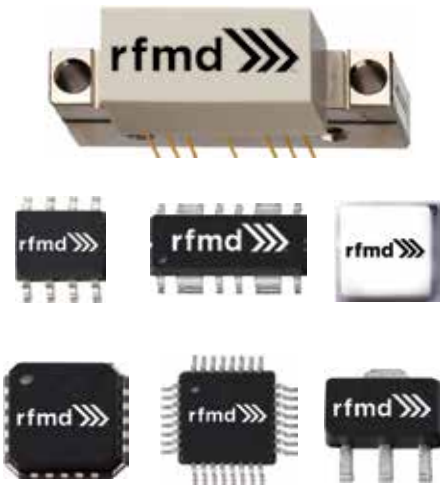


Broadband Solutions For Today And The Future



RFMD leads in performance, innovation, technology, and reliability solutions for the wired broadband market. We continue to invest in this market ensuring our products meet current and future requirements.

RFMD offers best-in-class broadband, GaAs, GaN, and silicon-based High Power CATV hybrid amplifiers. In addition, RFMD also offers low to medium power general purpose MMIC amplifiers, analog/digital attenuators, switches, and fiber optic components for broadband customer premise and broadband transmission equipment.

Power Doublers

RFMD offers a broad range of power-doubler amplifiers developed for CATV transmission applications. These amplifiers use leading technologies, including GaN, to provide unmatched superior performance covering frequency operations up to 1600MHz. Our product selection of power doublers includes various gains ranging from 18dB to 30dB with various output levels up to 63dBmV. Some RFMD power doublers feature the unique capability of programmable current, allowing designers to optimize current and linearity by externally adjusting DC current.

Push-Pull Amplifiers

The RFMD differential, push-pull amplifiers offer gains in the 18dB to 34dB range, maximizing flexibility in the CATV transmission path. These hybrid amplifiers are designed for use as driver stages to enhance CATV access networks. They employ GaAs MESFET, GaAs pHEMT, and GaN HEMT die and operate from 40MHz to 1200MHz — all in an industry-standard SOT-115J package, or in a newly released surface mount multi-chip module, SMT MCM.

Reverse Amplifiers

RFMD's hybrid reverse amplifiers complete the CATV transmission path. Our reverse path amplifiers come in an industry-standard SOT-115J package or in a newly released surface mount, multi-chip module, SMT MCM. RFMD offers the broadest range of reverse amplifiers with gains ranging from 23dB to 40dB and frequencies of 5MHz to 300MHz for future network upgrades and enhancements. Our devices provide optimal reliability with low noise, and are well suited for reverse channel systems.

Optical Receivers

RFMD offers a family of optical receivers for both forward and reverse paths. These high-dynamic range receiver amplifiers operate from 40MHz to 1200MHz for forward and 5MHz to 300MHz reverse. The module contains a single-mode optical input, suitable for wavelengths from 1290nm to 1600nm, a terminal to monitor PIN diode current, and matched to 75Ω output impedance. The receivers have extremely low noise, less than $3.0\text{pA} / \sqrt{\text{Hz}}$ and are packaged in an industry-standard SOT-115J package.

Broadband Transmission

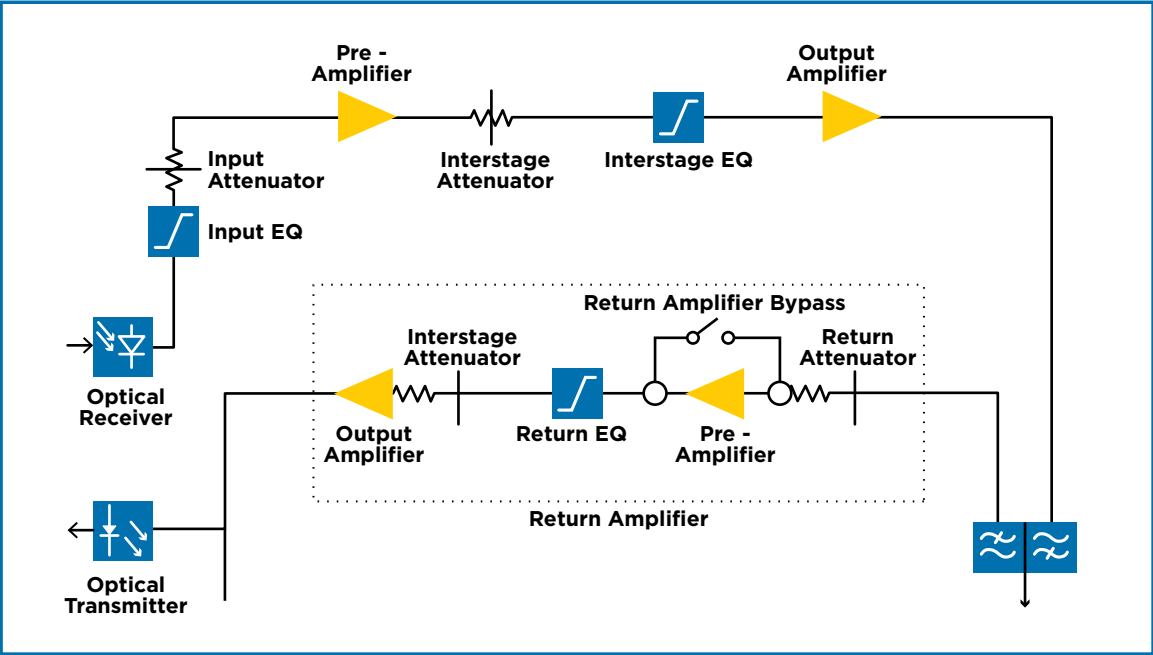
Optical Nodes • SMATV • MDU

Line Amplifiers • Edge QAM

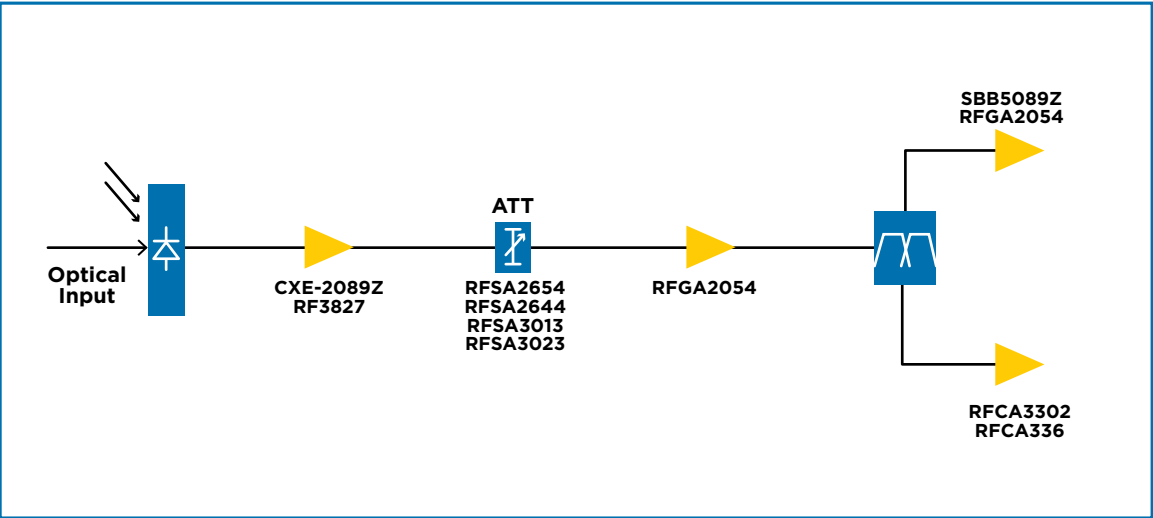
Head Ends • FTTH • RFoG • CPE

Digital Video Broadcast

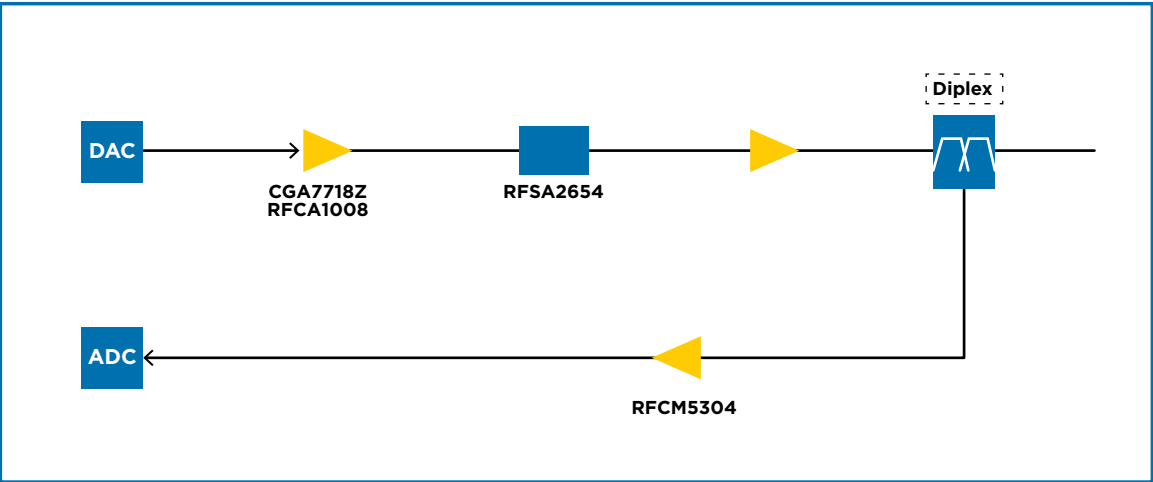
CATV
Optical Node



SMATV
Optical Receiver



DOCSIS 3.0



Technology	Amplifier Type	P/N	Frequency Range	Gain Type	Input/Output RL	CTB (typ)	CSO (typ)	CTB/CSO Test Condition			NF (typ)	Vcc	Icc (typ)	Package
			MHz	dB	dB	dB	dB	Channels	Output Power	Tilt				
								CH	dBmV	dB				
High Power Push-Pull PA														
GaN	PP	RFCM2680	40-1000	23.0	20/20	-73 -72	-75 -73	79A+75D 79A+75D	60.0	18	3.0	24	430 370	MCM 9x8
GaN	PD	RFCM3050	40-1000	25.0	17/18	-75	-70	79A+75D	56.0	13.4	5.0	24	420	MCM 11x 8.5
GaN	PP	RFCM3080	40-1000	28.5	17/18	-68	-75	79A+75D	46.0	0	4.5	24	250	MCM 11x 8.5
GaAs	PP	RFAM2790	40-1000	8 to 28	20/18	-67	-70	79A+75D	46.0	0	4.0	12	410	MCM 11x11
GaAs	PP	SPD2226Z	40-1000	15.0	12/18	-84	-76	79CH	34.0	0	2.3	6	500	SOF-26
InGaP	PP	RFCA1008	5-1000	17.4	27/16	-76	-80	79CH	34.0	0	4.0	5	215	SOIC-8
GaAs	PP	RFAM3790	40-1218	8 to 28	18/18	-67	-70	79A+75D	46.0	0	4.0	12	410	MCM 11x11
GaAs	PP	RFCA8828	50-12018	15.0	15/17	-78	-82	79CH	34.0	0	3	5	385	SOIC-8
GaAs	PP	RFCA8830	45-12018	19.5	20/20	-70	-77	79CH	34.0	0	2	5	260	SOIC-8
GaN	PD	RFCM3316	40-1218	23.0	18/18	-80	-80	79A+75D	60.0	22	3.0	24	430	MCM 9x8

General MMIC

InGaP	Single	RFCA3302	40-1000	21.5	15/13	-83	-65	79	26	0	3.0	5	125	SOT-89
GaAs	Single	RFCA3306	50-1000	22.0	13/15	-87	-60	79	29	0	3.0	8	140	SOT-89
GaAs	Single	CXE2089Z	50-1000	20.0	13/14	-75	-65	79	20	0	1.5	7	105	SOT-89
InGaP	Single	CGB1089Z	50-1000	16.0	19/15	-77	-65	79	25	0	3.5	5	80	SOT-89
GaAs	Single	RF2317	DC-3000	15.0	18/11	-84	-62	79	25	0	4.8	9	180	CJ2BAT0
GaAs	Single	RF3827	5-1500	20.5							1.3	7	120	QFN3x3
GaAs	Single	RF2312	DC-2500	16.0	17/20	-80	-64	79	26	0	4.3	5	100	SOIC-8
InGaP	PP	RFC1008	5-1000	17.4	27/16	-76	-80	79	34	0	4.0	5	215	SOIC-8
GaAs	PP	RFC8818Z	50-1000	17.0	10/15	-64	-62	77	34	0	2.0	7	220	SOIC-8
GaAs	PP	CGA6618Z	5-1000	14.0	15/12	-70	-81	79	34	0	5.4	5	160	ESOP-8
SiGE	PP	CGA3318Z	5-900	12.0	17/12	-68	-70	79	34	0	4.3	4	150	ESOP-8

General Reverse Path PA

Technology	I/O Config	P/N	Frequency Range MHz	Gain Type dB	Input/ Output RL dB	CTB (max) dB	CSO (max) dBc	CTB/CSO/XMOD Test Condition			NF dB	Vcc V	Icc (max) mA	Package
								Channels CH	Output dBMV	Tilt dB				
GaAs	Single	CXE2089Z	5-1000	20	13/14						1.5	7	105	SOT-89
InGaP	PP	RFC1008	5-1000	17.4	22/22	-67	-80	7	50	0	4.0	5	217	SOIC-8
InGaP	PP	CGR0118Z	5-65	25.4	20/20	-60	-80	7	50	0	3.0	5-12	130	SOIC-8
InGaP	PP	CGR0218Z	5-210	17.3	22/22	-67	-80	7	50	0	4.0	5	217	SOIC-8
GaAs	Single	RF2317	DC-3000	15.0	18/11						4.8	8	180	CJ2BAT0
GaAs	Single	RF2312	DC-2500	16.0	17/20						4.3	5	100	SOIC-8
GaAs	Single	RF3827	5-1500	20.5							1.5	7	120	QFN3x3

CATV Set-Top Application-Specific ICs

Type	P/N	Impedence Ω	Frequency Range MHz	Gain dB	AGC Range dB	NF dB	Vcc V	Icc mA	Package
Out-of-Band Tuner	RFFC0085	75	50-150	77.0	55.0	15.0	3.3	106	QFN
Out-of-Band Tuner	S510065-55Z	75	50-150	82.0	55.0	13.0	3.3	117	QFN

Attenuator and Switch

Technology	Type	P/N	Impedence Ω	Frequency Range MHz	Input/ Output RL dB	IP0.5dB dB	Gain Range dB	CTB (max) dB	CSO (max) dBc	CTB/CSO/XMOD Test Condition			Vcc V	Package
										Channels CH	Output Power dBMV	Tilt dB		
GaAs	DA	RFS2654	75	5-2000	17.5/17.5	30	31.5						5	MCM 24-Pin
SI	VA	RFS3013	75	50-3000	10/10	30	35.0	-70	-65	112	39	0	5	QFN 16-Pin
SI	VA	RFS3023	75	50-3000	10/10	30	35.0	-70	-65	112	39	0	3.3	QFN 16-Pin
SI	Switch	RFSW1012	75	5-2500	15/15	33	NC	-100	-100	137	41	0	3	QFN 12-Pin

Technology	Amplifier Type	P/N	Frequency Range	Gain Type	Input/Output RL	CTB (typ)	XMOD (typ)	CSO (typ)	CIN (typ)	CTB/CSO/XMOD Test Condition		NF (typ)	Vcc	Icc (typ)	Package
			MHz	dB	dB	dBc	dBc	dB	dB	Output Power	Tilt	dB	V	mA	

High Output Power GaN Module

GaN	PD	RFPD9950	40-1000	25	16/16	-75	-70	-79	66	56.4@1000M	13.4	5.0	24	420	SOTJ115J
GaN	PD	RFPD9951	40-1000	25	16/16	-72	-66	-70	64	56.4@1000M	13.4	5.0	24	370	SOTJ115J
GaN	PD	RFPD2710	40-1000	25	16/17	-78	-71	-71	66	56.4@1000M	13.4	4.0	24	450	SOTJ115J
GaN	PD	D10040230PH1	40-1000	23	16/17	-77	-71	-71	66	59@1000M	7.0	4.0	24	450	SOTJ115J
GaN	PD	D10040200PH1	40-1000	20	16/17	-77	-71	-71	66	59@1000M	7.0	4.0	24	450	SOTJ115J
GaN	PD	RFPD2940	40-1000	21.5	16/17	-73	-68	-68	57	62@1000M	18.0	3.7	24	470	SOTJ115J

Low Power Consumption GaN Module

GaN	PD	D10040200PL1	40-1000	20	16/17	-70	-65	-71	62	50@550M	7.0	4.0	24	380	SOTJ115J
GaN	PD	D10040230PL1	40-1000	23	16/17	-70	-65	-71	62	50@550M	7.0	4.0	24	380	SOTJ115J
GaN	PP	RFPP2870	40-1000	28	17/17	-68	-64	-75	66	46	0	4.5	24	250	SOTJ115J
GaN	PP	RFPP9850	40-1000	28	17/17	-68	-64	-75	65	46	0	4.5	24	250	SOTJ115J

Adjustable Current GaN Module

GaN	PD	RFPD2650	40-1000	23	16/17	-78	-71	-71	67	50@550M	7.0	3.5	24	430	SOTJ115J
GaN	PD	RFPP2930	40-1000	25	16/17	-64	-60	-70	66	56.4@1000M	13.4	3.0	24	430	SOTJ115J
GaN	PD	RFPD2580	40-1000	23	15/16	-77	-71	-71	66	56.4@1200M	13.4	4.5	24	450	SOTJ115J
GaAs	PP	RFPP2590	40-1000	23	16/17	-64	-60	-70	66	44@1200M	0.0	6.5	24	240	SOTJ115J

Opal Series Low Cost Module

GaN	PD	RFPD9950	40-1000	25	16/16	-75	-70	-79	66	56.4@1000M	13.4	5.0	24	420	SOTJ115J
GaN	PD	RFPD9951	40-1000	25	16/16	-72	-66	-70	64	56.4@1000M	13.4	5.0	24	370	SOTJ115J
GaN	PP	RFPP9850	40-1000	28	17/17	-68	-64	-75	65	46	0	4.5	24	250	SOTJ115J

High Gain GaAs CATV PA Module

Technology	Amplifier Type	P/N	Frequency Range	Gain Type	Input/Output RL	CTB	XMOD	CSO (typ)	CTB/CSO/XMOD Test Condition			NF (typ)	Vcc	Current (max)	Package
			MHz	dB	dB	dBc	dB	dB	Channels	Output Power	Tilt	dB	V	mA	

GaAs	PD	D10040300GTH	40-1000	30	16/17	-63	-60	-63	79	52	7	4.5	24	440	SOT115J
GaAs	PD	D10040270GTH	40-1000	27	16/17	-63	-60	-65	79	52	7	5.0	24	440	SOT115J
GaAs	PD	D10040270GT	40-1000	27	16/17	-62	-58	-63	132	44	0	5.0	24	375	SOT115J
GaAs	PD	D10040270GTL	40-1000	27	16/17	-59	-56	-61	132	44	0	5.0	24	325	SOT115J
GaAs	PD	D10040250GTH	40-1000	25	16/17	-63	-60	-65	79	52	7	5.5	24	440	SOT115J
GaAs	PD	D10040250GT	40-1000	25	16/17	-62	-58	-63	132	44	0	5.5	24	375	SOT115J
GaAs	PD	D8740320GTH	40-870	32	17/18	-63	-60	-63	79	52	7	4.5	24	440	SOT115J
GaAs	PD	D8740320GT	40-870	32	17/18	-60	-55	-63	112	50	10	4.5	24	375	SOT115J
GaAs	PD	D8740270GTH	40-870	27	17/18	-56	-50	-62	112	54	10	5.0	24	440	SOT115J
GaAs	PD	D8740270GT	40-870	27	17/18	-60	-55	-63	112	50	10	5.0	24	375	SOT115J
GaAs	PD	D8740250GTH	40-870	25	17/18	-56	-51	-64	112	54	10	5.5	24	440	SOT115J
GaAs	PD	D8740250GT	40-870	25	17/18	-60	-55	-63	112	50	10	5.5	24	375	SOT115J
GaAs	PP	S10040340	40-1000	34	16/16	-64	-58	-63	112	44	0	4.5	24	280	SOT115J
GaAs	PP	S10040280GT	40-1000	28	18/17	-65	-58	-63	132	40	0	5.0	24	260	SOT115J

CATV Reverse Path Module

Technology	I/O Config	P/N	Frequency Range	Gain Type	Input/Output RL	CTB	XMOD	CSO (max)	Power Output at Test	NF (typ)	Vcc	Current (max)	Package
			MHz	dB	dB	dBc	dB	dB	dBmV	dB	V	mA	

Si	Differential	R06054000L	5-65	40	20/20	-72	-64	-70	50	4.5	24	160	SOT115J
Si	Differential	R0605300L	5-65	30	20/20	-64	-55	-68	50	3.0	24	140	SOT115J
Si	Differential	R0605250L	5-65	25	20/20	-69	-59	-70	50	3.0	24	140	SOT115J
Si	Differential	RFRP2920	5-100	38.3	20/20	-69	-61	-68	50	4.2	24	160	SOT115J
Si	Differential	R1005300L	5-100	30	20/20	-61	-51	-68	50	3.0	24	140	SOT115J
Si	Differential	R1005250L	5-100	25	20/20	-65	-55	-70	50	3.4	24	140	SOT115J
Si	Differential	R2005350L	5-200	35	20/20	-57	-50	-66	50	5.0	24	160	SOT115J
Si	Differential	R2005300L	5-200	30	20/20	-66	-57	-70	50	3.0	24	140	SOT115J
Si	Differential	R2005280L	5-200	28	20/20	-66	-57	-70	50	3.0	24	140	SOT115J
Si	Differential	R2005240	5-200	24	20/20	-69	-60	-67	50	3.5	24	235	SOT115J
Si	Differential	R3005300L	5-300	30	16/16	-60	-53	-68	50	6.3	24	160	SOT115J
Si	Differential	RFRP3120	5-300	35.8	16/16	-70	-63	-75	50	5.1	24	158	SOT115J
Si	Differential	R3005250L	5-300	25	16/16	-57	-48	-68	50	3.5	24	140	SOT115J

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