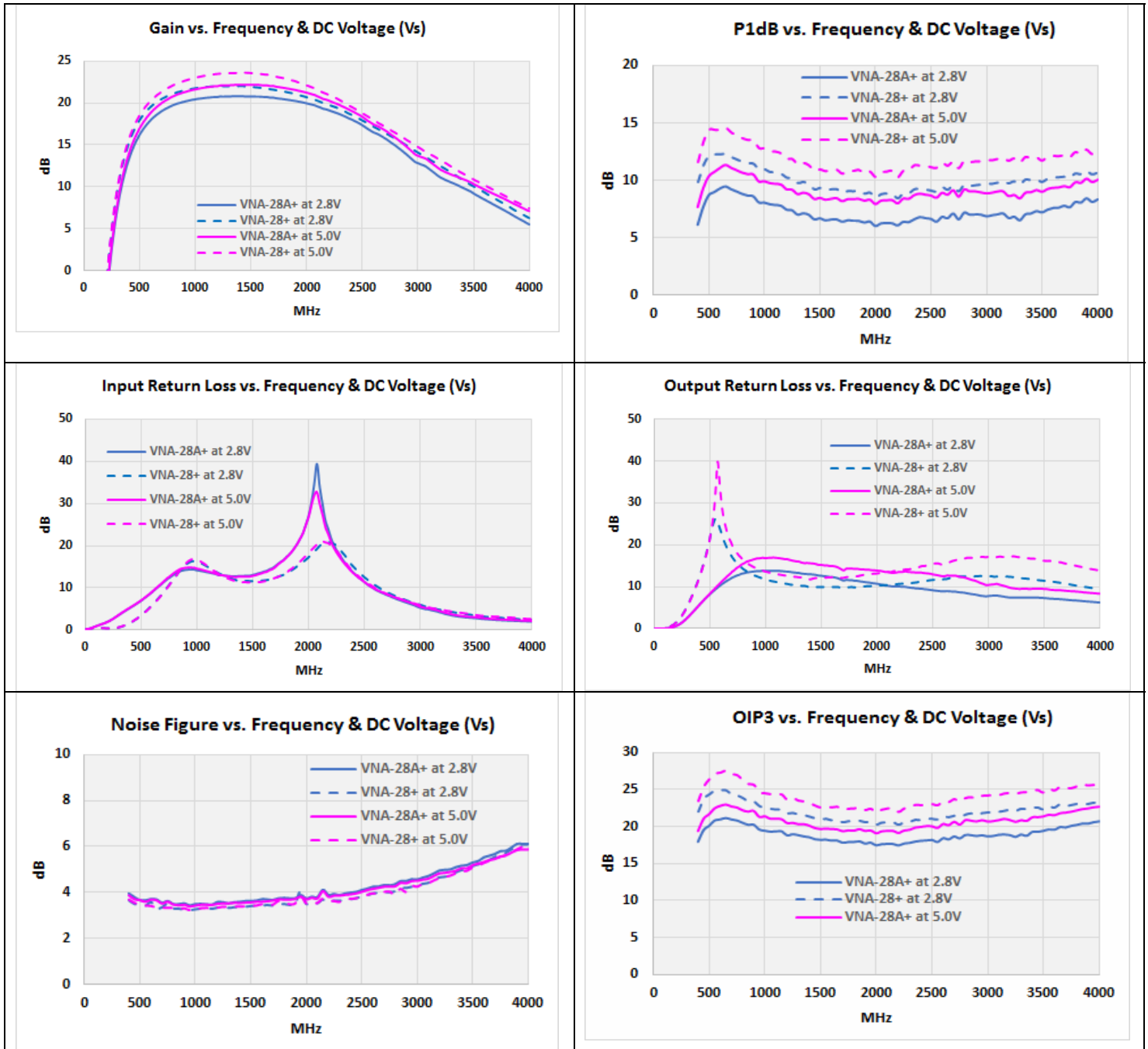
CONCLUSION:

- 1) **FORM-FIT-FUNCTIONAL COMPATIBLE:** Similar Circuit and PCB Layout.
- 2) **TYPICAL PERFORMANCE COMPARISON** ^a:

At DC=+5V				At DC=+2.8V			
	GHz	VNA-28A+	VNA-28+		GHz	VNA-28A+	VNA-28+
Gain (dB)	0.5	16.8	18.4	Gain (dB)	0.5	16.1	18.0
	1.0	21.5	23.0		1.0	20.3	21.8
	1.5	22.0	23.5		1.5	20.6	22.0
	2.0	21.1	22.1		2.0	19.8	20.7
	2.5	18.2	18.8		2.5	17.3	18.0
Input Return Loss (dB)	0.75 to 2.5	15.7	14.6	Input Return Loss (dB)	0.75 to 2.5	15.9	14.6
Output Return Loss (dB)	0.75 to 2.5	15.0	13.7	Output Return Loss (dB)	0.75 to 2.5	12.1	11.3
Output Power @ P1dB	0.5 to 2.5	9.0	11.9	Output Power @ P1dB	0.5 to 2.5	7.1	10.0
Output IP3 (dBm)	0.5 to 2.5	20.0	23.7	Output IP3 (dBm)	0.5 to 2.5	18.3	21.8
Noise Figure (dB)	0.5 to 2.5	3.7	3.5	Noise Figure (dB)	0.5 to 2.5	3.7	3.5
Directivity (Isolation-Gain) (dB)	0.5 to 2.5	16.8	16.6	Directivity (Isolation-Gain) (dB)	0.5 to 2.5	16.6	16.6
DC Current (mA)	DC	26.3	32.2	DC Current (mA)	DC	24.0	32.2

Notes:
a. Suitability for model replacement within a particular system must be determined by and is solely the responsibility of the customer based on, among other things, electrical performance criteria, stimulus conditions, application, compatibility with other components and environmental conditions and stresses.

COMPARISON PERFORMANCE CURVES:



Notes:
a. Suitability for model replacement within a particular system must be determined by and is solely the responsibility of the customer based on, among other things, electrical performance criteria, stimulus conditions, application, compatibility with other components and environmental conditions and stresses.

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