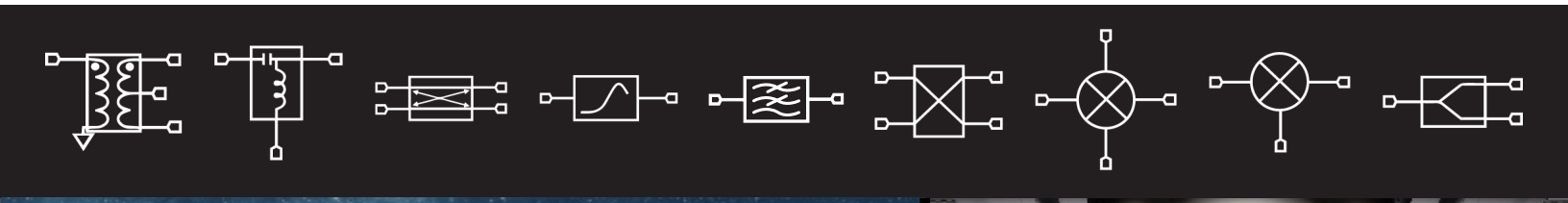
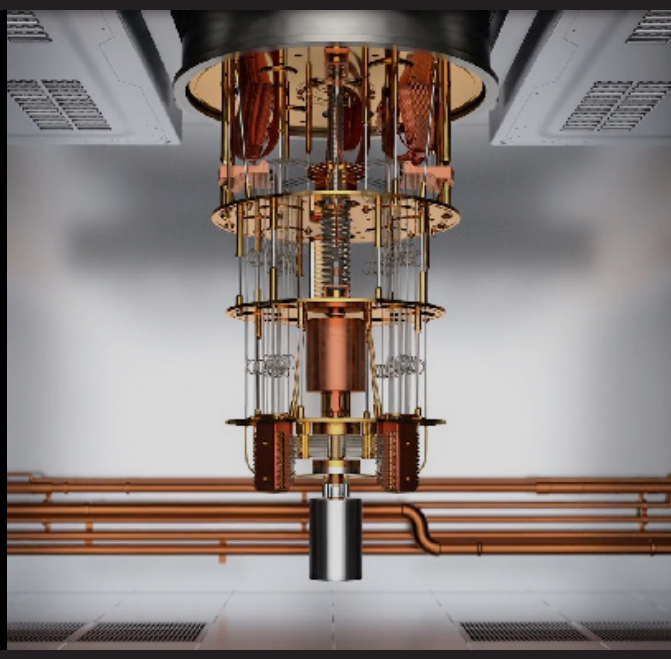
PASSIVE COMPONENTS | DC TO 85GHz

CONNECTORIZED MODULES

SUMMER 2020





At Marki Microwave our mission is to empower you, our customers, to **design faster, simplify production, eliminate complexity, and shatter performance barriers.** We achieve this through intensive research, rigorous product development, and advanced and carefully controlled production.

Performance

By combining time-honored fabrication and assembly techniques with a modern design approach we are able to push the technological boundaries of broadband RF and microwave components like never before. With proprietary innovations such as our T3 mixer line and high isolation bridge power combiners, and an expanding portfolio of MMIC devices, we seek to provide the most comprehensive selection of high-performance microwave components in the world.

Reliability

In this modern world of outsourcing and commodity pricing, Marki Microwave has prospered by retaining all design, manufacturing, and testing in the same Morgan Hill, California facility since 2000. We continually invest in advanced test and manufacturing capabilities to ensure products are maintained at the highest level of performance and workmanship. We are ISO9001:2015, ITAR, and REACH compliant.

Support

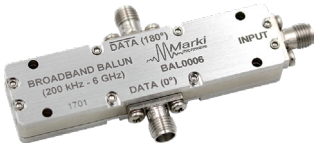
We pride ourselves on providing the best technical support to our customers of any company in the industry. We offer a full library of application notes, tech notes, web apps, comprehensive datasheets, and device models for ADS and Microwave Office. To further our domain expertise and empower our customers we've invested heavily in characterizing the power handling and phase noise of our components and the optimization of multi-component solutions.

AMPLIFIERS

Part Number	Band (GHz)	Gain (dB)	Psat (dBm)	Bias Voltage (V)	Bias Current (mA)
ADM1-0026PA	.005-26.5	12	20	3-7 / -0.3-0	165
ADM2-0035PA*	0.1-35	23	23	3-7 / -0.3-0	330
ADM3-0022PA	0.01-22	35	30	See Datasheet	760
AMM-6702UC/UC5*	20-55	28	22	3-4 / -0.6– -0.4	200
APM-6848PA	2-30	23/22	21/20	4-6	43
APM-6849PA	2-30	11	21	4-6	21

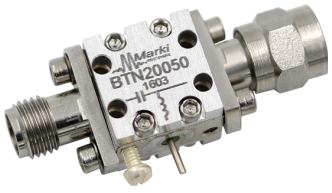
BALUNS, Single-Ended to Differential

Part Number	Band (GHz)	Amp Bal (dB)	Phase Bal (°)	Total Insertion Loss as a mode converter (dB)
BAL-0003	.0002-3	0.05	1	5
BALH-0003	.0002-3	0.1	1	2
BAL-0006	.0002-6	0.05	1	5.5
BALH-0006	.0002-6	0.1	1	4
BAL-0010	.0002-10	0.2	2	5.65
BALH-0010	.0002-10	0.2	2	4
BAL-0106	1.2-6	0.1	2	2.5
BAL-0212	2.6-12	0.1	2	3
BAL-0520	5-20	0.2	3	3
BAL-0026	.0003-26.5	0.5	3	4
BAL-0036	.0003-36	0.5	3	4.5
BAL-0050	.0003-50	0.7	4	4.5
BAL-0067	.0003-67	0.7	4	4.5



BIAS TEES

Part Number	Band (GHz)	DC Voltage (V)	DC Current (A)	Loss (dB)
BT-0018	.00004-18	30	0.5	0.6
BT-0025	.00004-25	30	0.5	0.8
BT-0026	.01-26.5	30	0.5	0.8
BT-0040	.000004-40	30	0.5	1.5
BTN-0040	.00004-40	30	0.5	1.5
BT-0050	.000004-50	30	0.5	1.8
BTN-0050	.00004-50	30	0.5	1.8
BT-0065	.000004-65	30	0.5	1.8
BTN-0065	.00004-65	30	0.5	2.0
BT1-0026	.00005-26.5	50	1	1
BT1-0040	.00005-40	50	1	1.5
BT1-0050	.00005-50	50	1	1.5
BT2-0026	.00001-26.5	50	2	1
BT2-0040	.0001-40	50	2	1.5
BT2-0050	.0001-50	50	2	1.5
BTN1-0018	.0005-18	50	1	0.7
BTN1-0026	.0005-26.5	50	1	1
BTN1-0040	.0005-40	50	1	1.5
BTN1-0050	.0005-50	50	1	1.5
BTN2-0018	.003-18	50	2	0.7
BTN2-0026	.003-26.5	50	2	1
BTN2-0040	.003-40	50	2	1.5
BTN2-0050	.003-50	50	2	1.5

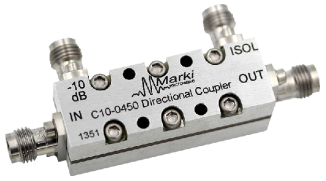


COUPLERS, High Directivity Bridge

Part Number	Band (GHz)	Coupling (dB)	Directivity (dB)	VSWR
CBR16-0003	.0002-3	16	40	1.1
CBR16-0006	.0002-6	16	38	1.15
CBR16-0012	.0002-12	16	32	1.25
CBR17-0026	.0002-26	17	23	1.22

COUPLERS, Stripline Directional

Part Number	Band (GHz)	Coupling (dB)	Directivity (dB)	Flatness (dB)	VSWR
C09-0R412	0.45-12	9	22	±0.7	1.15
C09-0R418	0.45-18	9	22	±0.7	1.15
C09-0R426	0.45-26.5	9	22	±0.7	1.15
C09-0R430	0.45-30	9	20	±0.7	1.15
C20-0R612	0.6-12	20	22	±0.6	1.2
C10-0116	1-16	10	20	±0.5	1.15
C20-0116	1-16	20	20	±0.6	1.15
C20-0R518	0.5-18	20	22	±0.75	1.2
C20-0R520	0.5-20	20	22	±0.75	1.2
C13-0126	1-26.5	13	20	±0.6	1.15
C16-1R718	1.7-18	16	20	±0.3	1.15
C16-1R726	1.7-26.5	16	20	±0.4	1.15
C10-0226	2-26.5	10	22	±0.6	1.15
C20-0226	2-26.5	20	22	±0.75	1.25
C13-0140	1-40	13	16	±0.1	1.2
C20-0240	2-40	20	17	±0.75	1.3
C13-0150	1-50	13	16	±0.75	1.2
C10-0450	4-50	10	15	±0.5	1.35
C10-0667	6-67	10	17	±0.8	1.2
C16-0667	6-67	16	17	±0.9	1.25
C20-0667	6-67	20	17	±0.8	1.25



COUPLERS, Low Loss High Power

Part Number	Band (GHz)	Coupling (dB)	Directivity (dB)	Loss (dB)	Ave Power (W)
C17-0R506	0.5-6	17	20	0.4	120
C17-0R512	0.5-12	17	20	0.65	80
C17-0R518	0.5-18	17	20	1	60
CA-18	DC-18	> 30	22	0.35	200
CA-26	DC-26.5	> 27	24	0.35	50
CA-40	DC-40	> 27	24	0.5	20
CA-50	DC-50	> 27	24	0.5	15
C-0250	2-50	12	15	0.7	10
C-0265	2-65	12	15	0.7	10

COUPLERS, Dual Directional

Part Number	Band (GHz)	Coupling (dB)	Directivity (dB)	Flatness (dB)	VSWR
CD10-0106	0.7-6.3	10	25	±0.6	1.14
CD10-0114	0.7-14.7	10	23	±0.6	1.17

COUPLERS, Pick-Off Tees

Part Number	Band (GHz)	Pick-Off Loss (dB)	Insertion Loss (dB)
PT-0020	DC-20	16	2
PT-0030	DC-30	16	2

COUPLERS, 3dB 90° Quadrature Hybrids

Part Number	Band (GHz)	Amp Bal (dB)	Phase Bal (°)	Excess Loss (dB)	Isolation (dB)
QH-0226	2-26.5	±0.25	±2	2	22
QH-0440	4-40	±0.4	±5	2	18
QH-0550	5-50	±0.6	±5	1	22
QH-0867	8-67	±0.6	±6	1.2	18
QH-0R71R3	0.65-1.3	±0.3	±3	0.5	16
QH-0R518	0.5-18	±0.5	±3	1.5	20
QH-0R714	0.7-14.5	±0.2	±2	1.2	22
MQS-0209UB	2-9	±0.5	±3	2	16
MQS-0218UA	2-18	±1	±3	1.4	17
MQH-2R58R5UB	2.5-8.5	±0.4	±3	2	23
MQH-3R510UB	3.5-10	±0.4	±1.5	1.8	25
MQS-0418UA	4-18	±0.4	±0.5	1.5	20
MQS-0517UB	5-17	±0.5	±6	1.6	23

EQUALIZERS, Positive-Slope

Part Number	Band (GHz)	Loss at DC (dB)	Return Loss (dB)
EQ3-26	DC-26	3	21
EQ6-26	DC-26	6	15
EQ3-40	DC-40	3	18
EQ6-40	DC-40	6	18
MEQX-26AS	DC-26.5	3, 6, 10	18, 20, 20
MEQ10-50AU	DC-50	10	15
Additional MMIC EQ modules available upon request.			

FILTERS: Lowpass, Highpass, Bandpass, Diplexer

Our lumped-element, microstrip and cavity filters are optimized for broadband applications requiring over 50dBc suppression up to 60GHz. Our diplexers are excellent for routing/ multiplexing signals and as absorptive filters for mixer and NLTL comb generators. Our highpass filters pair well with our multipliers.

LIMITERS

Part Number	Band (GHz)	Loss (dB)	Flat Leakage (dB)	Peak Power CW (W)	Peak Power, Pulsed (W)	P1dB (dBm)
HLM-40U	DC-40	0.5	18	4	20	15

IQ MIXERS

Part Number	RF/LO (GHz)	IF (GHz)	Image Rej (dBc)	L-R Isolation (dB)
MMIQ-0218(L/H)XPC	2-18	DC-3	27/35	58/53
MMIQ-0520(L/H)S	5-20	DC-6	35	46
MMIQ-0626(L/H)S	6-26	DC-6	35	41
MMIQ-1037H	10-37	DC-12	25	47
MMIQ-1040(L/S)S	10-40	DC-12	25	47/44
MMIQ-1865(L/H/S)UB	18-65	DC-23	35	49/48/50
MMIQ-4067LU	40-67	DC-20	35	33

DOUBLE BALANCED MIXERS

Part Number	RF/LO (GHz)	IF (GHz)	IIP3 (dBm)	LO Drive (dBm)
MM1-0212(L/H/S)S	2-12	DC-3	+13/+23/+26	+9/+15/+20
MM1-0222(L*/H)S	2-22	DC-3.5	+11.5/+20	+9/+15
MM1-0312(H/S)S	3-12	DC-4.5	+19/+24	+15/+20
MM1-0320(L/H)S	3-20	DC-4	+10/+20	+7/+15
MM1-0424SS	4.5-24	DC-4	+25	+20
MM1-0626(H/S)S	6-26.5	DC-9	+21/+25	+15/+20
MM1-0832(L/H)S	8-32	DC-12	+14/+23	+9/+15
MM1-1044(L/H)S	10-44	DC-14	+13/+22	+9/+15
MM1-1140HS	11-40	DC-12	+21	+15
MM1-1240SS	12-40	DC-12	+25	+20
MM1-1467(L/H)S	14-67	DC-21	+12/+17.5	+13/+15
MM1-1850(H/S)S	18-50	DC-20	+21/+25	+15/+20
MM1-1857(L/H)S	18-57	DC-21	+13/+20	+9/+13
MM1-2567LS	25-67	DC-30	+9	+13
M4-0140(L/H)K	1-40	DC-0.5	+13/+19	+10/+16
M4-0150(L)KV	1-50	DC-0.4	+13	+15
M9-0444(L/I)NV	4-44	DC-3	+15/+20	+9/+14
M9-0942(L/I)NV	9-42	1-22	+13/+18	+9/+14

TRIPLE BALANCED MIXERS

Part Number	RF/LO (GHz)	IF (GHz)	IIP3 (dBm)	LO Drive (dBm)
MT3L-0113HS	1.5-13	0.25-5	+31	+20
MT3H-0113(L/H)S	1.5-13	0.8-8.5	+20/+28	+15/+20
EVAL-MT3-0113S	1.5-13	0.01-13	+36	+27
T3-20GLS*	0.01-20	.001-10	+30	square wave (ADM1)
T3H-20G(L/I)S[1]	0.01-20	0.01-18	+30	square wave (ADM1)
T3-0838GLN[1]	8-38	0.01-10	+25	+20
T3-1040GLN[1]	10-40	1-18	+25	+20
MM2-0530(L/H)S	5-30	2-20	+15/+21	+15/+20
M2-0440LN	4-40	0.5-20	+15	+15
M2-0243LPV	2-43	0.4-43	+15	+15
M2-0250LNVT	2-50	0.4-50	+20	+15

[1]Target Release Late 2020

PASSIVE MULTIPLIERS & COMB GENERATORS

Part Number	Input (GHz)	Output (GHz)	1F Supp (dBc)	3F Supp (dBc)
MMD-1030HS	5-15	10-30	34	46
MMD-1648LS	8-24	16-48	44	69
MMD-2060(L/H)U	10-30	20-60	37	40
MMD-3567LU	17.5-33.5	35-67	38	44
MMD-3580LU-KW	17.5-40	35-80	38	44
NLTL-6273S	0.7-5	0.7-40	Low Phase Noise Comb Generator	
NLTL-6275U/U-SW	3-15	3-85		

ACTIVE MULTIPLIERS

Part Number	Input (GHz)	Output (GHz)	Input (dBm)	Output (dBm)
ADA-0416	2-8	4-16	0 to +6	+16
ADA-1030	5-15	10-30	+5 to +10	+16
AQA-2156*	5.25-14	21-56	-2 to +6	+21
ADA-2052	10-26	20-52	-6 to +2	+16
DAD-1840K/V	4.5-10	18-40	+6 to +15	+3

POWER DIVIDERS, High Isolation

Part Number	Band (GHz)	Loss (dB)	Amp Bal (dB)	Isolation (dB)
PBR-0003	.0003-3	1.25	±0.4	45
PBR-0006	.0003-6	1.5	±0.5	40
PBR-0012	.0003-12	1.5	±0.6	35

POWER DIVIDERS, Wilkinson 1:2

Part Number	Band (GHz)	Loss (dB)	Amp Bal (dB)	Phase Bal (°)	Isolation (dB)
PD-0R413	0.4-13.2	1	±0.05	±1	24
PD-0R426	0.4-26	2	±0.05	±2	24
PD-0R510	0.5-10	0.9	±0.1	±1	22
PD-0R618	0.6-18	1	±0.05	±1	22
PD-0R636	0.6-36	2	±0.1	±3	22
PD-0109	1-9	0.75	±0.1	±1	22
PD-0126	1-26	1	±0.1	±3	20
PD-0140	1-40	1.5	±0.2	±2	20
PD-0150	1-50	2	±0.25	±3	20
PD-0165	1-65	5	±0.25	±3	20
PD-0218	2-18	1	±0.2	±2	22
PD-0220	2-20	1	±0.2	±2	22
PD-0426	4-26.5	0.8	±0.2	±2	18
PD-0440	4-40	1	±0.2	±3	18
PD-0450	4-50	1.2	±0.5	±5	18
PD-0465	4-65	2	±0.5	±5	18

*New Release

POWER DIVIDERS, Wilkinson 1:3

Part Number	Band (GHz)	Loss (dB)	Amp Bal (dB)	Phase Bal (°)	Isolation (dB)
PD3-0R412	0.4-12	1.5	±0.1	±2	23
PD3-0R616	0.6-16	1.5	±0.1	±2	24
PD3-0126	1.5-26.5	1.5	±0.3	±4	24

POWER DIVIDERS, Wilkinson 1:4

Part Number	Band (GHz)	Loss (dB)	Amp Bal (dB)	Phase Bal (°)	Isolation (dB)
PD4-0R518	0.5-18	1.5	±0.25	±3	20
PD4-0R526	0.5-26.5	2.5	±0.25	±3	19
PD4-0R532	0.5-32	2.5	±0.3	±4	19
PD4-0120	1-20	1.5	±0.25	±3	20
PD4-0126	1-26.5	1.5	±0.3	±3	20
PD4-0140	1-40	2.5	±0.4	±4	19
PD4-0150	1-50	4	±0.5	±5	20
PD4-0218	2-18	1.2	±0.2	±2	20

POWER DIVIDERS, Resistive 1:2

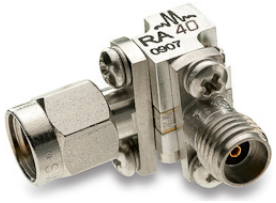
Part Number	Band (GHz)	Loss (dB)	Amp Bal (dB)	Phase Bal (°)
PD-0010	DC-10	0.25	±0.1	±1
PD-0020	DC-20	0.5	±0.2	±2
PD-0030	DC-30	0.5	±0.25	±2
PD-0040	DC-40	0.75	±0.25	±2

PULSE INVERTERS, Broadband, Fast Rise Time

Part Number	Band (GHz)	Loss (dB)	Rise/Fall Time (ps)
INV-0026	.0001-26.5	2	13
INV-0040	.0001-40	2.5	13
INV-0065	.0001-65	5	12

ADAPTERS, High Performance

Part Number	Band (GHz)	Loss (dB)	VSWR	Description
ADP-2429	DC-40	0.3	1.2	2.4(M/F) to 2.92(M/F)
ADP-29	DC-40	0.3	1.2	2.92(M/F) to 2.92(M/F)
ADP-24	DC-50	0.5	1.3	2.4(M/F) to 2.4(M/F)
RA40	DC-40	0.3	1.4	Swept Radius
RA50	DC-50	0.3	1.4	Swept Radius



DC BLOCKS, Broadband

Part Number	Band (GHz)	Loss (dB)	DC Voltage (V)	Rise Time (ps)	Group Delay (ps)
DCZ-2929	.000004-40	0.7	16	6	75
DCZ-2424	.000004-50	0.7	16	6	75

THUMBWHEEL

Part Number	Description
TW-1	quick, secure, wrenchless connection for SMA, 2.92mm and 2.4mm

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