

DESCRIPTION

AMCOM's AM0040PM-VVP is a connectorized, fully matched Voltage Controlled Phase Trimmer module. It has a wide frequency range from 2 to 5 GHz. The control is simply achieved by a DC input voltage (V_{ctrl}) varied between 0 and 25 Volts. The dimensions of the module are 1.5" (L) x 1" (W) x 0.46" (H).

FEATURES

- High Bandwidth 2-5 GHz
- Phase Variation up to 90°
- Small Insertion Loss variations over different phase shifts
- Fully matched connectorized module

APPLICATIONS

- General purpose Voltage Controlled Phase Trimmer
- Wideband system applications
- Feedforward linearizer

ELECTRICAL SPECIFICATIONS (@ 3.5 GHz T = 25°C)

Parameters	Unit	MIN	TYP	MAX
Phase Shift Range	Degree	80	90	-
Return Loss (@ $V_{ctrl} = 0V$)	dB	10	12	-
Insertion Loss	dB	-	-	1.5
Insertion Loss Variations	dB	-	± 0.5	± 1
IIP3 (Input Third Order Intercept Point) @ $V_{ctrl} = 0V$	dBm	-	30	-
IIP3 (Input Third Order Intercept Point) @ $V_{ctrl} = 10V$	dBm	-	40	-
IP1dB (Input Power at 1dB Compression)	dBm	30	33	-

ABSOLUTE MAXIMUM RATINGS

Parameters	Unit	MIN	MAX
V_{ctrl} (Control Voltage)	V	0	30
Power	dBm	-	36
Temperature	Deg	-40	185

LINEAR DATA

S-parameters @ $V_{ctrl} = 0V$, $T = 25^{\circ}C$ *

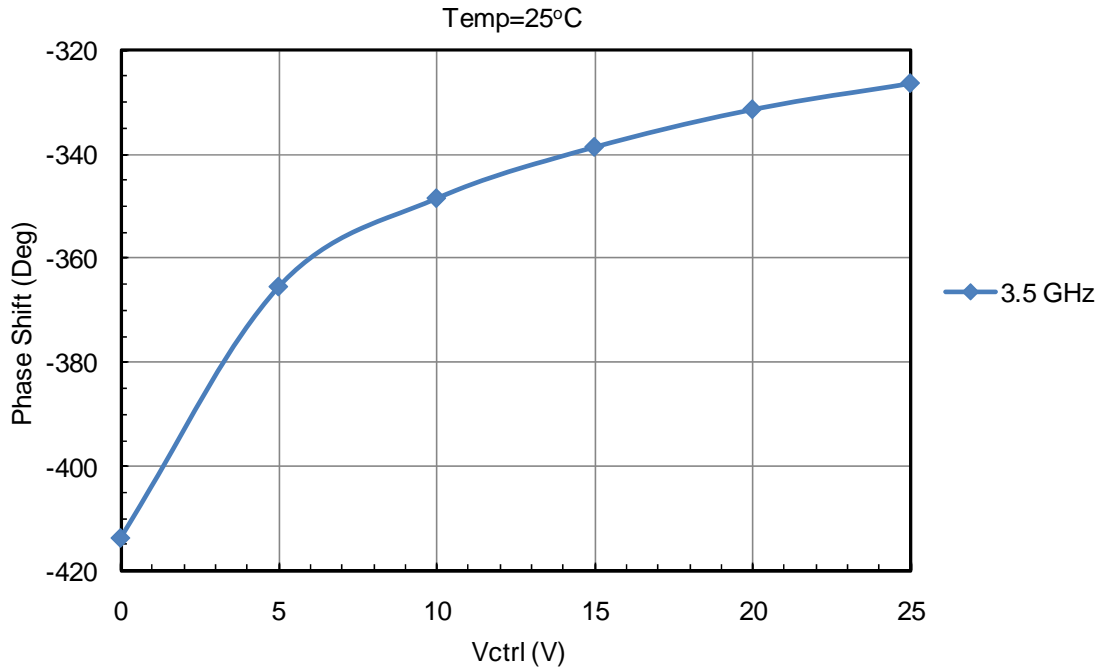
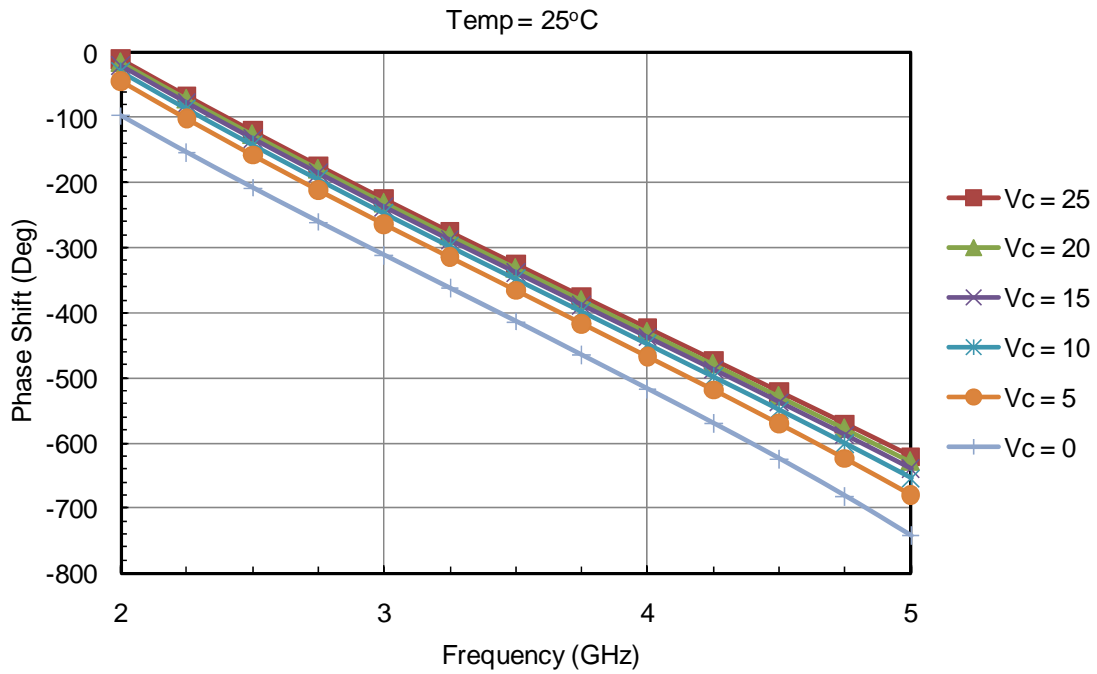
Freq(GHz)	MagS11	AngS11	MagS21	AngS21	MagS12	AngS12	MagS22	AngS22
2.00	0.19	177.08	0.89	-97.49	0.88	-98.57	0.19	173.49
2.10	0.18	153.65	0.90	-120.42	0.89	-121.66	0.18	150.33
2.20	0.17	128.83	0.89	-143.20	0.88	-143.98	0.17	126.37
2.30	0.17	104.76	0.89	-165.20	0.88	-165.96	0.17	104.20
2.40	0.17	82.07	0.89	173.20	0.88	171.86	0.17	80.66
2.50	0.17	58.84	0.88	151.93	0.88	150.89	0.17	59.03
2.60	0.16	37.83	0.88	130.73	0.87	130.12	0.16	38.23
2.70	0.15	18.22	0.89	110.01	0.87	108.77	0.16	16.84
2.80	0.14	-1.79	0.88	89.16	0.87	87.90	0.14	-4.74
2.90	0.12	-19.70	0.88	68.52	0.87	67.57	0.13	-23.65
3.00	0.10	-34.54	0.88	47.95	0.87	46.77	0.11	-44.26
3.10	0.08	-46.42	0.87	27.60	0.86	26.58	0.08	-65.31
3.20	0.06	-45.23	0.87	7.45	0.86	6.33	0.05	-88.96
3.30	0.05	-34.42	0.87	-12.56	0.86	-13.85	0.02	-129.02
3.40	0.05	-19.19	0.87	-33.29	0.86	-34.37	0.02	103.76
3.50	0.07	-12.54	0.87	-53.64	0.86	-55.00	0.06	57.59
3.60	0.10	-21.79	0.86	-74.53	0.85	-75.43	0.10	33.86
3.70	0.13	-35.21	0.86	-95.07	0.85	-96.20	0.13	10.60
3.80	0.16	-51.64	0.85	-115.72	0.84	-117.19	0.17	-9.96
3.90	0.19	-70.60	0.84	-136.56	0.83	-137.61	0.19	-30.92
4.00	0.21	-89.69	0.83	-157.41	0.82	-158.73	0.21	-50.27
4.10	0.22	-110.53	0.82	-178.36	0.81	-179.59	0.23	-70.56
4.20	0.23	-132.62	0.81	160.45	0.79	159.23	0.23	-89.56
4.30	0.23	-153.81	0.80	138.65	0.80	137.11	0.23	-108.78
4.40	0.22	-175.89	0.79	117.29	0.78	115.95	0.23	-126.08
4.50	0.21	160.99	0.78	95.26	0.77	94.21	0.22	-144.55
4.60	0.19	138.68	0.77	72.77	0.76	70.69	0.22	-159.60
4.70	0.17	114.71	0.77	49.98	0.76	47.88	0.21	-177.04
4.80	0.14	87.55	0.76	26.41	0.75	25.10	0.20	168.53
4.90	0.10	57.77	0.76	1.95	0.75	0.32	0.19	156.07
5.00	0.06	11.13	0.76	-22.98	0.75	-25.00	0.19	144.66

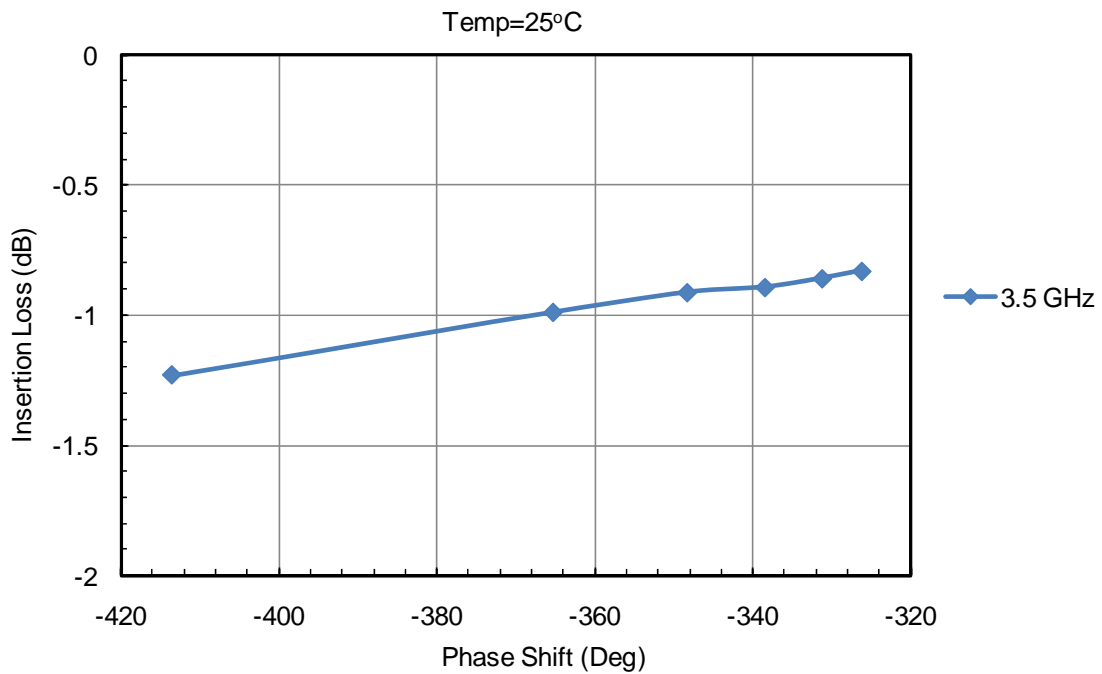
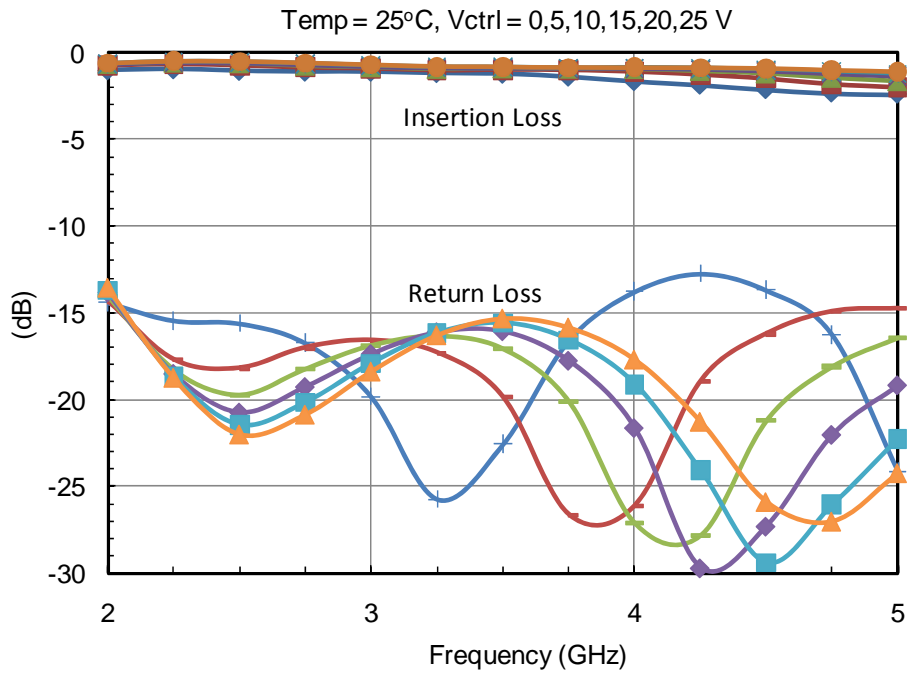
* Download S-parameters file from website: <http://www.amcomusa.com>

S-parameters @ $V_{ctrl} = 25V$, $T = 25^{\circ}C$ *

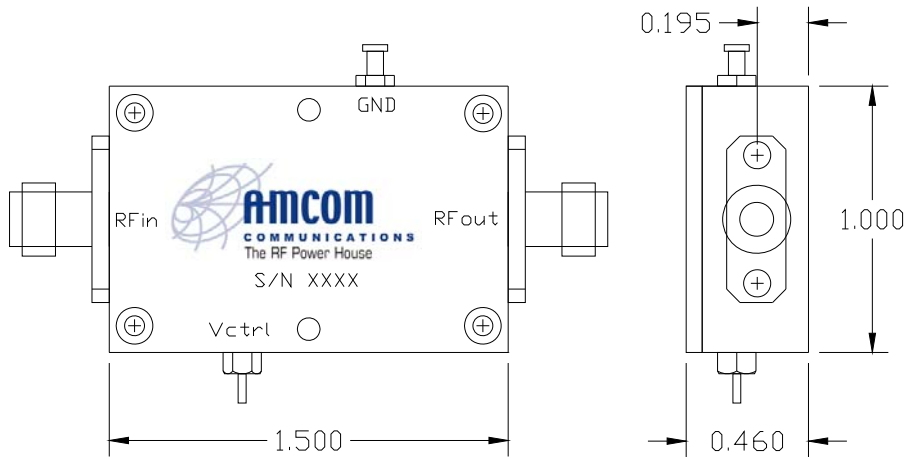
Freq(GHz)	MagS11	AngS11	MagS21	AngS21	MagS12	AngS12	MagS22	AngS22
2.00	0.21	-89.82	0.93	-10.67	0.93	-11.74	0.21	-110.38
2.10	0.16	-108.89	0.94	-33.21	0.93	-33.98	0.16	-133.09
2.20	0.13	-126.02	0.95	-55.42	0.93	-56.61	0.12	-158.33
2.30	0.10	-145.15	0.94	-77.57	0.93	-78.48	0.10	179.43
2.40	0.09	-165.99	0.94	-99.37	0.93	-100.22	0.08	156.13
2.50	0.08	170.04	0.94	-120.84	0.93	-121.89	0.07	131.77
2.60	0.08	141.11	0.94	-142.09	0.93	-143.13	0.08	112.43
2.70	0.08	112.22	0.94	-163.57	0.92	-164.69	0.08	93.32
2.80	0.09	87.46	0.93	175.51	0.92	174.23	0.10	73.20
2.90	0.11	62.21	0.92	154.70	0.91	153.78	0.11	54.55
3.00	0.12	39.66	0.92	133.91	0.91	132.86	0.13	36.05
3.10	0.14	19.47	0.92	113.60	0.90	112.08	0.15	17.36
3.20	0.15	-0.42	0.91	93.46	0.90	92.36	0.16	-1.55
3.30	0.16	-19.65	0.91	73.43	0.90	72.26	0.17	-19.00
3.40	0.17	-38.39	0.91	53.45	0.90	52.43	0.17	-37.84
3.50	0.17	-58.92	0.91	33.74	0.89	32.62	0.18	-57.45
3.60	0.17	-77.82	0.90	13.75	0.90	12.51	0.17	-76.11
3.70	0.17	-96.60	0.91	-5.55	0.90	-6.91	0.17	-95.53
3.80	0.16	-116.64	0.90	-25.09	0.89	-25.99	0.15	-116.14
3.90	0.14	-136.16	0.90	-44.91	0.89	-46.13	0.14	-135.40
4.00	0.13	-154.76	0.91	-64.10	0.90	-65.59	0.12	-157.04
4.10	0.11	-174.77	0.91	-83.58	0.90	-84.72	0.11	-178.09
4.20	0.09	168.37	0.90	-103.27	0.89	-104.43	0.08	160.15
4.30	0.08	152.59	0.90	-122.83	0.89	-123.99	0.07	135.99
4.40	0.06	139.29	0.90	-142.35	0.89	-143.59	0.05	114.11
4.50	0.05	131.27	0.90	-161.96	0.89	-163.34	0.04	83.42
4.60	0.04	124.16	0.89	178.46	0.89	177.04	0.04	61.66
4.70	0.04	122.20	0.89	158.80	0.88	157.34	0.03	26.75
4.80	0.05	120.59	0.89	138.97	0.88	137.37	0.03	-7.73
4.90	0.05	110.27	0.88	118.99	0.87	117.39	0.02	-37.82
5.00	0.06	96.89	0.88	98.81	0.87	97.19	0.02	-72.68

* Download S-parameters file from website: <http://www.amcomusa.com>





MODULE OUTLINE *



* All Dimension are in inch