

**TYPICAL CHARACTERISTICS  
ON  
DD-46-1840-10PF-P-292MF**

PMI MODEL: DD-46-1840-10PF-P-292MF IS A LOW NOISE TUNNEL DIODE DETECTOR OPERATING OVER THE 18.0 TO 40.0 GHz FREQUENCY RANGE. THIS MODEL OFFERS EXCELLENT TEMPERATURE STABILITY WITH A RESPONSE TIME OF LESS THAN 5 ns TYPICAL.



**October 24, 2025**

**Designed By:**

**Engineering PMI**

**Tested and Reported By:**

**Alfredo Lopez**

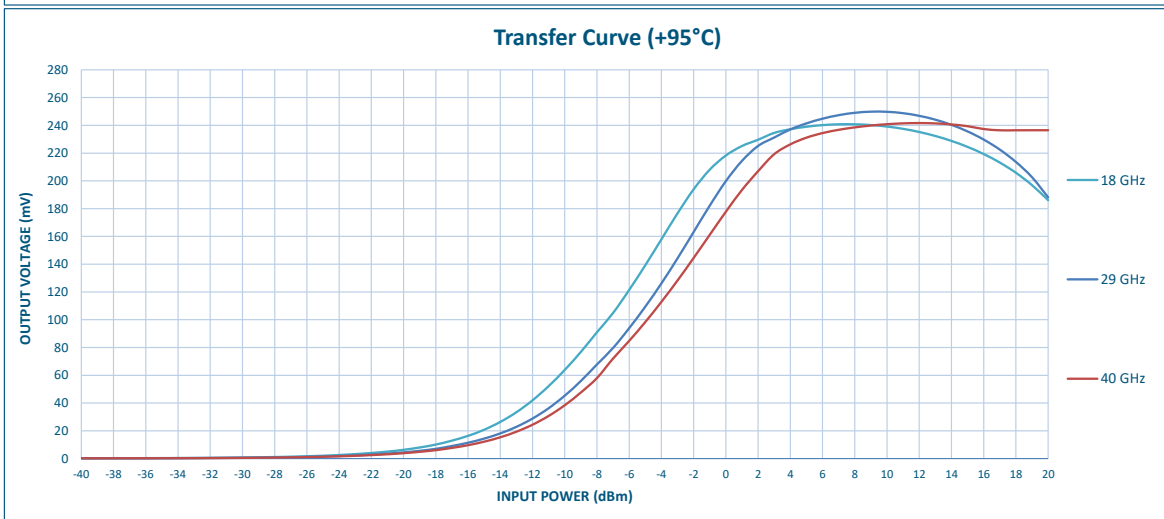
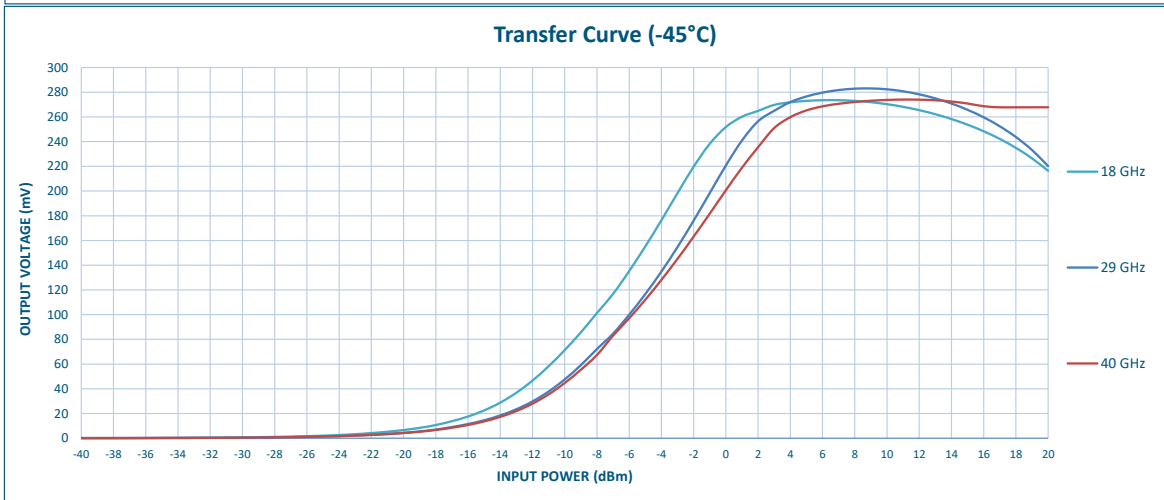
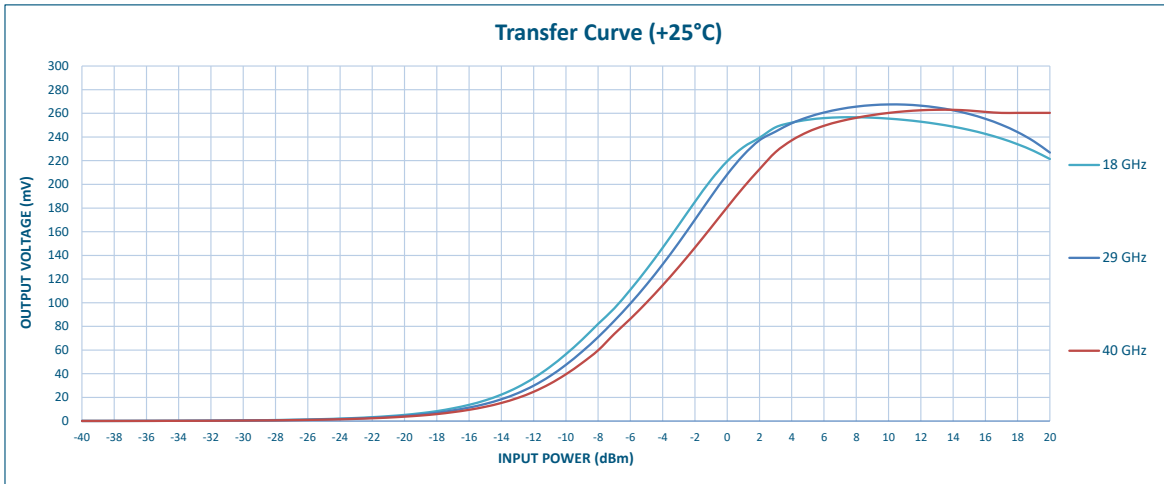


**TYPICAL CHARACTERISTICS  
ON  
DD-46-1840-10PF-P-292MF**

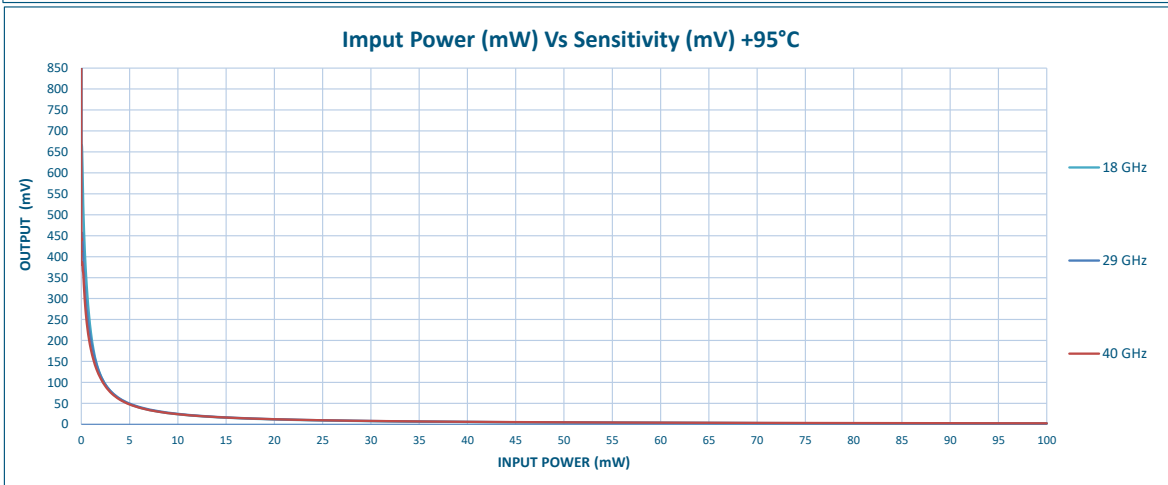
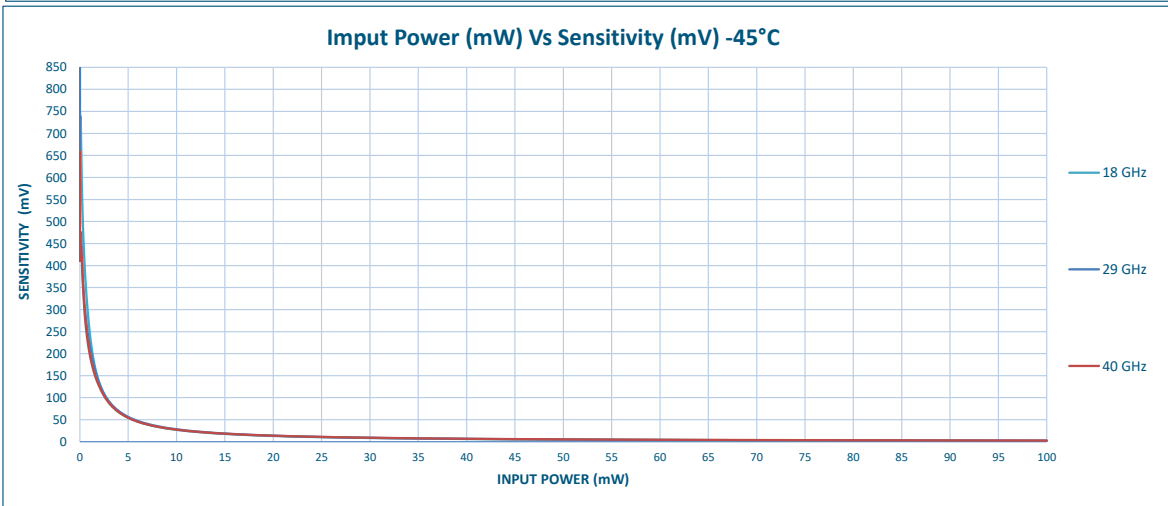
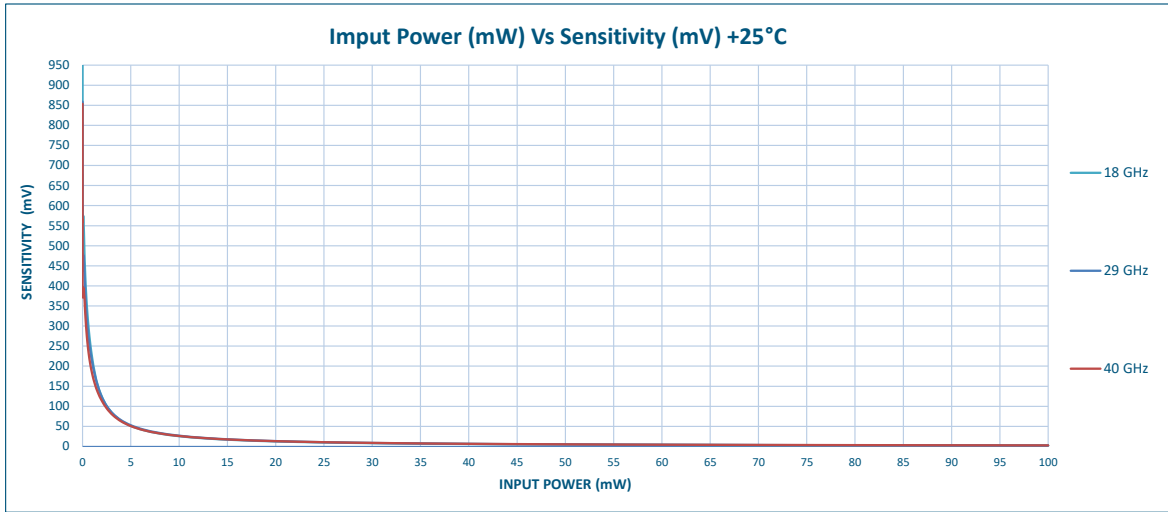
Technical Specifications

TEST ITEM NO.	PARAMETERS	SPECIFIED VALUE	TEST RESULTS		
			+25°C	-45°C	+95°C
1	Frequency Range:	18.0 to 40.0 GHz	18.0 to 40.0 GHz	18.0 to 40.0 GHz	18.0 to 40.0 GHz
2	Voltage Sensitivity:	300 mV/mW Min. (-35 dBm to -10 dBm)	371.14 mV/mW See Graphs	411.36 mV/mW See Graphs	381.37 mV/mW See Graphs
3	Tangential Sensitivity:	-45 dBm (20 MHz Video Bandwidth with 2 dB Noise Figure Video Amp.)	-54 dBm Video Bandwidth 20 MHz See Plot		
4	Temperature Sensitivity:	±0.5 dB Typ. Over Temp Extremes	±0.35 dB @ Over Temp Extremes See Graphs		
5	Flatness	±3.0 dB Max.	±1.66 dB See Graphs	±2.24 dB See Graphs	±2.37 dB See Graphs
6	Rise Time:	5 ns Typ.	5.10 ns @ -20 dBm Input Power 5.91 ns @ -10 dBm Input Power 5.98 ns @ 0 dBm Input Power See Plots		
7	VSWR:	4.0:1 Typ.	4.35:1 See Graph	4.24:1 See Graph	4.53:1 See Graph
8	Output Capacitance:	10 pF Typ.	10 pF		
9	Output Resistance:	50 Ω Typ.	50 Ω		
10	Input Power:	50 mW CW Max. (+20 dBm)	Pass +20 dBm See Graphs	Pass +20 dBm See Graphs	Pass +20 dBm See Graphs
11	Output Voltage	Positive	Positive		

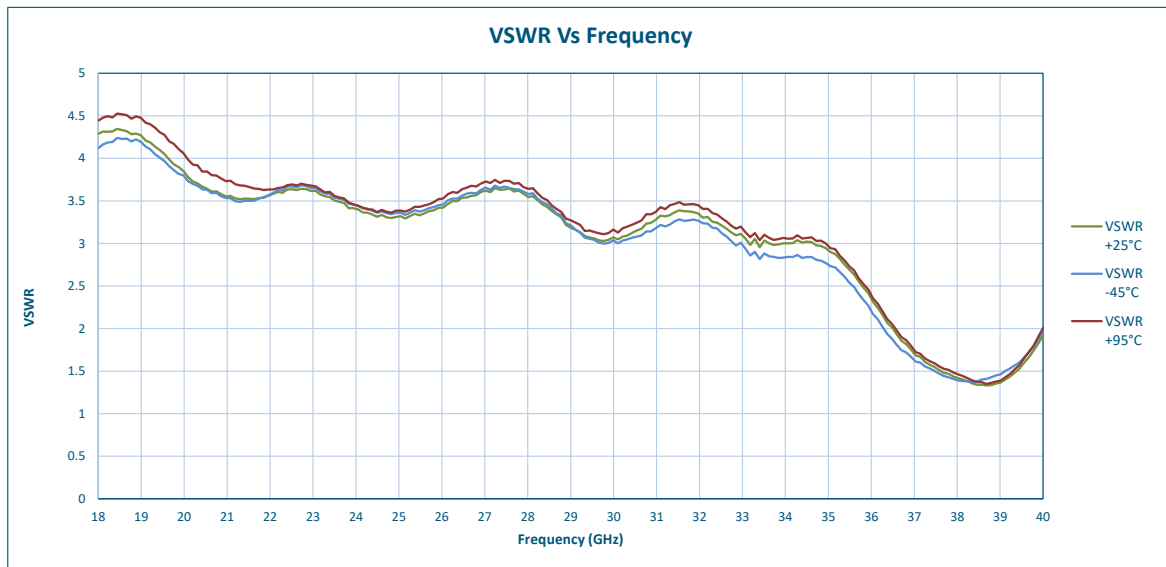
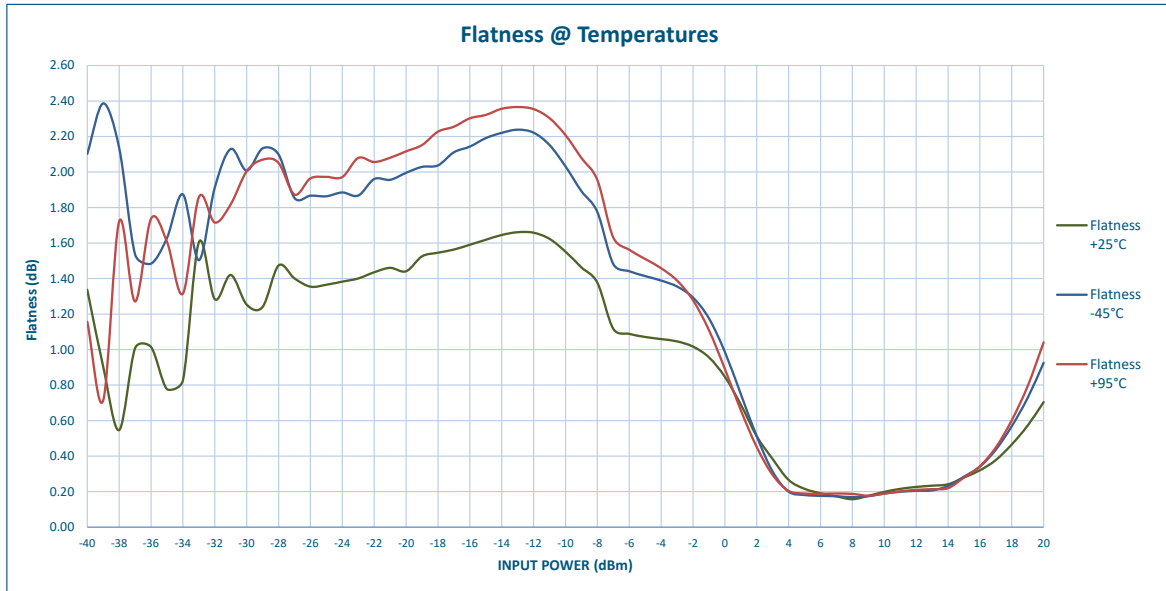
**TYPICAL CHARACTERISTICS  
 ON  
 DD-46-1840-10PF-P-292MF**



**TYPICAL CHARACTERISTICS  
 ON  
 DD-46-1840-10PF-P-292MF**



**TYPICAL CHARACTERISTICS  
 ON  
 DD-46-1840-10PF-P-292MF**



**TYPICAL CHARACTERISTICS  
ON  
DD-46-1840-10PF-P-292MF**

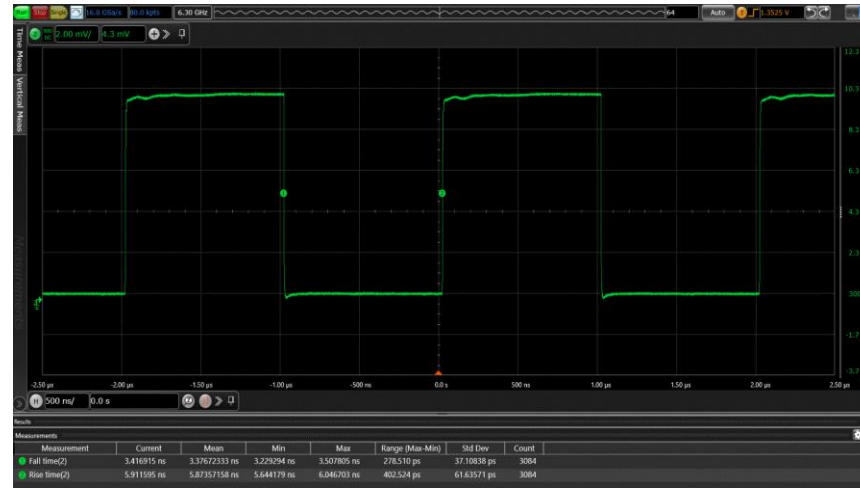
**40 GHz**  
**Input Power -20dBm**  
**1µs PW, 50% Duty Cycle**

*Rise time - 5.1 ns*  
*Fall Time - 3.27 ns*



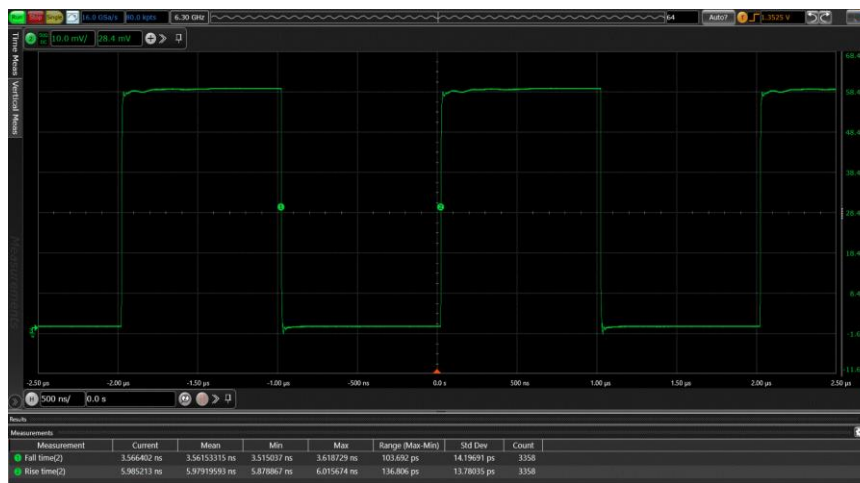
**40 GHz**  
**Input Power -10dBm**  
**1µs PW, 50% Duty Cycle**

*Rise time - 5.91 ns*  
*Fall Time - 3.41 ns*



**40 GHz**  
**Input Power 0dBm**  
**1µs PW, 50% Duty Cycle**

*Rise time - 5.98 ns*  
*Fall Time - 3.56 ns*



7309-A Grove Road Frederick, MD 21704 USA Phone: (301)662-5019 Fax: (301)662-1731  
Email: [sales@qpmi-rf.com](mailto:sales@qpmi-rf.com)

**TYPICAL CHARACTERISTICS  
ON  
DD-46-1840-10PF-P-292MF**

Frequency 20 GHz  
Input Power -54 dBm

