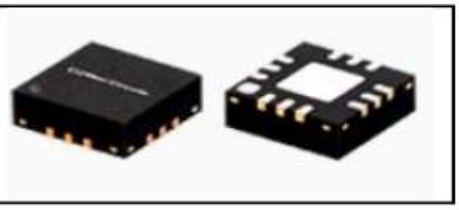
REPLACEMENT PART REFERENCE GUIDE, GP2YA+ AN-10-026

Original Part:	GP2Y+	
Replacement Part:	GP2YA+	

Replacement Part has been judged by Mini-Circuits Engineering as a suitable replacement to Original Part.

MECHANICAL DIMENSIONS

Case Style: DQ1225
Both the GP2YA+ and GP2Y+ uses the same case style DQ1225 case style.

CONCLUSION:

1) **FORM-FIT-FUNCTIONAL ANALYSIS$_a$**:

The Replacement Part GP2YA+ has the same form and fit as he original part GP2Y+

The Replacement Part maximum power handling and operating temperature on the Absolute Maximum Table were changed. The Replacement Part's maximum input power as a splitter is now +40dBm at 25C instead of the Original Part's maximum input power as a splitter of 1.5W (+31.76dBm). Replacement Part's maximum internal dissipation power is now +38dBm at 25C instead of the Original Part's maximum internal dissipation power of 0.75W (+28.75dBm).

Additionally, the Replacement Part's maximum operating temperature is now +105°C instead of the Original Part's maximum operating temperature of 85°C

Replacement Part and Original Part feature the same expected performance. See section 2 for Min. Max and Typical performance and graphs.

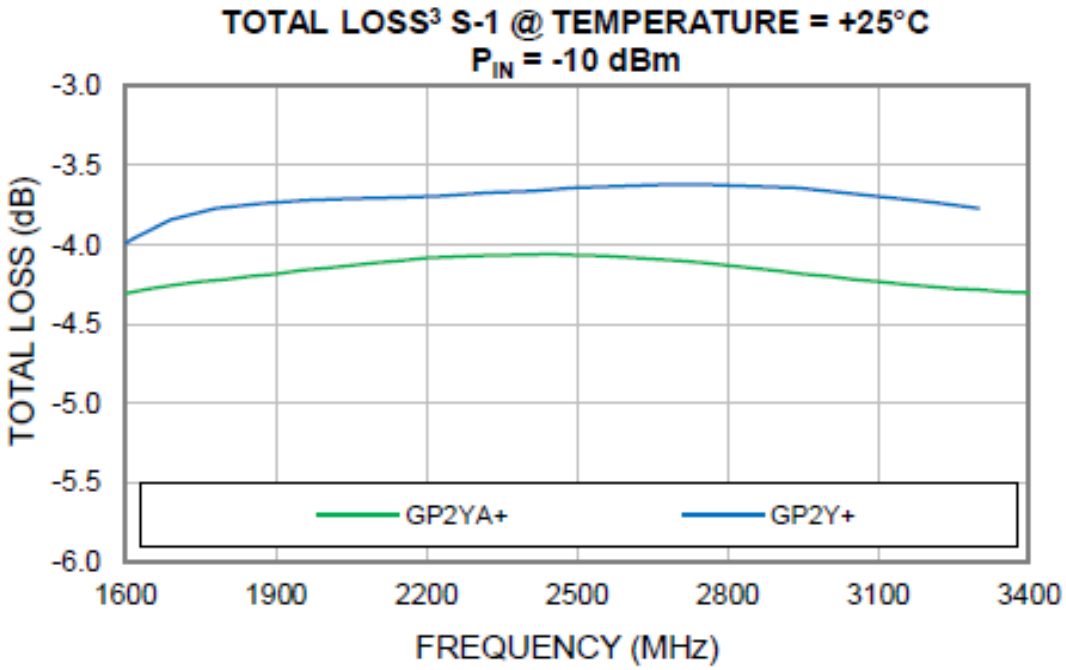
2) RF PERFORMANCE COMPARISON AT ROOM TEMPERATURE:

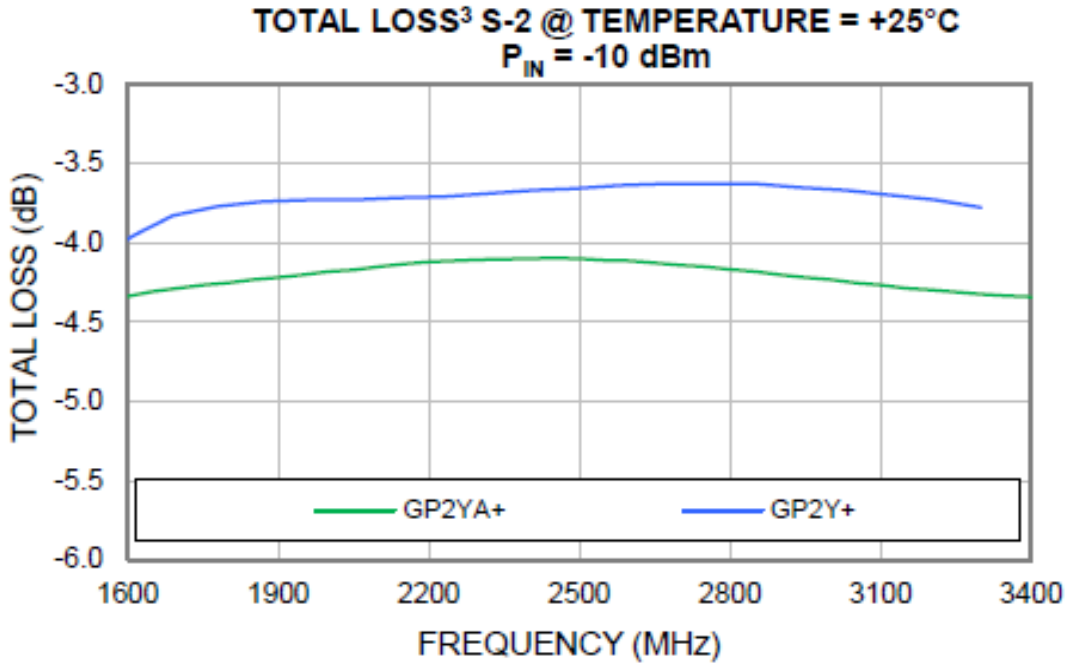
MODEL: GP2Y+, GP2YA+

Parameter	Freq (MHz)		GP2Y+			GP2YA+		
	From	To	Min.	Avg.	Max.	Min.	Avg.	Max.
INSERTION LOSS[1] - Above 3dB (dB)	1600	1600					1.2	1.6
	2500	2500		0.8	1.5		1.1	1.4
	3300	3300					1.2	1.6
ISOLATION (dB)	1600	1600				18	23	
	2500	2500	17	24		17	22	
	3300	3300				17	22	
AMPLITUDE UNBALANCE (dB)	1600	1600					0.03	0.2
	2500	2500		0.02			0.03	0.2
	3300	3300					0.04	0.2
PHASE UNBALANCE (Deg)	1600	1600					0.8	3.0
	2500	2500		0.3	4.0		0.8	4.0
	3300	3300					1.0	4.0
RETURN LOSS - PORT 1,2[2] (dB)	1600	1600					20	
	2500	2500		20.8			29	
	3300	3300					21	
RETURN LOSS - SUM (dB)	1600	1600					19	
	2500	2500		20.8			33	
	3300	3300					16	

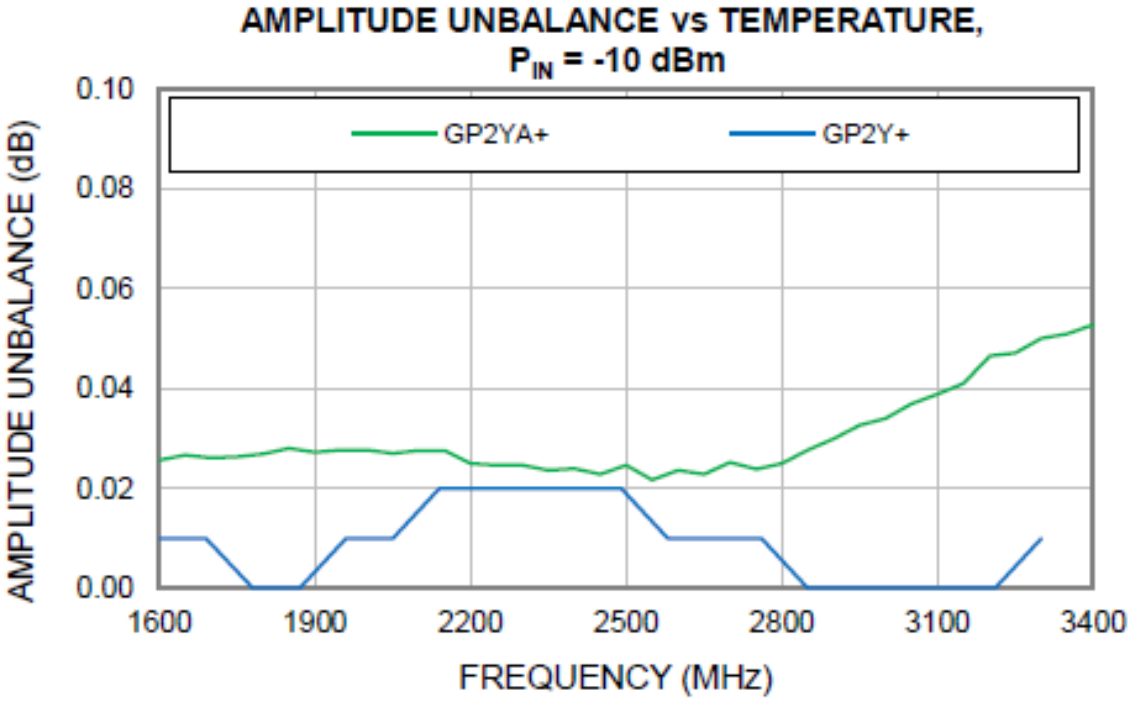
1. Typical insertion loss displayed are the worst case among Port 1 and Port 2.
2. Typical return loss displayed are the worst case among Port 1 and Port 2.

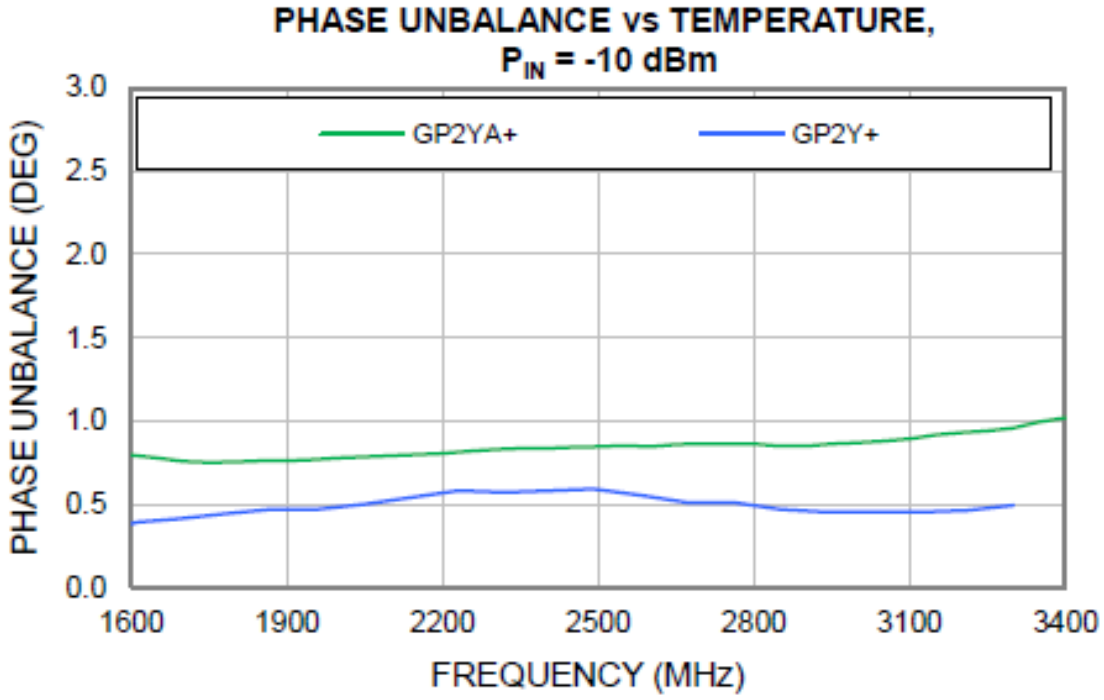
3) TYPICAL PERFORMANCE GRAPHS AT ROOM TEMPERATURE:

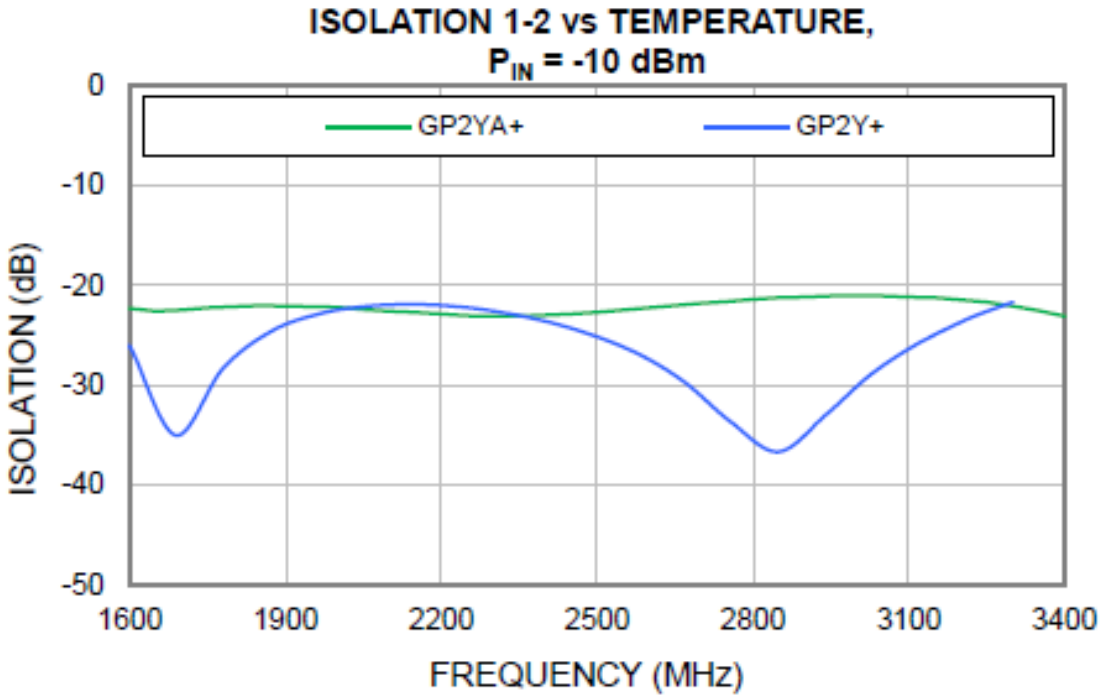


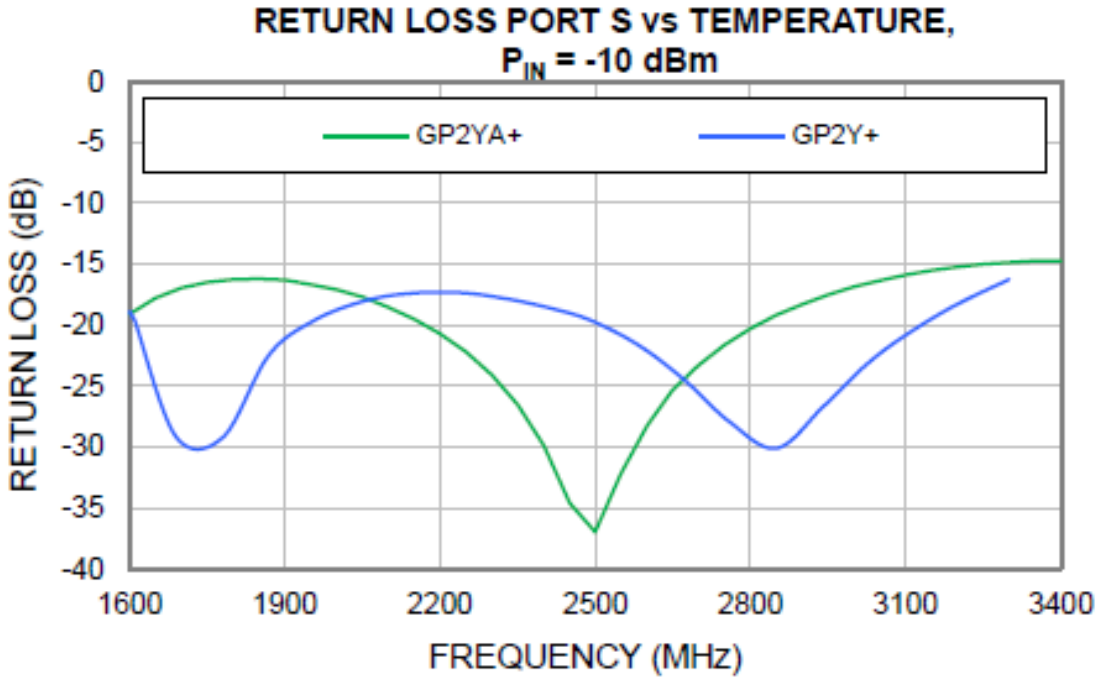


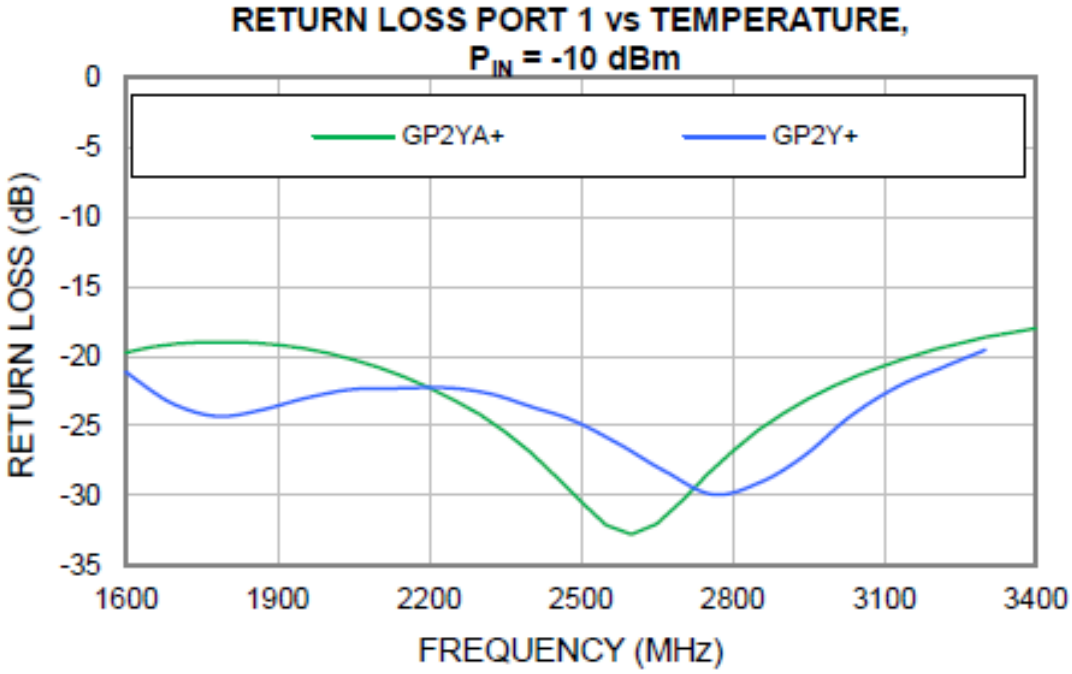
3. Total Loss = Single Path (S-1 or S-2) Insertion Loss + 3 dB Splitter Loss

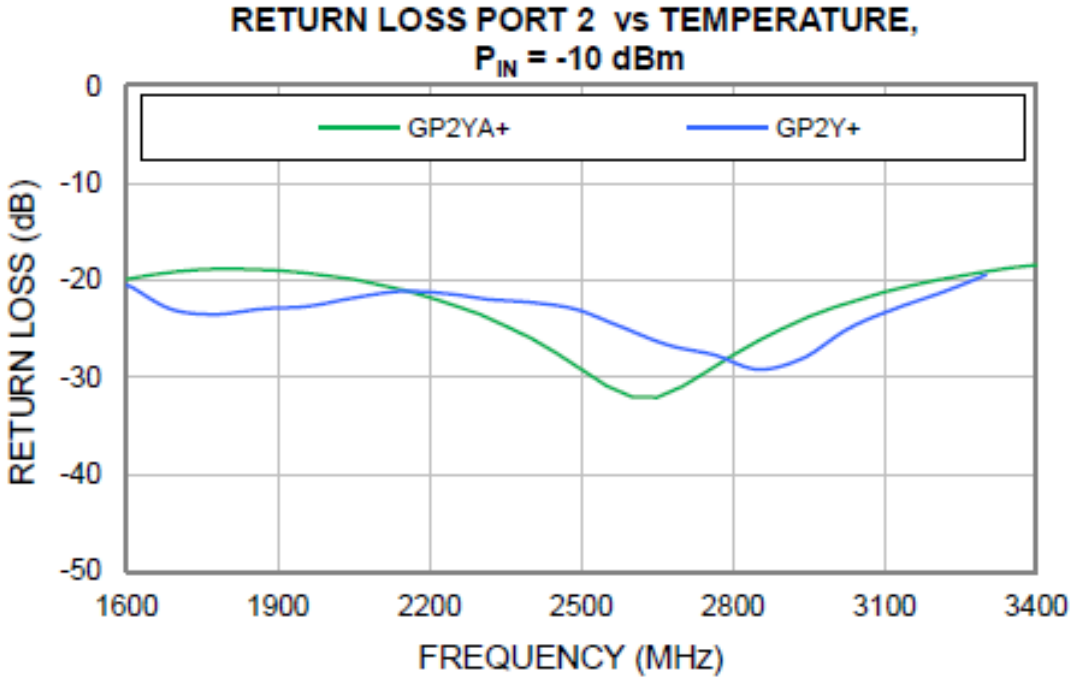












IMPORTANT NOTICE