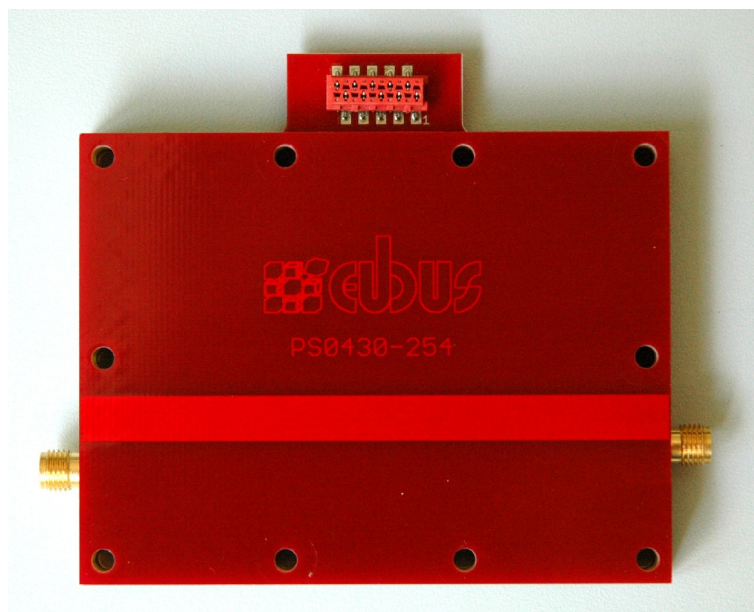


PS0430-254 380 MHz – 3.0 GHz Phase Shift (Delay Line) Module

Wideband RF Phase Shifter (Delay Line) with 7 bit TTL/CMOS 5V-Interface.

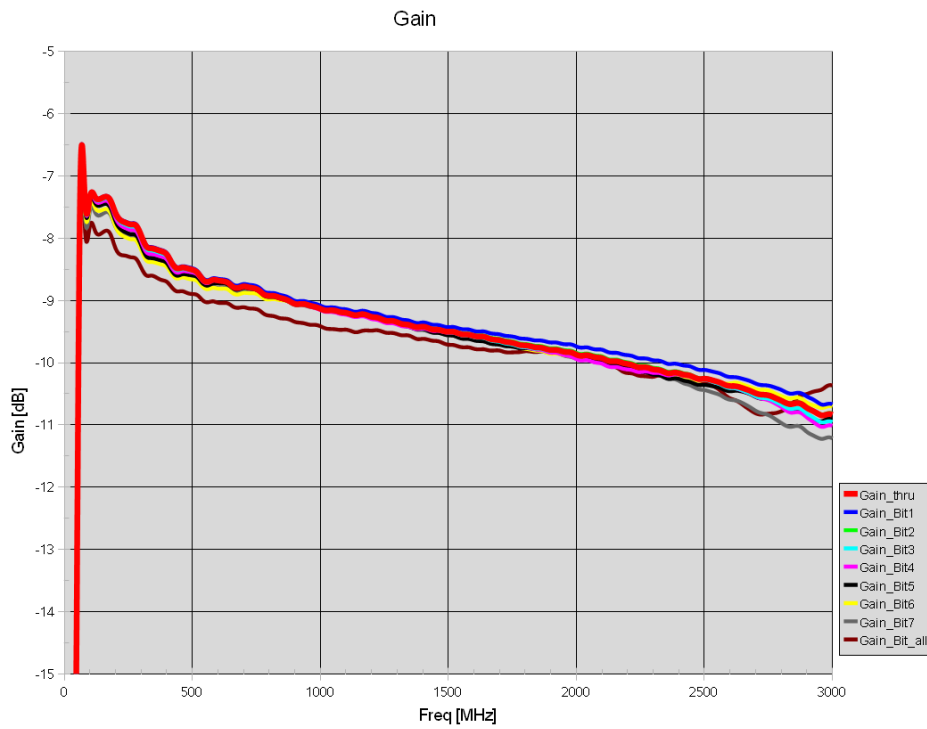
Technical Data:

Type:	PS0430-254
Impedance:	50 Ω
max. VSWR at all Ports:	1.9:1
Frequency Range:	0.38 GHz – 3.0 GHz
Phase Shift Range:	0 ... 254° @ 1GHz, 2° Steps
Electrical Delay:	0 ... 705.56ps in 5.56ps Steps
Phase Shift Accuracy @ 1GHz:	$\pm 1.5^\circ$ or $\pm 2\%$ above 75°
Thru State Insertion Loss:	9dB ± 0.5 dB @ 1GHz, 11dB ± 0.8 dB @ 3GHz
Insertion Loss Variation over Phase Steps:	± 0.7 dB
Thru State Electrical Length:	350mm
max. Input Power:	+27dBm
RF-Connectors:	SMA (f)
DC-Supply:	+4.8-5.2V, 1 mA max.
Interface:	Micromatch 10pin-connector
Size (without RF-Connectors):	84.5mm x 77mm x 11mm
Weight:	90 g
Operating Temperature:	0°C to +70°C

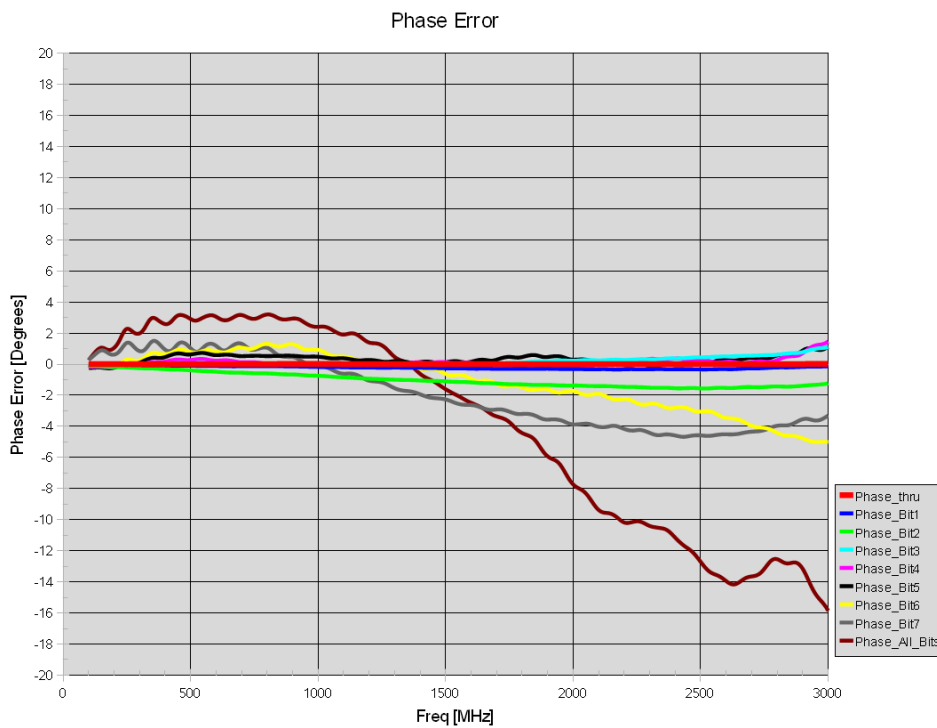


Measured Data:

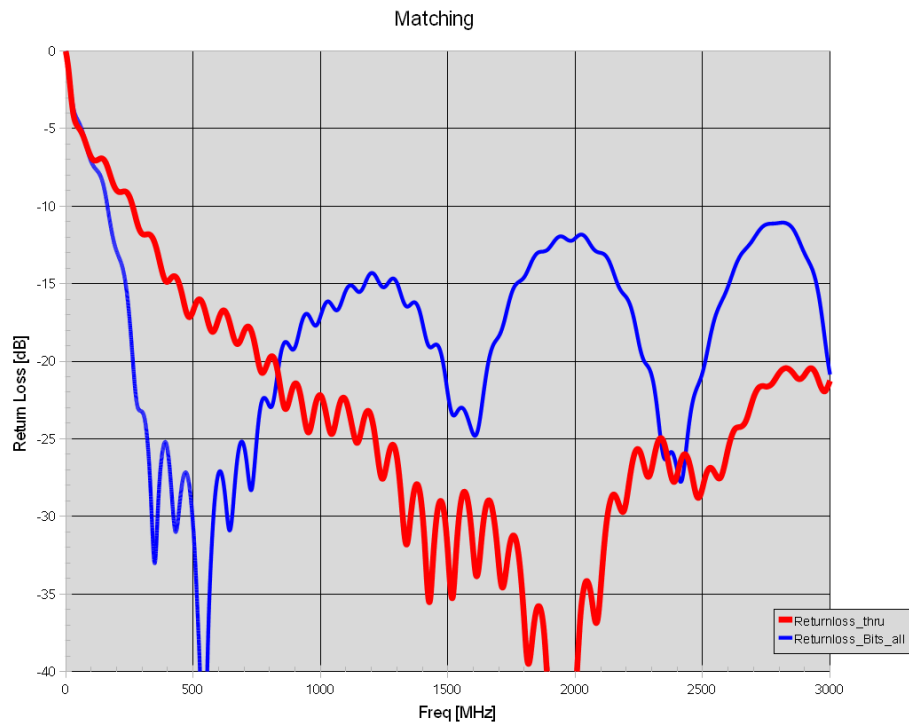
Measured at Prototype Unit.



Gain at all Main States



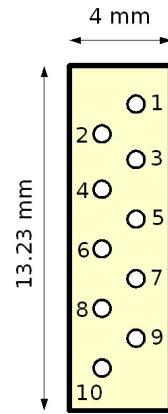
Phase Error at all Main States. Reference is the ideal delay.



Return Loss in
THRU State
(no bit active)
and
ALL BIT State
(all bits active)

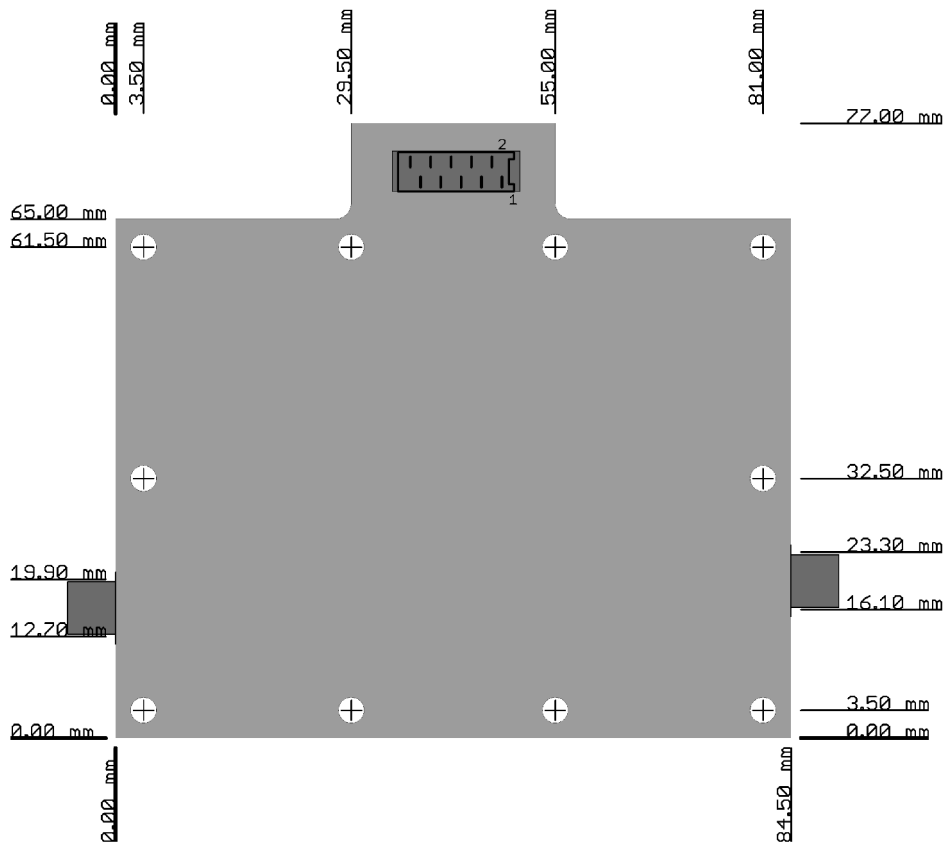
DC Connector (Micromatch 10 Pin (f)):

Pin #	Function
1	-2°@5V
2	-4°@5V
3	-8°@5V
4	-16°@5V
5	-32°@5V
6	-64°@5V
7	-128°@5V
8	n.c.
9	+5V Vcc (DC)
10	Ground



Phase Shifts @ 1 GHz, for delays please see last page.

Mounting



Height: 11mm

Equivalent Phase Shift @ 1 GHz and Electrical Delay in Pico-Seconds:

Degrees @ 1GHz	Delay [ps]	Degrees @ 1GHz	Delay [ps]	Degrees @ 1GHz	Delay [ps]
2	5,56	88	244,44	174	483,33
4	11,11	90	250,00	176	488,89
6	16,67	92	255,56	178	494,44
8	22,22	94	261,11	180	500,00
10	27,78	96	266,67	182	505,56
12	33,33	98	272,22	184	511,11
14	38,89	100	277,78	186	516,67
16	44,44	102	283,33	188	522,22
18	50,00	104	288,89	190	527,78
20	55,56	106	294,44	192	533,33
22	61,11	108	300,00	194	538,89
24	66,67	110	305,56	196	544,44
26	72,22	112	311,11	198	550,00
28	77,78	114	316,67	200	555,56
30	83,33	116	322,22	202	561,11
32	88,89	118	327,78	204	566,67
34	94,44	120	333,33	206	572,22
36	100,00	122	338,89	208	577,78
38	105,56	124	344,44	210	583,33
40	111,11	126	350,00	212	588,89
42	116,67	128	355,56	214	594,44
44	122,22	130	361,11	216	600,00
46	127,78	132	366,67	218	605,56
48	133,33	134	372,22	220	611,11
50	138,89	136	377,78	222	616,67
52	144,44	138	383,33	224	622,22
54	150,00	140	388,89	226	627,78
56	155,56	142	394,44	228	633,33
58	161,11	144	400,00	230	638,89
60	166,67	146	405,56	232	644,44
62	172,22	148	411,11	234	650,00
64	177,78	150	416,67	236	655,56
66	183,33	152	422,22	238	661,11
68	188,89	154	427,78	240	666,67
70	194,44	156	433,33	242	672,22
72	200,00	158	438,89	244	677,78
74	205,56	160	444,44	246	683,33
76	211,11	162	450,00	248	688,89
78	216,67	164	455,56	250	694,44
80	222,22	166	461,11	252	700,00
82	227,78	168	466,67	254	705,56
84	233,33	170	472,22		
86	238,89	172	477,78		