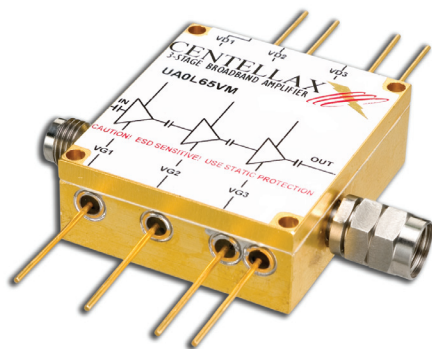


Microwave Amplifier Modules



UA0L30VM / UA0L65VM
100 KHz to 30 GHz/65 GHz Amplifier Module

The UA0L30VM and UA0L65VM amplifiers are general purpose broadband amplifiers designed for microwave communications, test equipment, and military systems. It's small size and exceptional performance make it a versatile gain block which can improve power and gain in a single hermetically sealed package potentially replacing 2 or 3 narrower band amplifiers.

- Applications:
- mm-wave systems
 - High frequency test instrumentation
 - Broadband gain amplifier

Part	Freq	Gain (dB)	Flatness (dB)	NF (dB)	Psat (dBm)	DC Bias (V, mA)	Conn. Type
UA0L30VM	100 kHz - 30 GHz	30	2	5.5	22	7,475	2.92 mm "K"
UA0L65VM	100 kHz - 26 GHz	30	2	5.5	23	7,475	2.4 mm
	26 - 46 GHz	27	2	5.5	23		

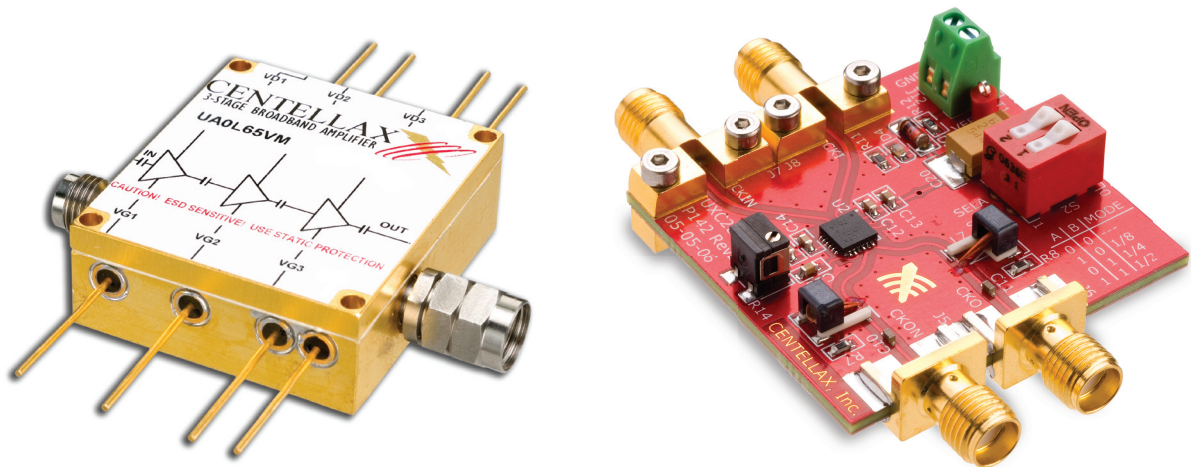
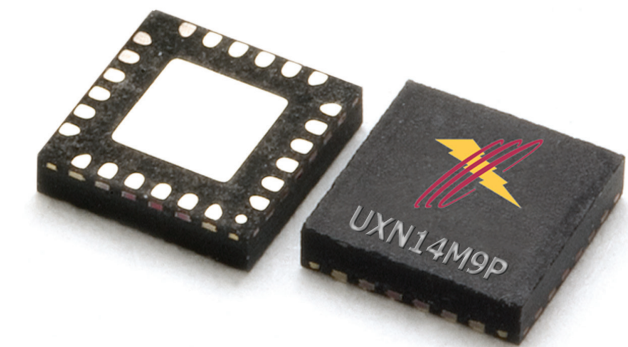
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MMIC AMPLIFIERS
FREQUENCY DIVIDERS/PRESCALERS
AMPLIFIER MODULES



Microwave IC’s and Prescaler Products



MMIC AMPLIFIERS <30GHz

Part	Feature	Freq (GHz)	Gain (dB)	Flatness (dB)	NF (dB)	Psat (dBm)	P1dB (dBm)	Bias	Chip Size (um)
UA5M15MP	no choke	5-18	13	±0.4	7	16	13.5	130mA @ 5V	3 x 3 mm QFN
UA5M20MC	no choke	5-18	15	±0.5	7	20	18	135mA @ 5V	920 x 920
		4.5-20	14.5	±1	7.5	20	18		
UATS30S1C	low noise	1.5-20	11	±0.75	4.5	16.5	14	85mA @ 4.5V	1640 x 835
		DC-30	10.5	±1.5	4.5	16.5	14		
UATM30S2C	general	1.5-20	10.25	±0.5	7.5	21	18	150mA @ 7V	1640 x 835
		DC-30	10.25	±0.75	7.5	21	18		
UATL30MC	med power	1.5-20	17.5	±0.75	5.5	24.5	21.5	250mA @ 8V	2390 x 920
		DC-26.5	16.5	±1.25	5.5	23.5	19		
		DC-30	15.5	±1.5	5.5	22	18		
UAPM30MC	low noise	DC-30	16.5	±1.5	5.5	20	17	150mA @ 5V	2390 x 920
UATM30M2C	low noise	6-20	18	±0.3	2.5	20	17	150mA @ 5V	2390 x 920
		1.5-20	18	±0.6	5	20	17		
		DC-30	16	±1.5	5.5	16.5	13.5		
UATL30S1C	med power	DC-30	10.5	±0.75	8	23	20.5	250mA @ 8V	1640 x 835

MMIC AMPLIFIERS 45GHz

Part	Feature	Freq (GHz)	Gain (dB)	Flatness (dB)	NF (dB)	Psat (dBm)	P1dB (dBm)	Bias	Chip Size (um)
UAPL45SC	med power	DC-45	10	±0.75	9	20	17	250mA @ 8V	1640 x 920
UAPM45SC	general	DC-45	10	±1.00	7.5	19	16	150mA @ 7V	1640 x 920
UAPS45SC	low noise	DC-45	11	±1.25	4.5	14.5	11.5	85mA @ 4.5V	1640 x 920
UATL45S1C	med power	DC-45	10	±1.00	9	21	15.5	250mA @ 8V	1640 x 835

MMIC AMPLIFIERS <65GHz

Part	Feature	Freq (GHz)	Gain (dB)	Flatness (dB)	NF (dB)	Psat (dBm)	P1dB (dBm)	Bias	Chip Size (um)
UAPM65S2C	general	1.5-40	10.25	±1	7.5	20	17	150mA @ 7V	1640 x 920
		DC-50	10	±1.25	9	18	15		
		DC-65	10	±1.25	-	-	-		
UAPL65SC	med power	1.5-40	10	±0.75	9	22.5	18	250mA @ 8V	1640 x 920
		DC-50	9.5	±0.75	10.5	19.5	16.5		
		DC-65	7.5	-	-	-	-		
UAPS65SC	low noise	DC-65	10	±1.5	5	14.5	11	85mA @ 4.5V	1640 x 920

MMIC FET Attenuators

Model Number	Freq Range (GHz)	Insertion Loss (GHz)	Dynamic Range (dB)	Return Loss	P1dB (dBm)	Control	Chip Size (um)
UVD50SC	0-50	<5	27	>10	>5	Analog	1640x920
UVDM40SC	0-40	<3	17	>8	>8	Analog	1640x920

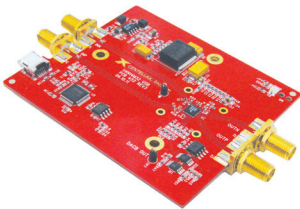
MMIC FET Switches

Model Number	Freq Range (GHz)	Function	Speed (nS)	Insertion Loss (dB)	Isolation (dB)	Return Loss (dB)	P1dB (dBm)	Control	Chip Size (um)
USD30SDC	0-30	SPDT	2	<4	>35	>7	>13.5	Analog	1100x920

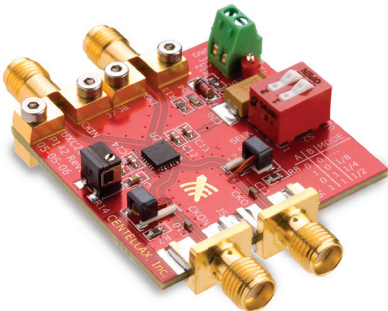
FREQUENCY DIVIDERS/PRESCALERS: SURFACE MOUNT QFN

Part	Freq (GHz)	Function	Pout (dBm)	10khz ssb noise (dBc/Hz)	Pdiss	Package
UXN6M9P	DC-9	Div-by-8,9...510,511	+4	-150	0.46W	6x6mm QFN
UXN14M9P	DC-14	Div-by-8,9...510,511	+4	-147	1.1W	6x6mm QFN
MX1DS10P	DC-15	Ultra-variable Div-by-2^1...2^20	-4	-153	1.4W	6x6mm QFN
UXM15P	DC-15	Div-by-4/5/6/7/8/9, or Div-by-2/4/8	+5	-153	0.6W	4x4mm QFN
UXC20P	DC-20	Div-by-2/4/8	+5	-153	0.5W	4x4mm QFN
UXD20P	DC-20	Div-by-1/2/4/8	+5	-153	0.43W	4x4mm QFN
UXD20K	DC-7	Div-by-1/2/4/8	+5	-153	0.43W	4x4mm, Ceramic
SuperDivider UXN14M32K	DC-15	Div-by-1 to 2 ³² -1	+4	-150	0.3-0.8W	4x4mm, Ceramic

FREQUENCY DIVIDERS/PRESCALERS: EVALUATION BOARDS

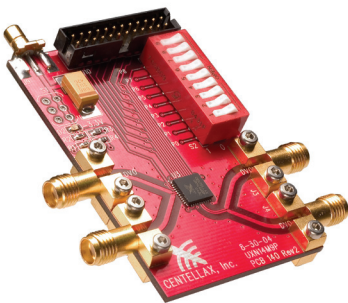


UXN14M32KE
DC-15GHz Divide-by-1 to 2³²-1 SuperDivider Eval Board
- 32-bit programmable divider (UXN14M32K: 4x4 mm Ceramic) eval
- Divide ratios: 1 to 2³²-1 SuperDivider Eval Board
- Low SSB phase noise
- Single-ended or differential drive
- Serial Control Lines
- SPI Windows GUI available for programming eval board



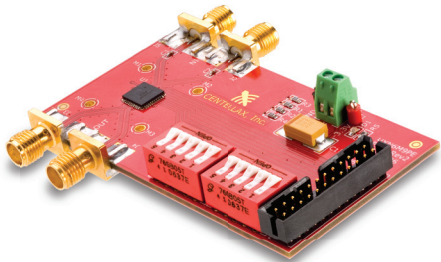
UXC20PE
DC-20GHz Divide-by-2/4/8 Eval Board
Low-noise programmable divider (UXC20P: 4x4mm QFN) eval

UXD20PE
DC-20GHz Divide-by-2/4/8 & -1/2/4/8 Eval Board
Low-noise programmable divider (UXD20P: 4x4mm QFN) eval
Also use to evaluate the UXD20K ceramic part



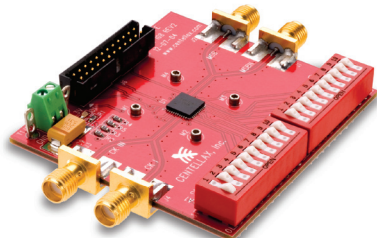
UXN14M9PE
14GHz Programmable Integer Prescaler / Eval Board

- UXN14M9P prescaler
- 6x6mm QFN
- DC to 14GHz operating range
- Variable divide ratios: 8 to 511 (contiguous)
- Single or differential operation



UXN6M9PE
9GHz Programmable Integer Prescaler / Eval Board

- UXN6M9P prescaler
- 6x6mm QFN
- DC to 9GHz operating range
- Variable divide ratios: 8 to 511 (contiguous)
- Single or differential operation



MX1DS10PE
15GHz Ultra-Variable Broadband Prescaler / Eval Board

- MX1DS10P prescaler
- 6x6mmQFN
- DC to 15GHz operating range
- Variable divide ratio: 2 to 220 (2, 4, 8, 16 ...)
- Single or differential operation