



We work with you

M/A-COM, Inc., a business unit of Tyco Electronics, is an established industry leader in the design, development, and manufacture of radio frequency (RF), microwave and millimeter wave semiconductors, components and technologies for the cable and satellite, wireless telecommunications, automotive, aerospace, and military markets. Holding hundreds of patents in the field, M/A-COM is internationally known as an innovator and integrator whose technologies are found in today's most advanced signal intelligence and defense systems, as well as in leading automotive navigation, safety, and communications solutions. M/A-COM is also a major supplier of critical communications systems and equipment for public safety, utility, federal, and select commercial markets. Headquartered in Lowell, Massachusetts, M/A-COM has offices and manufacturing facilities worldwide.

Products now and in the future

M/A-COM currently has many new products in development. We are happy to work with you on any customized products or standard product variations. Please contact us for more information.

Visit M/A-COM on the Web at www.macom.com or contact your local M/A-COM sales office for assistance.

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a vital part of your world



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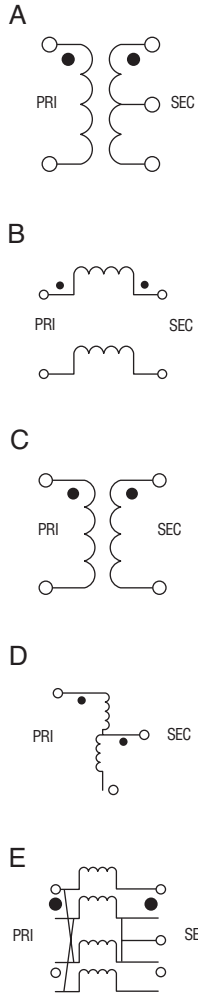


CATV/Broadband
Product Solutions
June 2006

a vital part of your world



Transformer
Schematics



CATV/Broadband Overview

M/A-COM has been serving the RF industry with components and modules for over 50 years. Over the past 15 years the CATV industry has grown from offering one way analog video services, to offering such value added services as high speed internet, video on demand, and IP telephony, in addition to digital and high definition television. New technologies for extending the reach of broadband into the home in Home Gateways, Passive Optical Nodes, Cablecard & new RF tuner technologies are all leading to the increased demand for high performance products.

Through our CATV/Broadband product line, we have participated in the rapid expansion of the CATV and Broadband industries by offering new components and modules to meet the needs of today's RF engineer.

Our high performance amplifiers and active splitters feature ultra-low noise and high linearity, especially in terms of second order distortion. High isolation 75 ohm switches are available to eliminate signal leakage with low loss characteristics in the on-state.

Contact us if you are involved in the design or manufacturing of any of the following types of products:

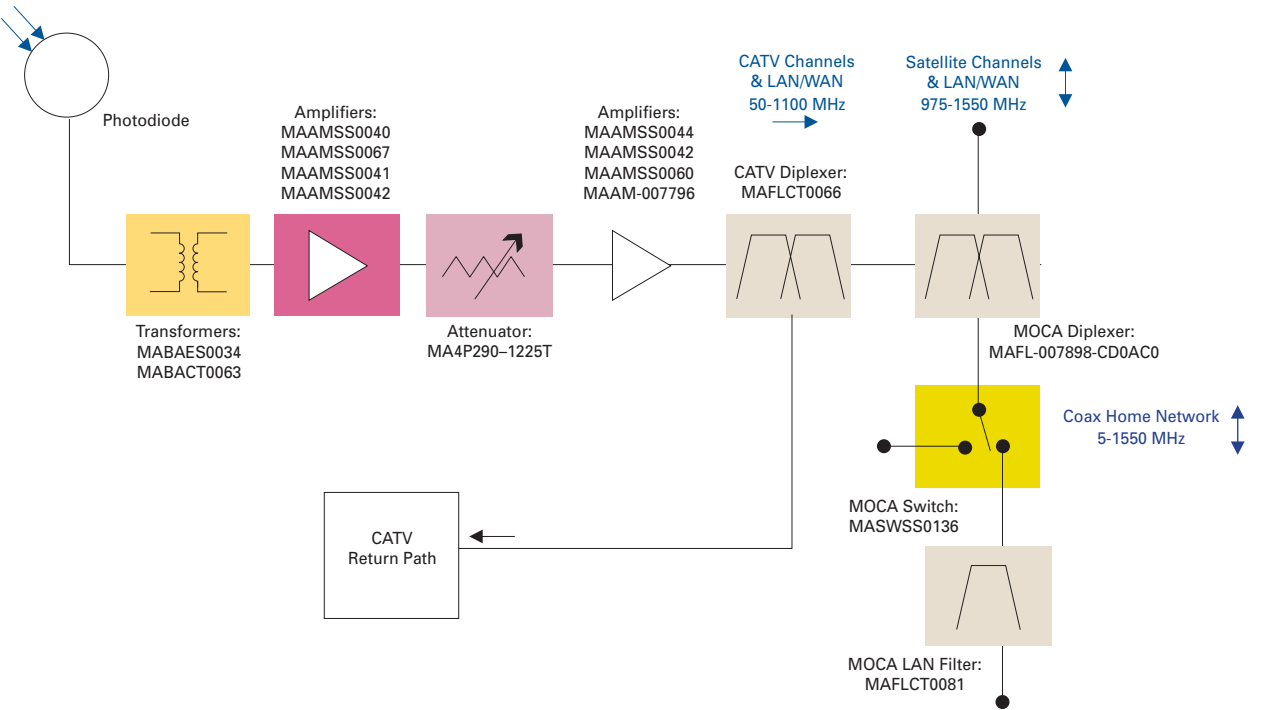
- Cable modem & set top subscriber equipment
- Head end and distribution equipment
- Interdiction and telephony equipment
- Fiber to the home - Passive Optical Node
- Multimedia Over Coax Alliance (MOCA)

This CATV/Broadband brochure is intended to highlight a few of the key products that are available for design into next generation broadband equipment. Please consult our Web site for information and additional components. We have a catalog of hundreds of available parts to meet your needs.

Amplifiers (First Stage)

Frequency (MHz)	Part Number	Description	Gain (dB)	NF (dB)	CSO/CTB (test condition)	CSO/CTB (dBc)	Package
50-870	MAAMSS0040	Balanced 12dB, low NF	12	2.8	135 @ 25dBmV O/P	75/72.5	SOIC-16
50-1000	MAAMSS0067	Balanced 12dB, high linearity	12.2	3.3	135 @ 13dBmV I/P	78/78	PQFN-20
50-1000	MAAMSS0041	Single-ended 15dB, low NF	14.8	2.7	132 @ 23dBmV O/P	70/80	SOT-89
50-1000	MAAMSS0042	Single-ended 15dB, high linearity	15	3	132 @ 30dBmV O/P	70/70	SOT-89

Video Overlay for PON/FTTx/MOCA Device



Diplexers

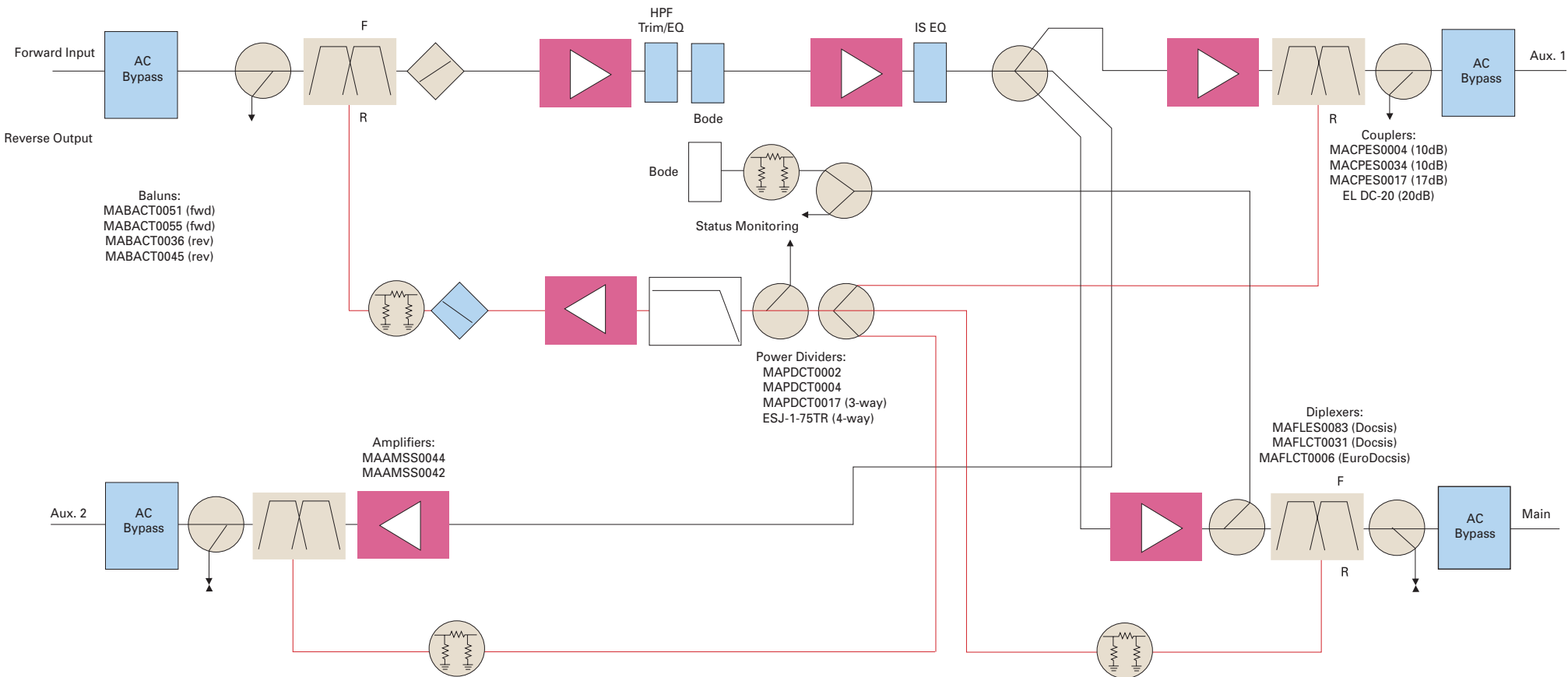
Frequency (MHz)	Part Number	Freq Split (MHz)	I.L. (dB)	Isol. L/H (dB)	RL Common (dB)	RL H/L (dB)	Package
5-870	MAFLCT0066	30-46	0.75	46	20	20	SM-160
50-1425	MAFLCT0081	975-1025(pass band)	1.1	—	18	—	SM-171
50-3000	MAFL-007898-CD0ACO	870-975 & 1525-2000	2	45	8	14	SM-172

Transformers

Frequency (MHz)	Part Number	Impedance Ratio	I.L. (dB)	Amp Bal (dB)	Phase Balance (degrees)	I/P R.L. (dB)	Package
5-1200	MABACT0061	4:1	2.1	—	—	5	SM-22
5-1200	MABACT0063	1.5:1	0.5	—	—	26	SM-22

Amplifiers (Second Stage)

Frequency (MHz)	Part Number	Description	Gain (dB)	NF (dB)	CSO/CTB (test condition)	CSO/CTB (dBc)	Package
50-1000	MAAMSS0044	Balanced 12dB, high linearity	12.5	3.5	79 @ 34dBmV O/P	70/75	PQFN-20
50-1000	MAAMSS0042	Single-ended 15dB, high linearity	15	3	132 @ 30dBmV O/P	70/70	PSOT-89
50-1000	MAAMSS0060	Single-ended 17dB, low NF	17	2.7	132 @ 30dBmV O/P	70/75	SOT-89
50-1000	MAAM-007796	Single-ended, low noise, high gain	21	3.8	132 @ 20dBmV O/P	70/70	PQFN-20



Line Amplifier/Optical Node

Amplifiers

Frequency (MHz)	Part Number	Description	Gain (dB)	NF (dB)	CSO/CTB (test condition)	CSO/CTB (dBc)	Package
50-1000	MAAMSS0042	Single-ended 15 dB, high linearity	15	3	132 @ 30dBmV O/P	70/70	SOT-89
50-1000	MAAMSS0044	Balanced 12dB, high linearity	12.5	3.5	79 @ 39dBmV O/P	70/75	PQFN-20

Power Dividers

Frequency (MHz)	Part Number	I.L. (dB)	Amp Unbalance (dB)	Isol (dB)	I/P R.L. (dB)	O/P R.L. (dB)	Package
5-1000	MAPDCT0030	1.1	0.4	20	24	—	SM-150
5-1000	ESJ-4-1-75TR	2.8	0.3	24	18	18	SM-46
5-1200	MAPDCT0032	1.33	0.15	29.6	24.25	24.5	SM-46
400-820	MAPDCT0004	0.6	0.5	40	23	—	SM-55

Diplexers

Frequency (MHz)	Part Number	Freq Split (MHz)	I.L. (dB)	Isol. L/H (dB)	Isol. Common (dB)	RL H/L (dB)	Package
5-870	MAFLCT0031 ◆	40-52	0.5	50	20	—	SM-142
5-870	MAFLCT0006 ◆	65-85	0.5	55	24	24	SM-145
5-900	MAFLES0083 ◆	42-54	0.5 (Max)	50	21	21	SM-85

Balun Transformers

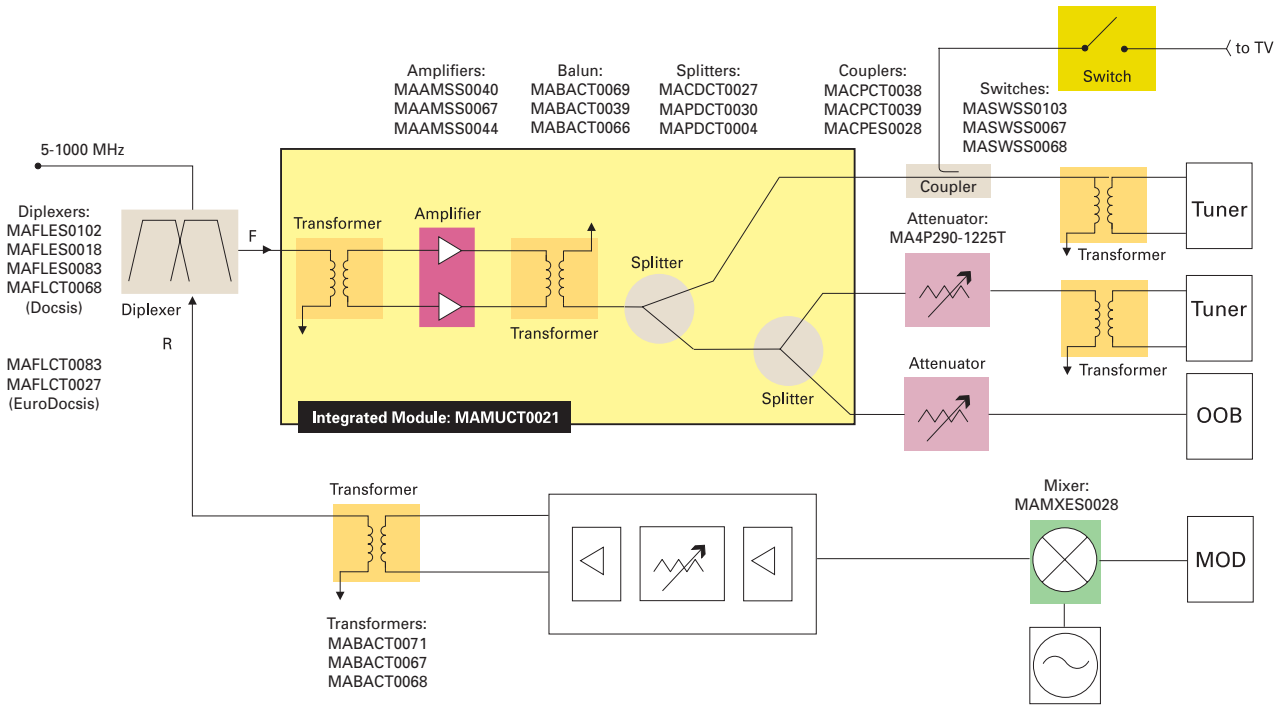
Frequency (MHz)	Part Number	Impedance Ratio	I.L. (dB)	Amp Bal (dB)	Phase Balance (degrees)	I/P R.L. (dB)	Package
0.3-200	MABACT0071	1:1	0:5	0.1	0.3	21	SM-164
5-200	MABACT0045	4:1	0:8	0.2	0.1	15	SM-155
5-1200	MABACT0055	1:1	0:9	0.3	5	14	SM-164
50-1200	MABACT0051	1:1	0:8	0.3	4	15	SM-118

Couplers

Frequency (MHz)	Part Number	Coupling (dB)	M.L.L. (dB)	Isol (dB)	I/P R.L. (dB)	O/P R.L. (dB)	Package
5-870	MACPES0004 ◆	10.2	1.3	28	24	26	SM-132
5-1000	MACPES0034 ◆	10	1.6	23	20	20	SM-138
5-1000	ELDC-20 ◆	17.1	0.8	—	24	25	SM-55
5-1200	MACPES0017 ◆	16.8	0.66	—	24	25.6	SM-103

Note: Part numbers are RoHS compliant except: ◆ indicates non-RoHS compliant

Home Gateway/Set-top Box



Amplifiers

Frequency (MHz)	Part Number	Description	Gain (dB)	NF (dB)	CSO/CTB (test condition)	CSO/CTB (dBc)	Package
50-870	MAAMSS0040	Balanced 12dB, low NF	12	2.8	135 @ 25dBmV O/P	75/72.5	SOIC-16
50-1000	MAAMSS0041	Single-ended, 15dB, low NF	14.8	2.7	132 @ 23dBmV O/P	70/80	SOT-89
50-1000	MAAMSS0042	Single-ended, 15dB, high linearity	15	3	132 @ 30dBmV O/P	70/70	SOT-89
50-1000	MAAMSS0044	Balanced 12dB, high linearity	12.5	3.5	79 @ 34dBmV O/P	70/75	PQFN-20
50-1000	MAAMSS0067	Balanced 12dB, high linearity	12.2	3.3	135 @ 13dBmV I/P	78/78	PQFN-20
50-1000	MAAM-007807	Single-ended, low cost device	8	4	132 @ 18dBmV O/P	65/65	SOT-89

Balun Transformers

Frequency (MHz)	Part Number	Impedance Ratio	I.L. (dB)	Amp Bal (dB)	Phase Balance (degrees)	I/P R.L. (dB)	Package
0.5-5	MABACT0071	1:1	0.4	0.1	0.3	21	SM-164
1-350	MABACT0067	4:1	1	0.2	2	14	SM-164
1-350	MABACT0068	2:1	1:1	0.2	2	14	SM-164
5-1000	MABACT0066	4:1	1:5	0.3	8	—	SM-138
5-3000	MABACT0039	1:1	2.75	1	5	15	SM-138
50-1200	MABACT0069	1:1	1:2	0.4	4.5	16	SM-158

Note: Part numbers are RoHS compliant except: ♦ indicates non-RoHS compliant

Couplers

Frequency (MHz)	Part Number	Coupling (dB)	M.L.L. (dB)	Isol (dB)	I/P R.L. (dB)	O/P R.L. (dB)	Package
5-870	MACPCT0038	17.4	0.5	40	27	34	SM-103
5-1000	MACPCT0039	10	1.6	23	20	20	SM-138
40-1000	MACPES0028 ♦	7	1:9	—	25	25	SM-137

Diplexers

Frequency (MHz)	Part Number	Freq Split (MHz)	I.L. (dB)	Isol. L/H (dB)	R.L. Common (dB)	R.L. H/L (dB)	Package
5-860	MAFLCT0083	65-94	0.92	59	16	16	SM-161
5-870	MAFLES0102 ♦	42-54	0.5	45	18	18	SM-149
5-900	MAFLES0083 ♦	42-54	0.5 (max)	50	21	21	SM-85
5-1000	MAFLES0018 ♦	42-54	0.5	50	16	16	SM-162
5-1000	MAFLCT0027 ♦	65-88	0.5	—	20	20	SM-85
5-1100	MAFLCT0068	42-54	1.3 (max)	45 (min)	10	10	SM-161

Mixers

Frequency (MHz)	Part Number	Description	C.L. (dB)	Isol. (LO-RF) (dB)	Isol. (LO-IF) (dB)	IIP3 (dBm)	Package
1-1000	MAMXES0028 ♦	Broadband, High Performance Double Balanced Mixer	7.5	30	30	18	SM-134

Modules

Frequency (MHz)	Part Number	Gain In-Out 1/2 (dB)	Gain In-Out 3 (dB)	N.F. typ (dB)	R.L. typ (dB)	Isol. (dB)	CSO/CTB (dBc)
50-860	MAMUCT0021	5	8.5	3.4	17	24	78/78

Splitters

Frequency (MHz)	Part Number	I.L. (dB)	Amp Unbalance (dB)	Isol (dB)	I/P R.L. (dB)	O/P R.L. (dB)	Package
5-1000	MAPDCT0027	0.7	0.32	20	26	25	SM-55A
5-1000	MAPDCT0030	1.1	0.4	20	24	—	SM-150
400-820	MAPDCT0004 ♦	0.6	0.5	40	23	—	SM-55

Switches

Frequency (MHz)	Part Number	I.L. (dB)	Isol. (dB)	R.L. (on) (dB)	R.L. (off) (dB)	IP3 (dBm)	Package
5-1000	MASWSS0103	1	63	16	21	47	4mm PQFN
5-1000	MASWSS0067	0.65	53	16	18	52	3mm FQFP-N
5-1000	MASWSS0068	0.65	50	17	22	52	4mm FQFP-N