MAR 2026

SMASHING Performance BARRIERS

PRODUCT CATALOG

RF & mmWave Components

Connectorized

Waveguide

THE TRUSTED LEADER WHEN PERFORMANCE MATTERS

Marki® microwave

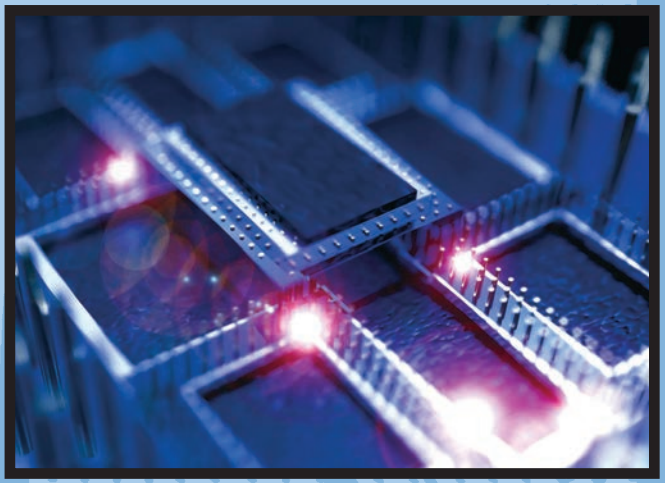
Marki Microwave holds a unique place in the RF and millimeter wave industry, combining time-honored hybrid fabrication and assembly techniques with a modern MMIC design approach. This enables us to push the technological boundaries of broadband RF and microwave components like never before, supporting frequencies from DC to sub-terahertz.

Marki Microwave's right-first-time design methodology ensures the simulation data we deliver provides a highly accurate representation of actual device performance under real operating conditions. This methodology enables efficient reuse of our extensive IP portfolio, addressing diverse application requirements while reducing design iteration cycles and accelerating time-to-deployment.

At the core of this capability is a unified simulation flow employed across our engineering organization, incorporating full 3D electromagnetic simulation for all MMIC products, including the die, package interfaces, RF launches, and, where applicable, the final mechanical enclosure. These simulations are executed using custom process design kits (PDKs) and leverage a validated and continuously expanding IP library, ensuring first-pass success and high correlation between simulated and measured performance from concept through production release.

At Marki Microwave, we engineer packaging as precisely as we design our MMICs. Marki Microwave's portfolio spans high-performance stripline and low-loss suspended substrate designs to MMIC-integrated connectorized and waveguide solutions. Our inline bullet housings, optimized for our extensive bare die portfolio, deliver low loss and excellent return loss across wide bandwidths, while our multi-octave M-Package and precision waveguide assemblies extend operation into millimeter wave. By co-designing the die and its housing, we ensure optimal electrical and mechanical performance.

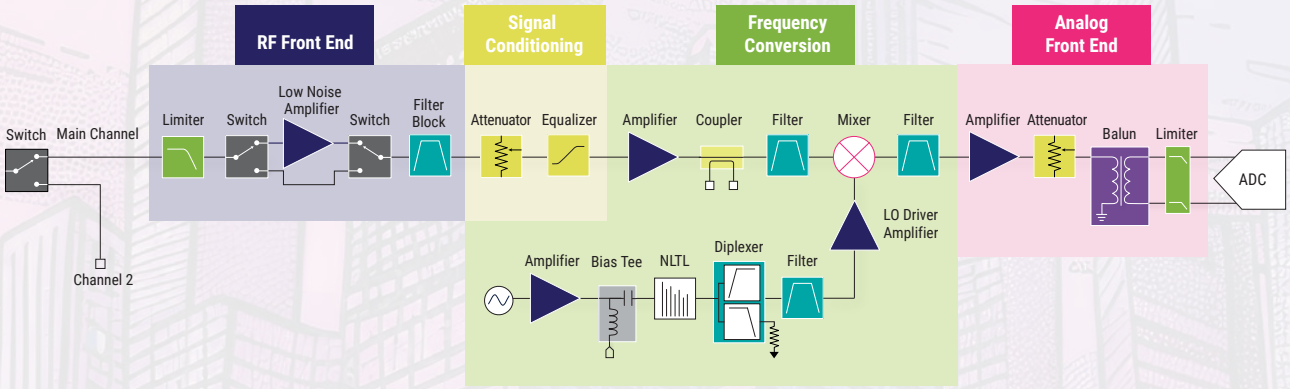
Marki Microwave delivers one of the most comprehensive selections of high-performance die, surface mount, connectorized, and waveguide microwave components in the world, and we have only just started!



THE TRUSTED LEADER WHEN PERFORMANCE MATTERS

For over 30 years, we've solved the industry's toughest technical problems by creating a robust portfolio of performance shattering RF and microwave products. Founded in 1991 with the goal of developing the best mixers in the industry, today Marki Microwave is a single source for high performance, broadband microwave technology, supporting multiple form factors including die, surface mount, and connectorized solutions for the entire RF block diagram.

Inventing leading-edge products and focusing on key technical challenges facing the evolving RF and microwave industry have been the cornerstones of our success. From simulation and design to packaging, innovation and creativity are part of our DNA, propelling us forward as we continue to challenge the status quo.



As demands from RF and microwave markets continue to evolve and the supply base consolidates, Marki Microwave remains dedicated to creating a future of limitless possibilities, expanding our catalog and empowering the industry to develop next-generation systems.

TABLE OF CONTENTS

CONNECTORIZED

WAVEGUIDE

SUFFIX/GLOSSARY

CONNECTORIZED

ADAPTERS, High Performance

Part Number	Band (GHz)	VSWR	Description	ECCN
ADPFKFK	DC-40	1.1	2.92mm F to 2.92 mm F	EAR99
ADPMKMK	DC-40	1.1	2.92mm M to 2.92mm M	EAR99
ADPMKFK	DC-40	1.1	2.92mm M to 2.92mm F	EAR99
ADPFVFK	DC-40	1.15	2.4mm F to 2.92 mm F	EAR99
ADPFVMK	DC-40	1.15	2.4mm F to 2.92mm M	EAR99
ADPMVFK	DC-40	1.15	2.4mm M to 2.92 mm F	EAR99
ADPMVMK	DC-40	1.15	2.4mm M to 2.92mm M	EAR99
ADPFVFV	DC-50	1.15	2.4mm F to 2.4mm F	EAR99
ADPMVMV	DC-50	1.15	2.4mm M to 2.4mm M	EAR99
ADPMVFV	DC-50	1.15	2.4mm M to 2.4mm F	EAR99
RA40(FM)	DC-40	1.4	2.92M to 2.92F	EAR99
RA50(FM/MM)	DC-50	1.4	2.92M to 2.92F	EAR99

AMPLIFIERS, Driver

Part Number	Band (GHz)	Gain (dB)	Psat (dBm)	OIP3 (dBm)	Voltage (V)	Current (mA)	ECCN
ADM3-00001PD	0.0003-18	37	+23	+31	See Datasheet	120, 120, 100	EAR99
AMM2-0020UH	0.01 - 20	29	+23	+33	+5.5 to +20 VD	240	EAR99
APM-7099PA	0.1-20	14	+25	+24	+8 VC and +7 VB	72	EAR99
✦ **AMM2-0220UH***	2-20	32	+19	+29	+5.5 to +20 VD	118	EAR99
ADM3-0022PA	0.01-22	35	+30	+31	See Datasheet	115, 115, 450	EAR99
APM-7098PA	0.1-22	14	+23	+24	+8 VC and +7 VB	44	EAR99
APM-7516PA	1-22	12.5	+23	+33	+5 VC and +5 VB	106	EAR99
ADM1-0026PA	0.005-26.5	12	+20	+25	+3 to +7 VD and -0.3 to 0 VG	165	EAR99
AMM-7473PC	0.4-26.5	16	+25	+34	+5 to +7 VD and -0.7 to -0.6 VG	150	EAR99
APM-6849PA	2-29	11	+21	+21	+7 VC and +7 VB	21	EAR99
✦ **AMM2-0330UH***	3-30	24	+15.6	+25	+5.5 to +20 VD	74	EAR99
ADM2-0035PA	0.1-35	23	+23	+30	+3 to +7 VD and -0.3 to 0 VG	320	EAR99
AMM-7199UC	11-38	20.5	+21	+31	+3 to +4 VD and -0.6 to -0.4 VG	180	EAR99
ADM1-8007APC	2-40	22	+22	+30	+3 to +6 VD and +3 to +6VG	213	EAR99
AMM-7200UC	12-46	18	+21.5	+29	+3 to +4 VD and -0.6 to -0.4 VG	180	EAR99
AMM-6702(UC/UC5)	20-55	24	+21	+27	+3 to +4 VD and -0.6 to -0.4 VG	180/230	EAR99
AMM-8211UC5	22-57	13	+21	+27	+3.5 to +5.5 VB	175	EAR99
AMM-7203UC	30-60	11.5	+16	+21	+1.5 to +3 VD and -0.6 to -0.4 VG	80	EAR99
A-3567UC	35-67	19	+20	+26	+3 to +4 VD and -0.6 to -0.4 VG	300	EAR99
AMM2-0070UH	0.01 - 70	18	+12	+20	+5.5 to +20 VD	108	EAR99
AMM-0001M	45-95	11	+19	-	+1.5 to 4V VD and -1.5V to 0V VG	350	3A001.b.4.e.2
AMM-9893M	45-95	18	+17	-	+3.5 V	360	3A001.b.2.h

***New Release since 12/2025**

All electrical specifications given are typical values.

AMPLIFIERS, Gain Block and Low Noise

Part Number	Band (GHz)	Gain (dB)	NF (dB)	OP1dB (dBm)	OIP3 (dBm)	Voltage (V)	Current (mA)	ECCN
ADM1-8096PC	0.09-6	22.5	1.5	+23	+35	+5 VD	84	EAR99
ADM-8622PC	0.0003-10	15	2.1	+13	+27	+3.3 VD	42	EAR99
ADM1-8095PC	0.09-10	18	1.6	+18.5	+32	+5 VD	57	EAR99
ADM-8344PC	DC-18	18	1.4	+18	+27	+5 VD	103	EAR99
ADM-8558PC	0.005-20	15	2.2	+14	+23	+6 VD	50	EAR99
ADM-8624PC	0.2-20	10.5	3	+13.5	+26	+5 VD	40	EAR99
ADM-8556PC	6-20	23	1.7	+15	+26	+3 VD	67	EAR99

ATTENUATORS, Precision-Grade

Part Number	Band (GHz)	Attenuation (dB)	Accuracy (dB)	Return Loss (dB)	ECCN
ATN03-0040BH	DC-40	3	0.5	29	EAR99
ATN06-0040BH	DC-40	6	0.9	30	EAR99
ATN10-0040BH	DC-40	10	0.5	29	EAR99
✦ **ATN15-0040BH***	0-40	15	0.5	27	EAR99
✦ **ATN20-0040BH***	0-40	20	0.8	27	EAR99
ATN06-0067(-2HV/-3HV)	DC-67	6.4	see datasheet	23	EAR99
ATN10-0067(-2HV/-3HV)	DC-67	10.5	see datasheet	22	EAR99
ATN06-00110(-2W/-3W)	DC-110	6.5	see datasheet	20	EAR99
ATN10-00110(-2W/-3W)	DC-110	10.5	see datasheet	20	EAR99

BALUNS, Passive

Part Number	Band (GHz)	Amp Bal (dB)	Phase Bal (°)	Isolation (dB)	Turns Ratio	Total Insertion Loss as a Mode Converter (dB)	ECCN
BAL-0003	0.0002-3	0.05	1	8	1:2	4	EAR99
BALH-0003	0.0002-3	0.1	1	7	1:1	1.5	EAR99
BAL-0006	0.0002-6	0.05	1	9	1:2	4.5	EAR99
BALH-0006	0.0002-6	0.1	1	8	1:1	2.5	EAR99
BAL-0010	0.0002-10	0.2	2	9	1:2	5	EAR99
BALH-0010	0.0002-10	0.2	2	8	1:1	2.5	EAR99
BAL-0106	1.2-6	0.1	2	6	1:2	0.6	EAR99
BAL-0212	2.6-12	0.1	2	6	1:2	1	EAR99
BAL-0520	5-20	0.2	3	6	1:2	1.5	EAR99
EBAL-0026	0.01-26	1.0	1	3	1:2	3	EAR99
BAL-0026	0.0003-26.5	0.5	3	24	1:2	2.5	EAR99
BAL-0036	0.0003-36	0.5	3	24	1:2	3	EAR99
EBAL-0040	0.01-40	0.1	2	5	1:2	3	EAR99
BAL-0050	0.0003-50	0.7	4	25	1:2	7	EAR99
EBAL-0050	0.01-50	0.2	3	5	1:2	4	EAR99
BAL-0067	0.0003-67	0.7	4	25	1:2	8.5	EAR99
EBAL-0067	0.01-67	0.2	2	5	1:2	4	EAR99

***New Release since 12/2025**

All electrical specifications given are typical values.

PULSE INVERTERS, Broadband, Fast Rise Time

Part Number	Band (GHz)	Loss (dB)	Rise/Fall Time (ps)	ECCN
INV-0026	0.0001-26.5	2	13	EAR99
INV-0040	0.0001-40	2.5	13	EAR99
INV-0065	0.0001-65	5	12	EAR99

BIAS TEES

Part Number	Band (GHz)	DC Voltage (V)	DC Current (A)	Insertion Loss (dB)	ECCN
BT-0018	0.00004-18	30	0.5	0.6	EAR99
BTN1-0018	0.0005-18	50	1	0.7	EAR99
BTN2-0018	0.003-18	50	2	0.7	EAR99
BT-0025	0.00004-25	30	0.5	0.8	EAR99
BT-0026	0.01-26.5	30	0.5	0.8	EAR99
BT1-0026	0.0002-26.5	50	1	1	EAR99
BT2-0026	0.0002-26.5	50	2	1	EAR99
BTN1-0026	0.0005-26.5	50	1	1	EAR99
BTN2-0026	0.003-26.5	50	2	1	EAR99
BT-0040	0.000004-40	30	0.5	1.5	EAR99
BTN-0040	0.00004-40	30	0.5	1.5	EAR99
BT1-0040	0.0002-40	50	1	1.5	EAR99
BT2-0040	0.0002-40	50	2	1.5	EAR99
BTN1-0040	0.0005-40	50	1	1.5	EAR99
BTN2-0040	0.003-40	50	2	1.5	EAR99
BT-0050	0.0002-50	30	0.5	1.8	EAR99
BTN-0050	0.0002-50	30	0.5	1.8	EAR99
BT1-0050	0.0002-50	50	1	1.5	EAR99
BT2-0050	0.0002-50	50	2	1.5	EAR99
BTN1-0050	0.0005-50	50	1	1.5	EAR99
BTN2-0050	0.003-50	50	2	1.5	EAR99
BT-0065	0.000004-65	30	0.5	1.8	EAR99
BTN-0065	0.00004-65	30	0.5	2.0	EAR99

DC BLOCKS, Broadband

Part Number	Band (GHz)	Loss (dB)	DC Voltage (V)	Rise Time (ps)	Group Delay (ps)	ECCN
DCZ(M-F)29(M-F)29	.000004-40	0.7	16	6	75	EAR99
DCZ(M-F)24(M-F)24	.000004-50	0.7	16	6	75	EAR99

***New Release since 12/2025**

All electrical specifications given are typical values.

COUPLERS, High Directivity Bridge

Part Number	Band (GHz)	Coupling (dB)	Directivity (dB)	VSWR	ECCN
CBR16-0003	0.0002-3	16	40	1.1	EAR99
CBR16-0006	0.0002-6	16	38	1.15	EAR99
CBR16-0012	0.0002-12	16	32	1.25	EAR99
CBR17-0026	0.0002-26	17	23	1.22	EAR99

COUPLERS, Low Loss High Power

Part Number	Band (GHz)	Coupling (dB)	Directivity (dB)	Loss (dB)	Average Power Handling (W)	ECCN
C17-0R506	0.5-6	17	20	0.4	120	EAR99
C17-0R512	0.5-12	17	20	0.65	80	EAR99
C17-0R518	0.5-18	17	20	1	60	EAR99
CA-18	DC-18	> 30	22	0.35	200	EAR99
CA-26	DC-26.5	> 27	24	0.35	50	EAR99
CA-40	DC-40	> 27	24	0.5	20	EAR99
CA-50	DC-50	> 27	24	0.5	15	EAR99
C-0250	2-50	12	15	0.7	10	EAR99
C-0265	2-65	12	15	0.7	10	EAR99

COUPLERS, Stripline Directional

Part Number	Band (GHz)	Coupling (dB)	Directivity (dB)	Flatness (dB)	VSWR	ECCN
C09-0R412	0.45-12	9	22	±0.7	1.15	EAR99
C09-0R418	0.45-18	9	22	±0.7	1.15	EAR99
C09-0R426	0.45-26.5	9	22	±0.7	1.15	EAR99
C09-0R430	0.45-30	9	20	±0.7	1.15	EAR99
C20-0R612	0.6-12	20	22	±0.6	1.2	EAR99
C10-0116	1-16	10	20	±0.5	1.15	EAR99
C20-0116	1-16	20	20	±0.6	1.15	EAR99
C20-0R518	0.5-18	20	22	±0.75	1.2	EAR99
C20-0R520	0.5-20	20	22	±0.75	1.2	EAR99
C13-0126	1-26.5	13	20	±0.6	1.15	EAR99
C16-1R718	1.7-18	16	20	±0.3	1.15	EAR99
C16-1R726	1.7-26.5	16	20	±0.4	1.15	EAR99
C10-0226	2-26.5	10	22	±0.6	1.15	EAR99
C20-0226	2-26.5	20	22	±0.75	1.25	EAR99
C13-0140	1-40	13	16	±0.1	1.2	EAR99
C20-0240	2-40	20	17	±0.75	1.3	EAR99
C13-0150	1-50	13	16	±0.75	1.2	EAR99
C10-0450	4-50	10	15	±0.5	1.35	EAR99
C10-0667	6-67	10	17	±0.8	1.2	EAR99
C16-0667	6-67	16	17	±0.9	1.25	EAR99
C20-0667	6-67	20	17	±0.8	1.25	EAR99
MC10-25110M2	25-110	10	19.5	+0.2	1.43	EAR99

***New Release since 12/2025**

All electrical specifications given are typical values.

COUPLERS, Elite Stripline Directional

Part Number	Band (GHz)	Coupling (dB)	IL Corrected Directivity (dB)	Flatness (dB)	VSWR	ECCN
CE10-0R620T	0.6-20	10	27	±0.2	1.07	EAR99
CE10-0R640(T)	0.6-40	10	24/22	±0.2	1.07/1.08	EAR99
CE10-1R520(T)	1.5-20	10	32	±0.25	1.07	EAR99
CE10-1R540(T)	1.5-40	10	26/22	±0.25	1.07	EAR99
CE13-0220T	2-20	13	30	±0.15	1.07	EAR99
CE13-0240(T)	2-40	13	29/27	±0.15	1.07/1.08	EAR99
CE16-0220T	2-20	16	32	±0.1	1.07	EAR99
CE16-0240(T)	2-40	16	30/29	±0.1	1.07	EAR99
CE20-0R620T	0.6-20	20	26	±0.15	1.07	EAR99
CE20-1R640(T)	0.6-40	20	27/24	±0.15	1.07	EAR99
CE20-0220T	2-20	20	30	±0.1	1.07	EAR99
CE20-0R240(T)	2-40	20	33/28	±0.1	1.05/1.07	EAR99

COUPLERS, Dual Directional

Part Number	Band (GHz)	Coupling (dB)	Directivity (dB)	Flatness (dB)	VSWR	ECCN
CD10-0106	0.7-6.3	10	25	±0.6	1.14	EAR99
CD10-0114	0.7-14.7	10	23	±0.6	1.17	EAR99

COUPLERS, Pick-Off Tees

Part Number	Band (GHz)	Pick-Off Loss (dB)	Insertion Loss (dB)	ECCN
PT-0020	DC-20	16	2	EAR99
PT-0030(A)	DC-30	16	2	EAR99

***New Release since 12/2025**

All electrical specifications given are typical values.

COUPLERS, Hybrid

Part Number	Band (GHz)	Amp Bal (dB)	Phase Bal (°)	Excess Loss (dB)	Isolation (dB)	ECCN
QH-0R518	0.5-18	±0.5	±3	1.5	20	EAR99
QH-0R71R3	0.65-1.3	±0.3	±3	0.5	16	EAR99
QH-0R714	0.7-14.5	±0.2	±2	1.2	22	EAR99
MQS-0209UB	2-9	±0.5	±3	2	16	EAR99
MQS-0218UA	2-18	±1	±3	1.4	17	EAR99
QH-0226	2-26.5	±0.25	±2	2	22	EAR99
MQH-2R58R5UB	2.5-8.5	±0.4	±3	2	23	EAR99
MQH-3R510UB	3.5-10	±0.4	±1.5	1.8	25	EAR99
MQS-0418UA	4-18	±0.4	±0.5	1.5	20	EAR99
QH-0440	4-40	±0.4	±5	2	18	EAR99
MQH-0517UB	5-17	±0.5	±6	1.6	23	EAR99
QH-0550	5-50	±0.6	±5	1	22	EAR99
QH-0867	8-67	±0.6	±6	1.2	18	EAR99
MQH-40110M2	40-110	1	5	2.5	18	EAR99

DIPLEXERS

Part Number	LPF F Min (GHz)	LPF F Max (GHz)	HPF F Min (GHz)	HPF F Max (GHz)	Isolation (dB)	ECCN
DPXN-M50	DC	0.035	0.07	10	24	EAR99
DPXN-0R5	DC	0.36	0.7	8	24	EAR99
DPXN-1	DC	0.85	1.4	5	24	EAR99
DPXN-2	DC	1.5	2.7	7	25	EAR99
DPXN-3	DC	2.3	4.2	8	25	EAR99
DPXN-4	DC	2.8	5.5	12	30	EAR99
MDPX-0305	DC	3	5	26.5	47	EAR99
MDPX-0407	DC	4	7	26.5	38	EAR99
DPX-0508	DC	5	8	18	45	EAR99
MDPX-0609	DC	6	9	26.5	58	EAR99
✦ **MDPX-0609BH***	DC	6	9	26.5	13	EAR99
MDPX-0710	DC	7	10	26.5	45	EAR99
DPX-9516	DC	9.5	16	32	40	EAR99
DPX-1114	DC	11	14	30	50	EAR99
DPX-1721	DC	17	21.5	40	50	EAR99

EQUALIZERS, Positive-Slope

Part Number	Band (GHz)	Loss at DC (dB)	Typ Return Loss (dB)	ECCN
EQX-26	DC-26	3, 6	21, 15	EAR99
MEQX-26AS	DC-26.5	3, 6, 10	18, 20, 20	EAR99
EQX-40	DC-40	3, 6	18	EAR99
MEQX-40ABH	DC-40	6, 10	24, 25	EAR99
MEQ10-50AU	DC-50	10	15	EAR99
MEQX-60ABH	DC-60	4, 6, 10	25, 24, 22	EAR99

***New Release since 12/2025**

All electrical specifications given are typical values.

FIXED FILTERS, Lowpass

Part Number	F1dBc High (GHz)	F3dBc High (GHz)	F30dBc High (GHz)	Passband Return Loss (dB)	ECCN
FLP-1460	4.6	5.0	6.7	20	EAR99
FLP-0750	6.1	7.6	9.6	30	EAR99
MFLP-00002BH	6.4	9.3	11.2	25	EAR99
FLP-1800	8.7	18.0	19.8	20	EAR99
FLP-0960	9.0	9.7	12.7	25	EAR99
FLP-1250	11.1	12.6	15.4	20	EAR99
FLP-2650	11.3	26.6	30.8	22	EAR99
FLP-3200	11.4	32.2	36.1	15	EAR99
FLP-2000	12.6	20.0	22.1	20	EAR99
FLP-2150	13.1	21.5	26.1	18	EAR99
FLP-1460	13.2	14.6	19.6	20	EAR99
FLP-1740	13.7	17.4	19.8	20	EAR99
FLP-2360	14.2	23.6	27.5	18	EAR99
MFLP-00005BH	14.3	18.1	20.9	21	EAR99
FLP-1940	14.9	19.5	26.0	25	EAR99
FLP-3660	15.2	36.7	41.4	26	EAR99
FLP-4300	16.3	43.1	47.6	26	EAR99
FLP-5000	18.0	50.0	54.8	15	EAR99

FIXED FILTERS, Highpass

Part Number	F30dBc Low (GHz)	F3dBc Low (GHz)	F1dBc Low (GHz)	Passband Return Loss (dB)	ECCN
MFHP-00001BH	1.4	1.9	2.4	16	EAR99
MFHP-00002BH	8.2	9.8	10.9	15	EAR99
FH-1700	14.3	16.5	16.8	13	EAR99
FH-1800	15.1	17.5	17.8	18	EAR99
FH-2600	21.4	25.1	25.8	14	EAR99
FH-4000	36.7	39.6	39.9	12	EAR99
FH-5500	51.3	54.3	54.6	12	EAR99

***New Release since 12/2025**

All electrical specifications given are typical values.

FIXED FILTERS, Bandpass

Part Number	F30dBc Low (GHz)	F3dBc Low (GHz)	F1dBc Low (GHz)	Fc (GHz)	F1dBc High (GHz)	F3dBc High (GHz)	F30dBc High (GHz)	IL @ Fc (dB)	ECCN
MFBP-00040BH	0.9	1.3	1.6	3.2	6.7	7.5	8.5	1.3	EAR99
MFBP-00084BH	5.4	5.9	6.1	7.5	9.3	9.9	10.5	2.4	EAR99
FB-0785	6.6	7.1	7.2	7.9	8.6	8.6	9.2	1.9	EAR99
FB-0860	6.6	7.8	8.0	8.6	9.2	9.4	10.4	1.9	EAR99
FB-0905	9.0	8.3	8.5	9.0	9.6	9.8	9.0	2.2	EAR99
FB-0955	9.5	8.8	8.9	9.6	10.1	10.3	9.5	2.1	EAR99
MFBA-00004BH	7.3	8.0	8.5	10.2	12.1	12.4	13.6	2.3	EAR99
FB-1050	10.4	9.4	9.6	10.4	11.2	11.5	10.4	2.0	EAR99
FB-1145	11.4	10.4	10.5	11.5	12.4	12.6	11.4	1.8	EAR99
FB-1215	12.1	11.0	11.8	12.2	12.9	13.2	12.1	2.1	EAR99
FB-1310	13.0	11.8	12.1	13.0	14.0	14.3	13.0	2.1	EAR99
FB-1385	13.7	11.2	11.4	13.7	16.4	16.7	13.7	1.4	EAR99
FB-1390	14.0	13.3	13.5	14.0	14.4	14.6	14.0	2.4	EAR99
FB-1450	14.1	10.8	11.0	14.1	18.0	18.4	14.1	1.3	EAR99
FB-1445	14.4	12.8	13.2	14.4	15.7	16.1	14.4	1.7	EAR99
FB-1500	14.6	11.6	11.8	14.6	18.1	18.4	14.6	1.2	EAR99
MFBP-00086BH	11.5	12.2	12.6	15.0	17.9	18.4	19.2	2.0	EAR99
FB-1575	11.7	14.1	14.5	15.7	17.0	17.4	19.3	2.0	EAR99
MFBA-00001BH	12.8	13.8	14.2	15.9	17.8	18.4	18.9	3.1	EAR99
FB-1655	16.5	15.5	15.7	16.5	17.3	17.5	16.5	2.5	EAR99
FB-1690	16.9	15.5	15.8	16.9	18.1	18.4	16.9	2.1	EAR99
FB-1725	13.9	15.4	15.6	17.1	18.8	19.1	20.6	1.6	EAR99
FB-1800	17.9	15.3	15.6	17.9	20.5	20.9	17.9	1.8	EAR99
FB-1840	18.4	16.2	16.7	18.4	20.3	20.9	18.4	2.3	EAR99
MFBP-00053BH	14.0	15.4	15.7	18.8	22.6	23.2	25.5	1.7	EAR99
FB-2000	19.7	17.8	18.2	19.7	21.3	21.6	19.7	1.9	EAR99
FB-2020	19.8	19.8	16.4	20.2	23.7	19.8	19.8	1.8	EAR99
FB-2060	20.5	18.4	18.8	20.5	22.4	22.7	20.5	2.1	EAR99
FB-2250	16.9	17.7	18.1	22.1	27.0	27.8	28.6	1.5	EAR99
MFBP-00089BH	16.3	17.5	17.9	22.2	27.4	28.5	30.0	1.9	EAR99
FB-2430	23.8	23.8	20.6	23.7	27.4	28.1	23.8	2.6	EAR99
FB-2400	24.0	21.9	22.4	24.0	25.6	26.0	24.0	2.5	EAR99
FB-2500	24.1	17.7	18.2	24.1	32.0	32.7	24.1	1.3	EAR99
FB-2480	24.6	24.6	21.2	24.6	28.5	24.6	24.6	2.7	EAR99
MFBP-00045BH	22.1	23.1	23.5	25.8	28.3	29.1	30.4	2.8	EAR99
FB-2770	27.4	22.7	23.4	27.4	32.0	32.8	27.4	2.1	EAR99
MFBP-00046BH	25.7	27.2	27.8	31.3	35.2	36.4	38.4	2.2	EAR99
FB-3300	31.9	25.7	26.3	31.9	38.7	40.2	31.9	3.3	EAR99
FB-3270	25.3	27.5	28.6	32.4	36.8	37.4	39.9	2.4	EAR99
MFB-3475U	23.4	27.9	28.6	33.4	39.0	40.4	47.5	2.0	EAR99
FB-3700	28.4	31.3	32.6	37.2	42.5	43.1	46.4	2.6	EAR99
✦ MFBP-00057BH*	27.0	29.8	30.2	37.1	45.6	47.3	52.7	2.0	EAR99
✦ MFBP-00051BH*	35.0	36.2	36.5	38.2	40.1	40.7	41.6	2.9	EAR99

***New Release since 12/2025**

All electrical specifications given are typical values.

FIXED FILTERS, Bandpass (cont.)

Part Number	F30dBc Low (GHz)	F3dBc Low (GHz)	F1dBc Low (GHz)	Fc (GHz)	F1dBc High (GHz)	F3dBc High (GHz)	F30dBc High (GHz)	IL @ Fc (dB)	ECCN
FB-4000	30.0	33.4	35.2	40.2	46.0	46.7	50.0	2.4	EAR99
MFBC-00017M	31.8	34.1	35.1	41.3	48.7	49.9	53.8	2.0	EAR99
MFBC-00008M	43.2	36.3	36.9	43.2	50.5	43.2	43.2	1.9	EAR99
✦ MFBP-00103BH*	39.3	43.3	44.0	47.4	51.1	52.2	53.5	3.6	EAR99
MFBC-00018M	52.4	43.6	44.9	52.4	61.2	63.3	52.4	2.0	EAR99
MFBC-00009M	40.4	46.1	46.9	54.1	62.4	64.7	54.1	2.3	EAR99
MFBC-00019M	67.9	67.9	59.1	67.9	78.1	67.9	67.9	2.7	EAR99
MFBC-00020M	63.1	76.5	78.5	90.0	103.2	110.0	90.0	3.9	EAR99

LIMITERS

Part Number	Band (GHz)	Loss (dB)	Flat Leakage (dBm)	Peak Power CW (W)	Peak Power Pulsed (W)	P1dB (dBm)	ECCN
✦ HLM-100001BH*[1]	DC-10	1	+10 @ 5 GHz	4	-	+10	EAR99
✦ HLM-20BH*[1]	DC-20	1	+15 @ 10 GHz	4	-	+15	EAR99
HLM-8011U[1]	DC-30	0.8	+7@30GHz	1	4.5	+10	EAR99
HLM-40U[1]	DC-40	1	+16@20GHz	4	20	15	EAR99
HLM-40ABH[1]	DC-40	0.7	+9@30GHz	2	-	+10	EAR99
✦ HLM-67ABH*[1]	DC-67	1.1	+8	1	-	+8	EAR99

[1]Power ratings are dependent on frequency, temperature, and pulse conditions

***New Release since 12/2025**

All electrical specifications given are typical values.

IQ MIXERS

Part Number	RF/LO (GHz)	IF (GHz)	Conversion Loss (dB)	Image Rej (dBc)	L-R Isolation (dB)	ECCN
MMIQ-0205HXA	1.75-5	DC-2	8	33	61	EAR99
MMIQ-0218(L/H)XPC	2-18	DC-3	8/7.5	27/35	58/53	EAR99
MMIQ-0416(L/H)S	4-16	DC-6	8/9	28/29	58/59	EAR99
MMIQ-0520(L/H)S	5-20	DC-6	9	35	46	EAR99
MMIQ-0626(L/H)S	6-26	DC-6	9	35	41	EAR99
MMIQ-1037H	10-37	DC-12	9	25	47	EAR99
MMIQ-1040(L/S)S	10-40	DC-12	9	25	47/44	EAR99
MMIQ-1865(L/H/S)UB	18-65	DC-23	8/8/9	35	49/48/50	EAR99
MMIQ-4067LU	40-67	DC-20	9	35	33	EAR99
MMIQ-40100(L/H)M	40-100	DC-20	10	30	see datasheet	EAR99
MMIQ-30120HM[1]	30-120	DC-30	8.5	27	40	EAR99

[1]Differential IF IQ Mixer

MIXERS, Double Balanced

Part Number	RF/LO (GHz)	IF (GHz)	Conversion Loss (dB)	IIP3 (dBm)	LO Drive (dBm)	ECCN
MM1-0115HS	1-15	DC-2.5	7.5	+24	+17	EAR99
MM1-0212(L/H/S)S	2-12	DC-3	8/8.5/8.5	+14/+23/+26	+9/+15/+20	EAR99
MM1-0222(L/H)S	2-22	DC-3.5	7	+13/+23	+9/+15	EAR99
MM1-0312(H/S)S	3-12	DC-4.5	7.5	+23/+26	+15/+20	EAR99
MM1-0320(L/H)S	3-20	DC-4	8	+10/+20	+7/+15	EAR99
MM1-0330(H/T)S	3-30	DC-5	7/9	+21/+32	+19/+23	EAR99
MM1-0424SS	4.5-24	DC-4	8	+25	+20	EAR99
MM1-0626(H/S)S	6-26.5	DC-9	7.5/8	+21/+25	+15/+20	EAR99
MM1-0832(L/H)S	8-32	DC-12	8/7.6	+14/+23	+9/+15	EAR99
MM1-1044(L/H)S	10-44	DC-14	7.6	+13/+22	+9/+15	EAR99
MM1-1140HS	11-40	DC-12	8	+21	+15	EAR99
MM1-1240SS	12-40	DC-12	8	+25	+20	EAR99
MM1-1467(L/H)S	14-67	DC-21	7	+12/+17.5	+11/+15	EAR99
MM1-1850(H/S)S	18-50	DC-20	8/8.5	+21/+25	+15/+20	EAR99
MM1-1857(L/H)S	18-57	DC-21	8/7.5	+13/+20	+9/+13	EAR99
MM1-2567LS	25-67	DC-30	9	+9	+13	EAR99
✦ **MM1-1886LM***	18-86	DC-20	8.5	+15.5	+14	EAR99
MM1-30100LM	30-100	DC-20	8.5	see datasheet	+14	EAR99
MMH-35120HM[1]	35-120, 12-40	DC-14	18	+7	+15	3A001.b.7.c.1

[1]Harmonic Mixer

***New Release since 12/2025**

All electrical specifications given are typical values.

MIXERS, Triple Balanced

Part Number	RF/LO (GHz)	IF (GHz)	Conversion Loss (dB)	IIP3 (dBm)	LO Drive (dBm)	ECCN
MT3A-0113HPA[1]	1-13	0.5-8.5	9.5	+28	+12	EAR99
MT3L-0113HS	1.5-13	0.25-5	8.5	+31	+20	EAR99
MT3H-0113(L/H)S	1.5-13	0.8-8.5	8/8.5	+20/+28	+15/+20	EAR99
T3-18GLS	0.01-18	0.001-10	7.5	+25	+20	EAR99
T3H-18GLS	0.01-18	0.01-18	9.5	+30	+20	EAR99
T3-20GLS	0.01-20	0.001-10	7.5	+30	+20	EAR99
T3H-20G(L/I)S	0.01-20	0.01-20	9.5	+30	+20	EAR99
✦ **MM2-0530LBH***	5-30	2-20	7.5	+15	+15	EAR99
T3-0838GLN	8-38	0.01-10	8	+30	+20	EAR99
T3-1040GLN	10-40	1-18	8	+25	+20	EAR99
✦ **MM2-0845HS***	8-45	1-15	8	+22	+18	EAR99
MM2-0530(L/H)S	5-30	2-20	10/9	+15/+21	+15/+20	EAR99

[1]Integrated low phase noise driver amplifier

PASSIVE MULTIPLIERS and NON LINEAR TRANSMISSION LINES

Part Number	Type	Input (GHz)	Output (GHz)	Conversion Loss (dB)	1F Supp (dBc)	3F Supp (dBc)	ECCN
MMD-0415HS	Doubler	2-7.5	4-15	11	27	36	EAR99
✦ **MMD-0426LBH***	Doubler	2-13	4-26	12	37	50	EAR99
MMD-1030(L/H)S	Doubler	5-15	10-30	12.5/11.5	38/41	46/51	EAR99
MMD-1030LBH	Doubler	5-15	10-30	12	38	46	EAR99
MMD-1640LBH	Doubler	8-20	16-40	14	42	52	EAR99
MMD-1648LS	Doubler	8-24	16-48	15	44	69	EAR99
MMD-1250HU	Doubler	6-25	12-50	10	32	40	EAR99
MMD-2060(L/H)U	Doubler	10-30	20-60	11/10.5	37/38	41/40	EAR99
✦ **MMD-2060LBH***	Doubler	10-30	20-60	11	36	42	EAR99
MMD-3567LU	Doubler	17.5-33.5	35-67	11	38	44	EAR99
✦ **MMD-3567LBH***	Doubler	17.5-33.5	35-67	12	37	38	EAR99
MMD-3580LU-KW	Doubler	17.5-40	35-80	11	38	44	EAR99
✦ MMD-18100(**L***/**H***)M	Doubler	9-50	18-100	12.5 / 12	24 / 25	33 / 35	EAR99
MMD-20100HM	Doubler	10-50	20-100	10	24.5	33	3A001.b.7.b.1
MMD-40120HM	Doubler	20-60	40-120	10	30	40	3A001.b.7.b.1
MMQ-40125HM	Quadrupler	10-31.25	40-125	20	19	12	3A001.b.7.b.1
NLTL-6273S	Comb Generator	0.7-5	0.7-40	-	–	–	EAR99
NLTL-6275U/USW	Comb Generator	3-15	3-85	-	–	–	EAR99

ACTIVE MULTIPLIERS

Part Number	Input (GHz)	Output (GHz)	Input (dBm)	Output (dBm)	ECCN
ADA-0416	2-8	4-16	0 to +6	+16	EAR99
ADA-1030	5-15	10-30	0 to +6	+16	EAR99
ADA-2052	10-26	20-52	-6 to +2	+16	EAR99
AQA-2156	5.25-14	21-56	-2 to +6	+20	EAR99

***New Release since 12/2025**

All electrical specifications given are typical values.

POWER DIVIDERS, High Isolation

Part Number	Band (GHz)	Loss (dB)	Amplitude Balance (dB)	Isolation (dB)	ECCN
PBR-0003	.0003-3	1.25	±0.4	45	EAR99
PBR-0006	.0003-6	1.5	±0.5	40	EAR99
PBR-0012	.0003-12	1.5	±0.6	35	EAR99

POWER DIVIDERS, Wilkinson 1:2

Part Number	Band (GHz)	Loss (dB)	Amplitude Balance (dB)	Phase Balance (°)	Isolation (dB)	ECCN
PD-0R413	0.4-13.2	1	±0.05	±1	24	EAR99
PD-0R426	0.4-26	2	±0.05	±2	24	EAR99
PD-0R510	0.5-10	0.9	±0.1	±1	22	EAR99
PD-0R618	0.6-18	1	±0.05	±1	22	EAR99
MPD-0226BH*	2-26.5	1	0	2.6	26	EAR99
PD-0R636	0.6-36	2	±0.1	±3	22	EAR99
PD-0109	1-9	0.75	±0.1	±1	22	EAR99
PD-0126	1-26	1	±0.1	±3	20	EAR99
PD-0140	1-40	1.5	±0.2	±2	20	EAR99
PD-0150	1-50	2	±0.25	±3	20	EAR99
PD-0165	1-65	5	±0.25	±3	20	EAR99
PD-0218	2-18	1	±0.2	±2	22	EAR99
PD-0220	2-20	1	±0.2	±2	22	EAR99
PD-0426	4-26.5	0.8	±0.2	±2	18	EAR99
PD-0440	4-40	1	±0.2	±3	18	EAR99
PD-0450	4-50	1.2	±0.5	±5	18	EAR99
PD-0465	4-65	2	±0.5	±5	18	EAR99
MPDW-10110M2	10-110	3	±0.25	±3	22	EAR99

POWER DIVIDERS, Wilkinson 1:3

Part Number	Band (GHz)	Loss (dB)	Amplitude Balance (dB)	Phase Balance (°)	Isolation (dB)	ECCN
PD3-0R412	0.4-12	1.5	±0.1	±2	23	EAR99
PD3-0R616	0.6-16	1.5	±0.1	±2	24	EAR99
PD3-0126	1.5-26.5	1.5	±0.3	±4	24	EAR99

***New Release since 12/2025**

All electrical specifications given are typical values.

POWER DIVIDERS, Wilkinson 1:4

Part Number	Band (GHz)	Loss (dB)	Amplitude Balance (dB)	Phase Balance (°)	Isolation (dB)	ECCN
PD4-0R518	0.5-18	1.5	±0.25	±3	20	EAR99
PD4-0R526	0.5-26.5	2.5	±0.25	±3	19	EAR99
PD4-0R532	0.5-32	2.5	±0.3	±4	19	EAR99
PD4-0120	1-20	1.5	±0.25	±3	20	EAR99
PD4-0126	1-26.5	1.5	±0.3	±3	20	EAR99
PD4-0140	1-40	2.5	±0.4	±4	19	EAR99
PD4-0150	1-50	4	±0.5	±5	20	EAR99
PD4-0218	2-18	1.2	±0.2	±2	20	EAR99

POWER DIVIDERS, Resistive 1:2

Part Number	Band (GHz)	Loss (dB)	Amplitude Balance (dB)	Phase Balance (°)	ECCN
PD-0010	DC-10	0.25	±0.1	±1	EAR99
PD-0020	DC-20	0.5	±0.2	±2	EAR99
PD-0030	DC-30	0.5	±0.25	±2	EAR99
PD-0040	DC-40	0.75	±0.25	±2	EAR99
MPDR-00110M2	DC-110	1.5	±0.25	±7.5	EAR99

TERMINATIONS

Part Number	Band (GHz)	Impedance (Ω)	Return Loss (dB)	ECCN
T(M/F)50-27	DC-27	50	32	EAR99
T(M/F)50-40	DC-40	50	35	EAR99
T(M/F)50-50	DC-50	50	31	EAR99
T(M/F)50-67	DC-67	50	36	EAR99
T(M/F)50-110M	DC-110	50	15	EAR99

THUMBWHEEL

Part Number	Description	ECCN
TW-1	quick, secure, wrenchless connection for SMA, 2.92mm and 2.4mm	EAR99

***New Release since 12/2025**

All electrical specifications given are typical values.

WAVEGUIDE

COUPLERS

Part Number	Band (GHz)	Coupling	Directivity TYP. (dB)	Insertion Loss (dB)	Return Loss (dB)	Waveguide Band	Flange	ECCN
C10-2800WG	26.5-40	10	40	0.5	30	WR-28	UG-599/U	EAR99
C10-2200WG	33-50	10	40	0.6	30	WR-22	UG-383/U	EAR99
C10-1900WG	40-60	10	40	0.7	30	WR-19	UG-383/U	EAR99
C10-1500WG	50-75	10	40	1.2	30	WR-15	UG-385/U	EAR99
C20-1500WG	50-75	19	41	0.9	39	WR-15	UG-385/U	EAR99
C10-1200WG	60-90	10	40	1.1	30	WR-12	UG-387/U	EAR99
C20-1200WG	60-90	19	38	0.8	39	WR-12	UG-387/U	EAR99
C10-1000WG	75-110	10	40	1.25	30	WR-10	UG-387/U	EAR99
C20-1000WG	75-110	20	36	1.15	35	WR-10	UG-387/U	EAR99

DETECTORS

Part Number	Band (GHz)	Sensitivity (V/mW)	Flatness (dB)	Operating range (dB)	Flange	ECCN
DET-28PP00WG	26.5-40	1800	+/- 1.5	15 to -40	UG-599/U	EAR99
DET-22PP00WG	33-50	1500	+/- 1.5	15 to -40	UG-383/U	EAR99
DET-19PP00WG	40-60	1500	+/- 2.0	15 to -40	UG-383/U	EAR99
DET-15PP00WG	50-75	1200	+/- 1.5	15 to -40	UG-385/U	EAR99
DET-12PP00WG	60-90	1000	+/- 1.5	15 to -40	UG-387/U	EAR99
DET-10PP00WG	75-110	800	+/- 1.5	15 to -40	UG-387/U	EAR99
DET-08PP00WG	90-140	700	+/- 1.7	15 to -40	UG-387/U	EAR99

ISOLATORS

Part Number	Band (GHz)	Isolation (dB)	Insertion Loss (dB)	Return Loss	Waveguide Band	Flange	ECCN
ISO27-28F00WG	26.5-40	27	1	17.7	WR-28	UG-599/U	EAR99
ISO27-22F00WG	33-50	27	1.3	17.7	WR-22	UG-383/U	EAR99
ISO27-19F00WG	40-60	27	1.5	17.7	WR-19	UG-383/U	EAR99
ISO27-15F00WG	50-75	27	1.6	15.5	WR-15	UG-385/U	EAR99
ISO27-12F00WG	60-90	27	1.7	15.5	WR-12	UG-387/U	EAR99
ISO27-10F00WG	75-110	27	2	15.5	WR-10	UG-387/U	EAR99

LEVEL SET ATTENUATORS

Part Number	Band (GHz)	Attenuation Range (dB)	Return Loss (dB)	Flange	ECCN
ATN35-15LS00WG	50-75	0-35	15	UG-385/U	EAR99
ATN35-12LS00WG	60-90	0-35	15	UG-387/U	EAR99
ATN35-10LS00WG	75-110	0-35	15	UG-387/U	EAR99

***New Release since 12/2025**

All electrical specifications given are typical values.

FIXED ATTENUATORS

Part Number	Band (GHz)	Attenuation (dB)	Waveguide Band	Flange	ECCN
ATN00-15FH00WG[1]	50-75	0	WR-15	UG-385/U	EAR99
ATN00-15FL00WG[1]	50-75	0	WR-15	UG-385/U	EAR99
ATN03-15FH00WG[1]	50-75	3	WR-15	UG-385/U	EAR99
ATN03-15FL00WG[1]	50-75	3	WR-15	UG-385/U	EAR99
ATN06-15FH00WG[1]	50-75	6	WR-15	UG-385/U	EAR99
ATN06-15FL00WG[1]	50-75	6	WR-15	UG-385/U	EAR99
ATN10-15FH00WG[1]	50-75	10	WR-15	UG-385/U	EAR99
ATN10-15FL00WG[1]	50-75	10	WR-15	UG-385/U	EAR99
ATN15-15FH00WG[1]	50-75	15	WR-15	UG-385/U	EAR99
ATN15-15FL00WG[1]	50-75	15	WR-15	UG-385/U	EAR99
ATN20-15FH00WG[1]	50-75	20	WR-15	UG-385/U	EAR99
ATN20-15FL00WG[1]	50-75	20	WR-15	UG-385/U	EAR99
ATN25-15FH00WG[1]	50-75	25	WR-15	UG-385/U	EAR99
ATN25-15FL00WG[1]	50-75	25	WR-15	UG-385/U	EAR99
ATN30-15FH00WG[1]	50-75	30	WR-15	UG-385/U	EAR99
ATN30-15FL00WG[1]	50-75	30	WR-15	UG-385/U	EAR99
ATN00-12FH00WG[1]	60-90	0	WR-12	UG-387/U	EAR99
ATN00-12FL00WG[1]	60-90	0	WR-12	UG-387/U	EAR99
ATN03-12FH00WG[1]	60-90	3	WR-12	UG-387/U	EAR99
ATN03-12FL00WG[1]	60-90	3	WR-12	UG-387/U	EAR99
ATN06-12FH00WG[1]	60-90	6	WR-12	UG-387/U	EAR99
ATN06-12FL00WG[1]	60-90	6	WR-12	UG-387/U	EAR99
ATN10-12FH00WG[1]	60-90	10	WR-12	UG-387/U	EAR99
ATN10-12FL00WG[1]	60-90	10	WR-12	UG-387/U	EAR99
ATN15-12FH00WG[1]	60-90	15	WR-12	UG-387/U	EAR99
ATN15-12FL00WG[1]	60-90	15	WR-12	UG-387/U	EAR99
ATN20-12FH00WG[1]	60-90	20	WR-12	UG-387/U	EAR99
ATN20-12FL00WG[1]	60-90	20	WR-12	UG-387/U	EAR99
ATN25-12FH00WG[1]	60-90	25	WR-12	UG-387/U	EAR99
ATN25-12FL00WG[1]	60-90	25	WR-12	UG-387/U	EAR99
ATN30-12FH00WG[1]	60-90	30	WR-12	UG-387/U	EAR99
ATN30-12FL00WG[1]	60-90	30	WR-12	UG-387/U	EAR99
ATN00-10FH00WG[1]	75-110	0	WR-10	UG-387/U	EAR99
ATN00-10FL00WG[1]	75-110	0	WR-10	UG-387/U	EAR99
ATN03-10FH00WG[1]	75-110	3	WR-10	UG-387/U	EAR99
ATN03-10FL00WG[1]	75-110	3	WR-10	UG-387/U	EAR99
ATN06-10FH00WG[1]	75-110	6	WR-10	UG-387/U	EAR99
ATN06-10FL00WG[1]	75-110	6	WR-10	UG-387/U	EAR99
ATN10-10FH00WG[1]	75-110	10	WR-10	UG-387/U	EAR99
ATN10-10FL00WG[1]	75-110	10	WR-10	UG-387/U	EAR99
ATN15-10FH00WG[1]	75-110	15	WR-10	UG-387/U	EAR99
ATN15-10FL00WG[1]	75-110	15	WR-10	UG-387/U	EAR99

[1]Low power handles 300 mW, high power handles 3 W with fan cooling

***New Release since 12/2025**

All electrical specifications given are typical values.

FIXED ATTENUATORS (cont.)

Part Number	Band (GHz)	Attenuation (dB)	Waveguide Band	Flange	ECCN
ATN20-10FH00WG[1]	75-110	20	WR-10	UG-387/U	EAR99
ATN20-10FL00WG[1]	75-110	20	WR-10	UG-387/U	EAR99
ATN25-10FH00WG[1]	75-110	25	WR-10	UG-387/U	EAR99
ATN25-10FL00WG[1]	75-110	25	WR-10	UG-387/U	EAR99
ATN30-10FH00WG[1]	75-110	30	WR-10	UG-387/U	EAR99
ATN30-10FL00WG[1]	75-110	30	WR-10	UG-387/U	EAR99

[1]Low power handles 300 mW, high power handles 3 W with fan cooling

MIXERS

Part Number	Band (GHz)	IF (GHz)	Conversion Loss (dB)	L-R Isolation (dB)	ECCN
MXDB-1500WG	50-75	DC-25	7.2	35	EAR99
MXDB-1200WG	60-90	DC-30	7.5	34	EAR99
MXDB-1500WG	75-110	DC-35	9.0	28	EAR99

MULTIPLIERS

Part Number	Band (GHz)	Output Power dBm	Input Frequency (GHz)	Flange	ECCN
AQA-15F00WG	50-75	13	12.5-18.75	UG-385/U	EAR99
ASA-12F00WG	71-86	12	11.83-14.33	UG-387/U	EAR99
ASA-10F00WG	75-110	10	12.5-18.3	UG-387/U	3A001.b.7.c.3

POWER DIVIDERS

Part Number	Band (GHz)	Insertion Loss (dB)	Isolation (dB)	VSWR Input	VSWR Outputs	Flange	ECCN
PD20-1500WG	50-75	0.5	20	1.6:1	1.5:1	UG-385/U	EAR99
PD20-1200WG	60-90	0.5	20	1.6:1	1.5:1	UG-387/U	EAR99
PD20-1000WG	75-110	0.5	20	1.6:1	1.5:1	UG-387/U	EAR99

TERMINATIONS

Part Number	Band (GHz)	Return Loss (dB)	Power Handling (W)	Waveguide Band	Flange	ECCN
TW50-28H00WG	26.5-40	30	7	WR-28	UG-599/U	EAR99
TW50-28L00WG	26.5-40	32	5	WR-28	UG-599/U	EAR99
TW50-22H00WG	33-50	30	5	WR-22	UG-383/U	EAR99
TW50-22L00WG	33-50	32	4	WR-22	UG-383/U	EAR99
TW50-19H00WG	40-60	30	3	WR-19	UG-383/U	EAR99
TW50-19L00WG	40-60	32	2	WR-19	UG-383/U	EAR99
TW50-15H00WG	50-75	28	2	WR-15	UG-385/U	EAR99
TW50-15L00WG	50-75	30	1	WR-15	UG-385/U	EAR99
TW50-12H00WG	60-90	28	1.8	WR-12	UG-387/U	EAR99
TW50-12L00WG	60-90	30	0.9	WR-12	UG-387/U	EAR99
TW50-10H00WG	75-110	28	1.2	WR-10	UG-387/U	EAR99
TW50-10L00WG	75-110	30	0.6	WR-10	UG-387/U	EAR99
TW50-08H00WG	90-140	24	contact support	WR-08	UG-387/U	EAR99
TW50-08L00WG	90-140	26	contact support	WR-08	UG-387/U	EAR99

WAVEGUIDE TWISTS

Part Number	Band (GHz)	Twist Angle	Flange	ECCN
WT45-28L00WG	26.5-40	45°	UG-599/U	EAR99
WT45-28R00WG	26.5-40	45°	UG-599/U	EAR99
WT90-2800WG	26.5-40	90°	UG-599/U	EAR99
WT45-22R00WG	33-50	45°	UG-383/U	EAR99
WT45-22L00WG	33-50	45°	UG-383/U	EAR99
WT90-2200WG	33-50	90°	UG-383/U	EAR99
WT90-1900WG	40-60	90°	UG-383/U	EAR99
WT45-19R00WG	40-60	45°	UG-383/U	EAR99
WT45-19L00WG	40-60	45°	UG-383/U	EAR99
WT45-15L00WG	50-75	45°	UG-385/U	EAR99
WT90-1500WG	50-75	90°	UG-385/U	EAR99
WT45-15R00WG	50-75	45°	UG-385/U	EAR99
WT90-1200WG	60-90	90°	UG-387/U	EAR99
WT45-12R00WG	60-90	45°	UG-387/U	EAR99
WT45-12L00WG	60-90	45°	UG-387/U	EAR99
WT45-10R00WG	75-110	45°	UG-387/U	EAR99
WT90-1000WG	75-110	90°	UG-387/U	EAR99
WT45-10L00WG	75-110	45°	UG-387/U	EAR99
WT45-08L00WG	90-140	45°	UG-387/U	EAR99
WT45-08R00WG	90-140	45°	UG-387/U	EAR99
WT90-0800WG	90-140	90°	UG-387/U	EAR99
WT45-06R00WG	110-170	45°	UG-387/U	EAR99
WT45-06L00WG	110-170	45°	UG-387/U	EAR99
WT90-0600WG	110-170	90°	UG-387/U	EAR99

***New Release since 12/2025**

All electrical specifications given are typical values.

WAVEGUIDE BENDS

Part Number	Band (GHz)	Bend Angle	Flange	ECCN
WE45-2800WG	26.5-40	45°	UG-599/U	EAR99
WE90-2800WG	26.5-40	90°	UG-599/U	EAR99
WH45-2800WG	26.5-40	45°	UG-599/U	EAR99
WH90-2800WG	26.5-40	90°	UG-599/U	EAR99
WE45-2200WG	33-50	45°	UG-383/U	EAR99
WE90-2200WG	33-50	90°	UG-383/U	EAR99
WH45-2200WG	33-50	45°	UG-383/U	EAR99
WH90-2200WG	33-50	90°	UG-383/U	EAR99
WE45-1900WG	40-60	45°	UG-383/U	EAR99
WE90-1900WG	40-60	90°	UG-383/U	EAR99
WH45-1900WG	40-60	45°	UG-383/U	EAR99
WH90-1900WG	40-60	90°	UG-383/U	EAR99
WE45-1500WG	50-75	45°	UG-385/U	EAR99
WE90-1500WG	50-75	90°	UG-385/U	EAR99
WH45-1500WG	50-75	45°	UG-385/U	EAR99
WH90-1500WG	50-75	90°	UG-385/U	EAR99
WE45-1200WG	60-90	45°	UG-387/U	EAR99
WE90-1200WG	60-90	90°	UG-387/U	EAR99
WH45-1200WG	60-90	45°	UG-387/U	EAR99
WH90-1200WG	60-90	90°	UG-387/U	EAR99
WE45-1000WG	75-110	45°	UG-387/U	EAR99
WE90-1000WG	75-110	90°	UG-387/U	EAR99
WH45-1000WG	75-110	45°	UG-387/U	EAR99
WH90-1000WG	75-110	90°	UG-387/U	EAR99
WE45-0800WG	90-140	45°	UG-387/U	EAR99
WE90-0800WG	90-140	90°	UG-387/U	EAR99
WH45-0800WG	90-140	45°	UG-387/U	EAR99
WH90-0800WG	90-140	90°	UG-387/U	EAR99
WE45-0600WG	110-170	45°	UG-387/U	EAR99
WE90-0600WG	110-170	90°	UG-387/U	EAR99
WH45-0600WG	110-170	45°	UG-387/U	EAR99
WH90-0600WG	110-170	90°	UG-387/U	EAR99

***New Release since 12/2025**

All electrical specifications given are typical values.

WAVEGUIDE STRAIGHTS

Part Number	Band (GHz)	Length (inch)	Flange	ECCN
WS-2800100WG	26.5-40	1	UG-599/U	EAR99
WS-2800200WG	26.5-40	2	UG-599/U	EAR99
WS-2800300WG	26.5-40	3	UG-599/U	EAR99
WS-2800600WG	26.5-40	6	UG-599/U	EAR99
WS-2200100WG	33-50	1	UG-383/U	EAR99
WS-220010SWG	33-50	1	UG-599/U	EAR99
WS-2200200WG	33-50	2	UG-383/U	EAR99
WS-220020SWG	33-50	2	UG-599/U	EAR99
WS-2200300WG	33-50	3	UG-383/U	EAR99
WS-220030SWG	33-50	3	UG-599/U	EAR99
WS-2200600WG	33-50	6	UG-383/U	EAR99
WS-220060SWG	33-50	6	UG-599/U	EAR99
WS-1900100WG	40-60	1	UG-383/U	EAR99
WS-190010SWG	40-60	1	UG-599/U	EAR99
WS-1900200WG	40-60	2	UG-383/U	EAR99
WS-190020SWG	40-60	2	UG-599/U	EAR99
WS-1900300WG	40-60	3	UG-383/U	EAR99
WS-190030SWG	40-60	3	UG-599/U	EAR99
WS-1900600WG	40-60	6	UG-383/U	EAR99
WS-190060SWG	40-60	6	UG-599/U	EAR99
WS-1500100WG	50-75	1	UG-385/U	EAR99
WS-1500200WG	50-75	2	UG-385/U	EAR99
WS-1500300WG	50-75	3	UG-385/U	EAR99
WS-1500600WG	50-75	6	UG-385/U	EAR99
WS-1200100WG	60-90	1	UG-387/U	EAR99
WS-1200200WG	60-90	2	UG-387/U	EAR99
WS-1200300WG	60-90	3	UG-387/U	EAR99
WS-1200400WG	60-90	4	UG-387/U	EAR99
WS-1000100WG	75-110	1	UG-387/U	EAR99
WS-1000200WG	75-110	2	UG-387/U	EAR99
WS-1000300WG	75-110	3	UG-387/U	EAR99
WS-1000400WG	75-110	4	UG-387/U	EAR99
WS-0800100WG	90-140	1	UG-387/U	EAR99
WS-0800200WG	90-140	2	UG-387/U	EAR99
WS-0800300WG	90-140	3	UG-387/U	EAR99
WS-0800600WG	90-140	6	UG-387/U	EAR99
WS-0600100WG	110-170	1	UG-387/U	EAR99
WS-0600200WG	110-170	2	UG-387/U	EAR99
WS-0600300WG	110-170	3	UG-387/U	EAR99
WS-0600600WG	110-170	6	UG-387/U	EAR99
WS-0500100WG	140-220	1	UG-387/U	EAR99
WS-0500200WG	140-220	2	UG-387/U	EAR99
WS-0500300WG	140-220	3	UG-387/U	EAR99
WS-0500600WG	140-220	6	UG-387/U	EAR99

MARKI MICROWAVE PART NUMBER DECODER RING

Example: MM2-0530LS

Prefix=MM2, Identifier=0530, Diode=L, Package=S

PREFIX

1 to 4 letters to identify the product category (**BAL**=balun, **PD**=power divider, etc)

- MMICs: M prefix (ex: **M**BAL, **M**M1, **M**T3)
- Modifiers: ex: MT3**A** Integrated LO Driver Amplifier

IDENTIFIER

Most part numbers include a 4-digit string that identifies start/stop frequencies (ex: **0416** = 4 to 16 GHz), with a few exceptions:

- Exceptions: amplifiers and NLTLs have the chip number instead of frequency band

DIODE

Found on mixers, IQ mixers and multipliers. LO Drive is given at typical value.

- **L** diode: Vf=0.25V, LO Drive +5 to +15 dBm
- **H** diode: Vf=0.75V, LO Drive +11 to +20 dBm
- **S** diode: Vf=1.4V, LO Drive +17 to +23 dBm
- **T** diode: Vf=2V, LO Drive +20 to +27 dBm

PACKAGES

- Bullet Housing: **BH**
- Sub-30GHz MMIC: typically **S**
- Amplifier packages: **PA**, **PC**, **PD**
- mmWave modules: **M**, **M2**, **U**, **UA**, **UB**, **UC**, etc
- Evaluation boards: **EVAL**, **EVB**

CONNECTOR OPTIONS: swaps are available upon request

- SMA
- 2.92 mm
- 2.4 mm
- 1.85 mm
- 1 mm

WAVEGUIDE DECODER

Prefix: ADA = Active Doubler, AQA = Active Quadrupler, ASA = Active times Six
ADA-xxX00WG:
- Identifier: xx 2-digit string identifying the frequency band of operation (ex: 10 = WR-10)
- Identifier: X 1-digit string identifying : F = Full band N= Narrow band

Prefix: ATN identifies Attenuator product family
ATNXX-xxFX00WG:
- XX is a 2-digit string identifying the attenuation value
- Identifier: xx 2-digit string identifying the frequency band of operation. (ex: 10 = WR-10)
- FX identifies Fixed Attenuator, X = L for Low and H for High power; LS identifies Level Set Attenuator

Prefix: C identifies Coupler product family
CXX-xx00WG:
- XX identifier is coupling value (ex: 10, 20, 30 or 40 dB)
- Identifier: xx 2-digit string identifying the frequency band of operation (ex: 10 = WR-10)

Prefix: DET identifies Detector product family
DET-xxPP00WG:
- Identifier: xx 2-digit string identifying the frequency band of operation (ex: 10 = WR-10)
- Output: SMA Female
- PP Identifier is Polarity: Positive

Prefix: ISO identifies Isolator product family
ISO27-xxF00WG:
- XX identifies isolation value (ex: 27 dB)
- Identifier: xx 2-digit string identifying the frequency band of operation (ex: 10 = WR-10)

Prefix: MX identifies Mixer product family
MXDB-xx00WG:
- DB = Double Balanced
- Identifier: xx 2-digit string identifying the frequency band of operation (ex: 10 = WR-10)

Prefix: PD identifies Power Divider product family
PD20-xx00WG:
- XX = Output to Output isolation value. (ex: 20 dB)
- Identifier: xx 2-digit string identifying the frequency band of operation (ex: 10 = WR-10)

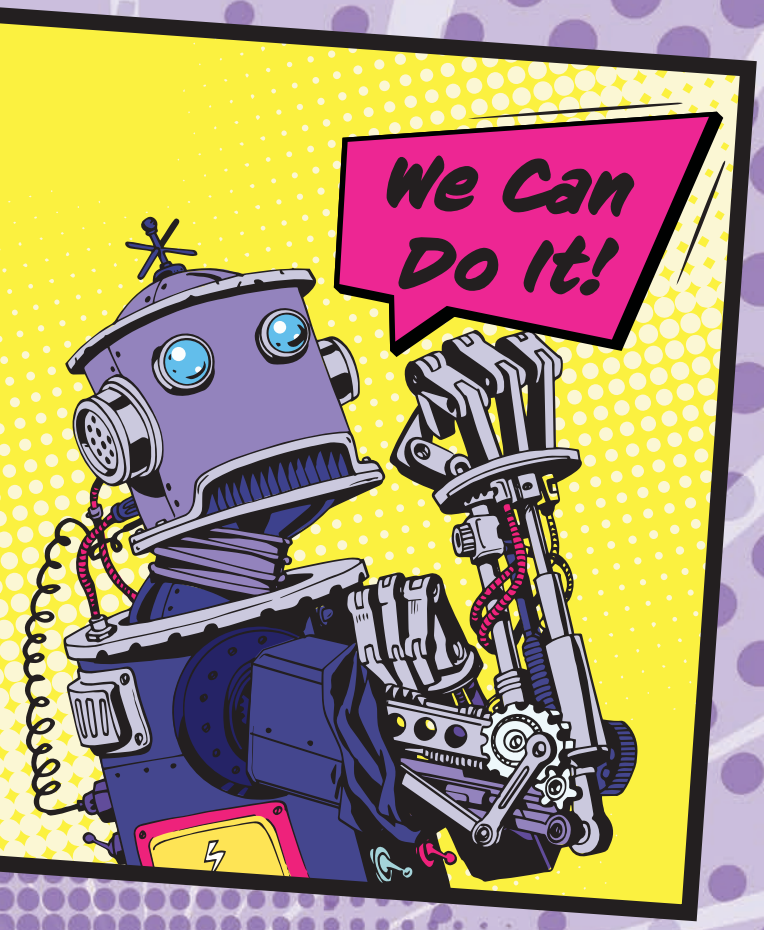
Prefix: TW identifies Termination product family
TW50-xxX00WG:
- Identifier: xx 2-digit string identifying the frequency band of operation (ex: 10 = WR-10)
- Identifier X = H for high Power, L for Low Power
- Connector options: UG-387, UG-385, UG-383 and UG-599

Prefix: WE identifies Waveguide E plane bend product family
WEXX-xx00WG:
- Identifier: XX 2-digit string identifying bend degree (45 or 90 Degrees)
- Identifier: xx 2-digit string identifying the frequency band of operation (ex: 10 = WR-10)

Prefix: WH identifies Waveguide H plane bend product family
WHXX-xx00WG:
- Identifier: XX 2-digit string identifying bend degree (45 or 90 Degrees)
- Identifier: xx 2-digit string identifying the frequency band of operation (ex: 10 = WR-10)

Prefix: WS identifies Waveguide Straight product family
WS-xx00XXXWG:
- Identifier: xx 2-digit string identifying the frequency band of operation (ex: 10 = WR-10)
- Identifier: XXX 3-digit string identifying length in inches (ex: 3 inches=300)
- Identifier: XXX the last X in string will identify if the flange is Square (S) or Round (R)

Prefix: WT identifies Waveguide Twist product family
WTXX-xxX00WG:
- Identifier: XX 2-digit string identifying bend degree (45 or 90 Degrees)
- Identifier: xx 2-digit string identifying the frequency band of operation (ex: 10 = WR-10)
- Identifier: X 1-digit string identifying L for left and R for right hand twist



NO Die Left UNPACKAGED

Leading-Edge Bullet Housing from Marki Microwave

Marki Microwave's new connectorized bullet housing for 2-port passive products is a cost-effective packaging solution delivering industry-leading performance from DC to 67 GHz. Designed to be fully customizable across Marki Microwave's extensive catalog of bare die products, including attenuators, equalizers, filters, multipliers, and limiters.

Features

- **DC-67 GHz Operation**
- **High-Performance, Low-Loss, Inline housing**
- **Supports 2-Port Products**

Marki® microwave

MARKI MICROWAVE

is proud to provide world-class support including direct access to engineers, downloadable device models for ADS®, SystemVue®, Microwave Office®, Modelithics®, Quantic X-Microwave®; and evaluation modules for our MMIC bare die and surface mount products.

Online Tech Support:

- Extensive Knowledge Base with Tech Notes
- Application Notes
- Detailed White Papers
- Prodigy™ Filter Designer, RF Design Tools, Calculators and Converters
- Email us at **support@markimicrowave.com**

Visit **markimicrowave.com** to view our complete portfolio of connectorized, waveguide, surface mount and bare die components.

CONTACT INFORMATION

Headquarters:
345 Digital Drive
Morgan Hill, CA 95037

San Diego Office:
12626 High Bluff Drive
Suite 120
San Diego, CA 92130

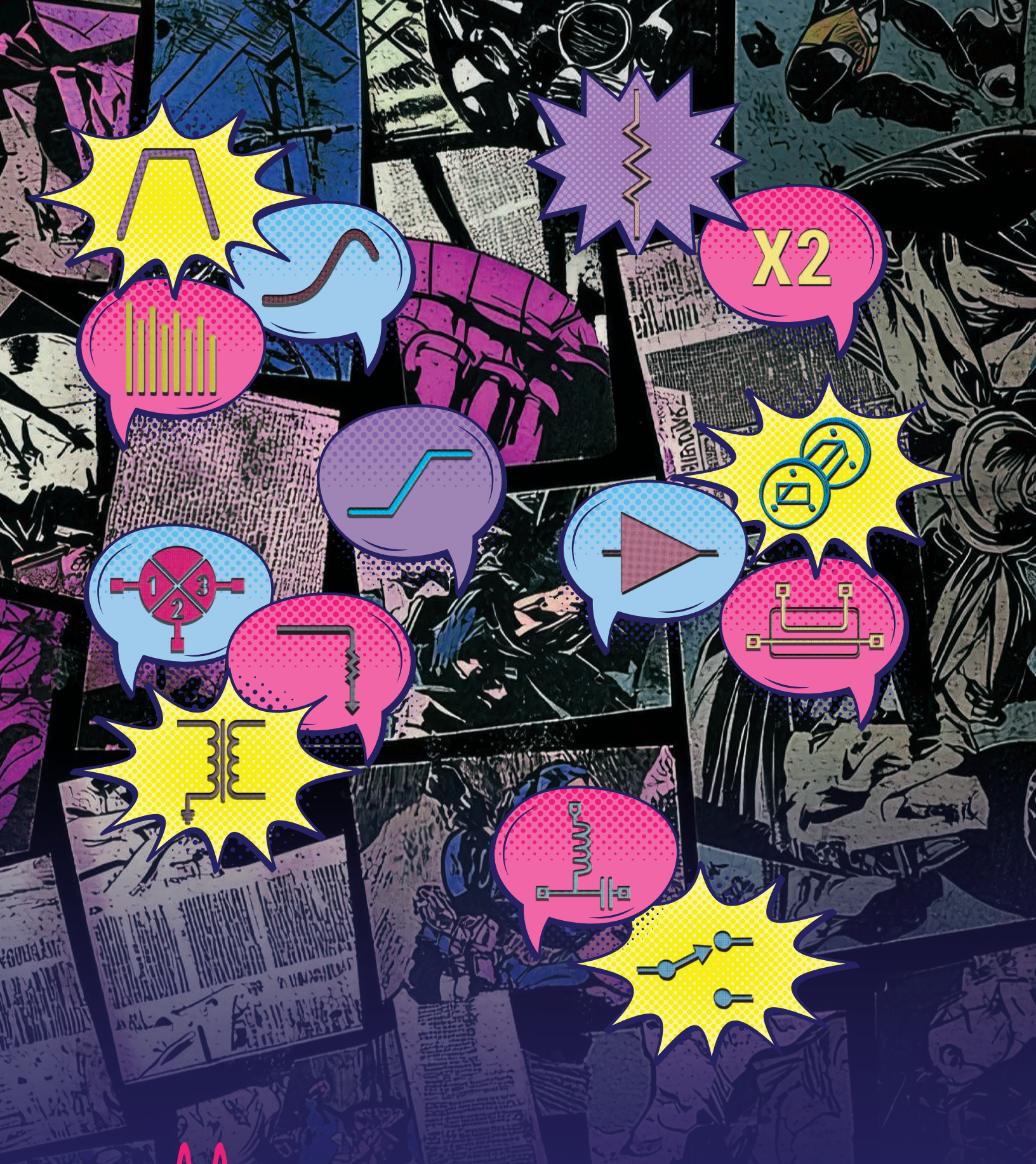
Sales: 408-778-9952

Sales Support: sales@markimicrowave.com

Tech Support: support@markimicrowave.com

General: 408-778-4200

Fax: 408-778-4300



Marki® microwave

USA DESIGNED MANUFACTURED SUPPORTED