

MMICs

Selection Guide

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MIXER PRODUCTS

Function	P/N	Operational RF frequency	Operational LO frequency	IF bandwidth	Conversion Gain	LO input power	P-1dB	Case	Market
Mixer subH	CHM1290-99F	20-30GHz	10-15GHz	DC-6GHz	-10dB	-4dBm	0dBm	die	Telecom
I/Q Mixer subH	CHM1291-99F	25-32GHz	12-15.5GHz	0.1-3GHz	-11dB	5dBm	1dBm	die	Telecom
Mixer	MFC-PO10897	25-35GHz	5.5-9.5GHz	DC-3GHz	-11dB	10dBm	3dBm	die	Telecom
Mixer	CHR2294-99F*	25-35GHz	11-19GHz	DC-3GHz	-11dB	9dBm	2.5dBm	die	Telecom
I/Q Mixer subH	MFC-PO10892	35-45GHz	16-24GHz	0.1-3GHz	-11dB	10dBm	1dBm	die	Telecom
I/Q Mixer	MFC-PO9828	55-65GHz	27.5-32.5GHz	DC-5GHz	-12dB	10dBm	0dBm	die	Telecom
Mixer	CHM2179a99F*	76-77GHz	76-77GHz	DC-100MHz	-7.5dB	5dBm	0dBm	die	Automotive
Mixer	CHM2179b99F	76-77GHz	76-77GHz	DC-100MHz	-8dB	5.5dBm	0dBm	die	Automotive
Mixer	CHM2378a99F	76-77GHz	76-77GHz	DC-100MHz	-7.5dB	7dBm	-	die	Automotive

MULTIFUNCTION PRODUCTS

Function	P/N	Operational RF frequency	Operational LO frequency	IF bandwidth	Conversion Gain	LO input power	P-1dB	Case	Market
I/Q Down conv.	CHR2291-99F	12-17GHz	5.25-7.75GHz	0.25-1.5GHz	10dB	10dBm	-8dBm	die	Telecom
Down conv.	CHR2391-99F	12-17GHz	5.25-7.75GHz	0.25-1.5GHz	12dB	10dBm	-8dBm	die	Telecom
I/Q Down conv.	CHR2292-99F	17-20GHz	7.5-10GHz	0.25-1.5GHz	13dB	10dBm	-10dBm	die	Telecom
I/Q Down conv.	CHR2293-99F	20-24GHz	9.25-12.75GHz	0.25-1.5GHz	11dB	10dBm	-8dBm	die	Telecom
Down conv.	CHR2411-QDG	20-24GHz	20-24GHz	DC-1MHz	23dB	5dBm	-21dBm	QFN	Automotive
I/Q Down conv.	CHR2295-99F	24-30GHz	12-15GHz	0.25-1.5GHz	11dB	10dBm	-10dBm	die	Telecom
I/Q Down conv.	CHR2296-99F	36-40GHz	17-20GHz	0.25-1.5GHz	11dB	10dBm	-10dBm	die	Telecom
Down conv.	CHR2297-99F	36-44GHz	30-39GHz	2-6GHz	2.5dB	0dBm	+8dBm	die	Telecom

Function	P/N	Operational RF frequency	Downlink Sensitivity	Downlink Frequency	Uplink Conversion Gain	Uplink Modulation input power	Standby Consumption	Case	Market
Transponder	CHR2244-QDG	5.7-5.8GHz	-43dBm	250-500KHz	-4dB	0.1-10MHz	8µA	QFN	Automotive

60GHz RADIO PRODUCTS

Function	P/N	Operational Frequency		Noise figure	Gain	Gain Flatness	P-1dB	Case	Market
		Low	High						
LNA	CHA2157-99F	55GHz	60GHz	3.5dB	10dB	±1dB	15dBm	die	Telecom
LNA/MPA	CHA2159-99F	55GHz	65GHz	4dB	20dB	±1dB	15dBm	die	Telecom

Function	P/N	Input frequency		Output frequency		Input power	Conversion gain	Case	Market
		Low	High	Low	High				
X4 multiplier	MUX-P09824*	6.25GHz	8.25GHz	25GHz	33GHz	12dBm	0dB	die	Telecom
X3 multiplier	CHX2093a99F	9GHz	10GHz	27GHz	30GHz	7dBm	-2.5dB	die	Telecom
X2 multiplier	MUX-P09773*	12.5GHz	16.5GHz	25GHz	33GHz	10dBm	+2dB	die	Telecom
X2 multiplier	CHX2192-99F*	27GHz	33GHz	54GHz	66GHz	12dBm	-1dB	die	Telecom
X2 multiplier	CHX2190a99F	28GHz	30GHz	56GHz	60GHz	3dBm	-4dB	die	Telecom

Function	P/N	Operational RF frequency	Operational LO frequency	IF bandwidth	Conversion Gain	LO input power	P-1dB	Case	Market
I/Q Mixer	MFC-PO9828*	55-65GHz	27.5-32.5GHz	DC-5GHz	-12dB	10dBm	0dBm	die	Telecom

AUTOMOTIVE RADAR & ISM PRODUCTS

Function	P/N	Operational Frequency		Case	Market
		Low	High		
Transponder	CHR2244-QDG	5.7GHz	5.8GHz	QFN	ISM
VCO	VCO-PO13341-97F	12.6GHz	12.8GHz	die	Automotive
LNA	CHA2093-99F	20GHz	30GHz	die	Automotive
LNA	CHA2193-99F	20GHz	30GHz	die	Automotive
Down conv.	CHR2411-QDG	20GHz	24GHz	QFN	Automotive
VCO	CHV2411-QDG	24GHz	24.25GHz	QFN	Automotive
LNA	CHA2411-QDG	20GHz	25GHz	QFN	Automotive
SP4T SWITCH	CHS2411-QDG	20GHz	25GHz	QFN	Automotive
VCO	CHV2240-99F	37.5GHz	39GHz	die	Automotive
DR0/Mixer	CHV2241-99F	37.5GHz	39GHz	die	Automotive
VCO	CHV2242c98F	38GHz	38.5GHz	die	Automotive
VCO	CHV2243a99F	38GHz	38.5GHz	die	Automotive
Mixer	CHM2378a99F	76GHz	77GHz	die	Automotive
Mixer	CHM2179a99F	76GHz	77GHz	die	Automotive
Mixer	CHM2179b99F	76GHz	77GHz	die	Automotive
Frequency multiplier	CHU2277-99F	76GHz	77GHz	die	Automotive
Frequency multiplier	CHU2277a98F	76GHz	77GHz	die	Automotive
Frequency multiplier	CHU3277-98F	76GHz	77GHz	die	Automotive
Frequency multiplier	CHU3377-98F	76GHz	77GHz	die	Automotive
LNA	CHA1077a98F	76GHz	77GHz	die	Automotive
APS	CHA2177-99F*	76GHz	77GHz	die	Automotive

DISCRETE PRODUCTS

Transistor

Function	P/N	Operational Frequency		Noise Figure	Gain	Case	Market
		Low	High				
Transistor	EC2612-99F	DC	40GHz	1.5dB	9.5dB	die	Defence

Diode

Function	P/N	Cutt-off Frequency		Ideality factor	Anode Cathode Break down voltage	Case	Market
		Gate Width	Frequency				
Diode	DBES 105a99F	5µm	3THz	1.2	<-5V	die	Defence

All UMS products listed in this selection guide are ROHS compliant except the CND2047-DAF.

* Please contact our Marketing & Sales department for detailed information on these products (mktsales@ums-gaas.com)
All datasheets for these products are available on our website : www.ums-gaas.com

New products

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