



A Selection of Hittite Components for MICROWAVE & MMWAVE

MICROWAVE & MILLIMETERWAVE RADIO, 7 to 23 GHz

Function	7 / 8 GHz	11 GHz	13 GHz	15 GHz	18 GHz	23 GHz
Mixer: Fundamental	HMC129LC4 HMC144LC4 HMC219MS8E HMC220MS8E HMC553 HMC553LC3B HMC558 HMC558LC3B HMC663LC3	HMC144LC4 HMC411MS8GE HMC412MS8GE HMC553 HMC553LC3B HMC558 HMC558LC3B HMC-C051 HMC663LC3	HMC144LC4 HMC411MS8GE HMC412MS8GE HMC553 HMC553LC3B HMC558 HMC558LC3B HMC-C051	HMC144LC4 HMC260LC3B HMC412MS8GE HMC554 HMC554LC3B HMC558 HMC558LC3B HMC-C051	HMC144LC4 HMC260LC3B HMC292LC3B HMC554 HMC554LC3B HMC-C051	HMC260LC3B HMC292LC3B
Mixer: Sub-Harmonic				HMC258LM3	HMC258LC3B HMC258LM3 HMC337	HMC264LC3B HMC338LC3B
PLLs: Synthesizer ICs	HMC698LP5E HMC699LP5E HMC700LP4E HMC701LP6CE					
Switch	HMC547LP3E HMC641	HMC607 HMC641	HMC547LP3E HMC641	HMC607 HMC641	HMC547LP3E HMC641	
Signal Generator	HMC-T2000					
VCO & PLO: **Requires X2 or X4	HMC466LP4E HMC505LP4E HMC506LP4E HMC532LP4E HMC586LC4B HMC587LC4B	HMC513LP4E HMC515LP5E HMC534LP4E HMC582LP5E HMC588LC4B HMC735LP5E	HMC513LP4E HMC529LP4E HMC584LP5E	HMC529LP4E HMC531LP5E HMC535LP5E HMC632LP5E HMC736LP4E HMC737LP4E	HMC429LP4E**	HMC431LP4E** HMC738LP4E HMC739LP4E
VGA: Analog	HMC694 HMC694LP4E	HMC694 HMC694LP4E	HMC694 HMC694LP4E	HMC694 HMC694LP4E	HMC694 HMC694LP4E	

MICROWAVE & MILLIMETERWAVE RADIO, 26 to 86 GHz

Function	26 / 28 GHz	32 / 38 GHz	32 - 43 GHz	44 - 66 GHz	71 - 86 GHz
Low Noise Amplifier	HMC341LC3B HMC517LC4 HMC519LC4 HMC635 HMC693	HMC263 HMC566 HMC635 HMC693	HMC-ALH376	HMC-ALH382	HMC-ALH459 HMC-ALH509
Driver Amplifier	HMC383LC4 HMC499LC4 HMC635LC4	HMC300LM1 HMC383LC4 HMC635LC4	HMC-APH403 HMC-APH473 HMC-APH510	HMC-ABH209 HMC-ABH241 HMC-ABH403	HMC-AUH317 HMC-AUH318 HMC-AUH320
Power Amplifier	HMC499LC4 HMC693 HMC-APH196 HMC-APH460 HMC-APH462 HMC-APH596 HMC-APH608	HMC693 HMC-ABH264 HMC-APH403 HMC-APH473 HMC-APH510 HMC-APH596	HMC693 HMC-ABH264 HMC-APH403 HMC-APH473 HMC-APH510 HMC-AUH256	HMC-ABH209 HMC-ABH241 HMC-ABH403	HMC-ALH508 HMC-AUH317 HMC-AUH318 HMC-AUH320



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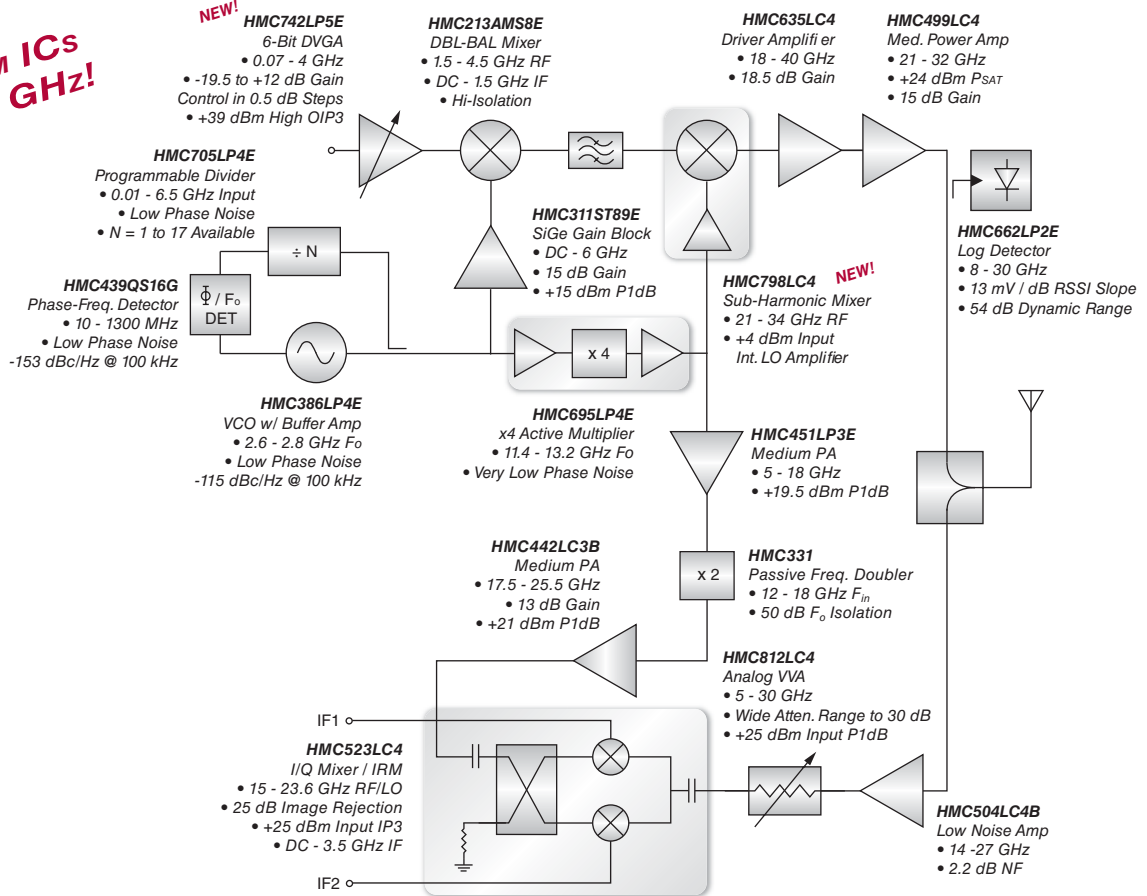
Function	26 / 28 GHz	32 / 38 GHz	32 - 43 GHz	44 - 66 GHz	71 - 86 GHz
Wideband (Distributed) Amplifiers	HMC-ALH140 HMC-ALH216 HMC-ALH244 HMC-ALH311 HMC-ALH313 HMC-ALH364 HMC-ALH369 HMC-ALH445 HMC-ALH476 HMC-AUH232 HMC-AUH249 HMC-AUH256 HMC-AUH312	HMC635 HMC-ALH140 HMC-ALH244 HMC-ALH310 HMC-ALH313 HMC-ALH364 HMC-ALH369 HMC-ALH376 HMC-ALH445 HMC-ALH476 HMC-AUH249 HMC-AUH256	HMC-ALH140 HMC-ALH244 HMC-ALH310 HMC-ALH313 HMC-ALH364 HMC-ALH369 HMC-ALH376 HMC-ALH445 HMC-AUH232 HMC-AUH249 HMC-AUH256 HMC-AUH312	HMC-ALH376 HMC-AUH312	
Attenuator: Analog	HMC712LP3CE HMC812LC4 HMC-VVD102	HMC-VVD106	HMC-VVD106	HMC-VVD106	HMC-VVD104
Divide-by-4	HMC447LC3				
Multiplier: Active x2	HMC448LC3B HMC577LC4B HMC578LC3B HMC598	HMC449LC3B HMC578LC3B HMC579 HMC598	HMC598	HMC598 HMC-XDH158	
Multiplier: Active x4					
Multiplier: Passive x2 / x3	HMC331	HMC331			
I/Q Receiver	HMC572 HMC572LC5				
I/Q Mixer / IRM	HMC524 HMC524LC3B HMC-MDB172	HMC404 HMC555 HMC556	HMC-MDB171 HMC-MDB172	HMC-MDB171 HMC-MDB207	
Mixer: Fundamental	HMC292LC3B HMC329LC3B HMC557 HMC557LC4 HMC560 HMC560LM3	HMC294 HMC329LM3 HMC560 HMC560LM3		HMC-MDB169	
Mixer: Sub-Harmonic	HMC264LC3B HMC265LM3 HMC338LC3B HMC798LC4	HMC338 HMC339 HMC798LC4		HMC-MDB218	
Power Detectors	HMC662LP3E				
Switch				HMC-SDD112	HMC-SDD112
VCO & PLO: **Requires X2 or X4	HMC515LP5E** HMC531LP5E** HMC639LP4E HMC739LP4E	HMC505LP4E HMC506LP4E			
Switch				HMC-SDD112	HMC-SDD112
VCO & PLO: **Requires X2 or X4	HMC515LP5E** HMC531LP5E**	HMC505LP4E HMC506LP4E			



A Selection of Hittite Components for MICROWAVE & MMWAVE

DOUBLE UPCONVERSION & DIRECT DOWNCONVERSION

**CUSTOM ICs
TO 110 GHz!**



HITTITE'S HIGH FREQUENCY LO SOURCE ALTERNATIVES

PLL & VCO CHIPSET

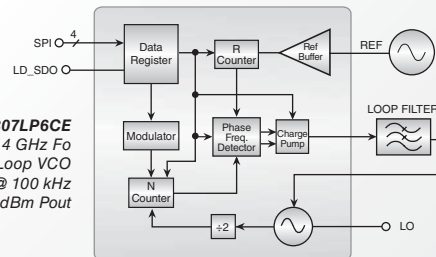
HMC702LP6CE
Fractional-N Synthesizer (PLL)
• 10 KHz to 14 GHz
• Low Phase Noise: -103 dBc
• -227 FOM Integer Mode



HMC584LP5E
VCO with Fo/2 & Fo/4 Output
• 12.5 - 13.9 GHz F₀
• Low Phase Noise
• -110 dBc/Hz @ 100 kHz
• +10 dBm P_{out}

PLL WITH INTEGRATED VCO IC

NEW!
HMC807LP6CE
• 12.4 - 13.4 GHz F₀
• -110 dBc/Hz Open Loop VCO Phase Noise @ 100 kHz
• +8 dBm P_{out}



Typical Microwave / Millimeterwave application is illustrated.

See the full product listing for alternatives to the select HMC products shown in each functional block.

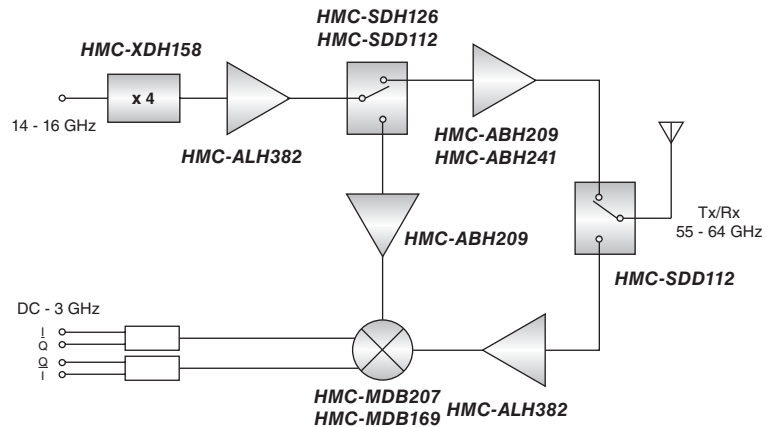


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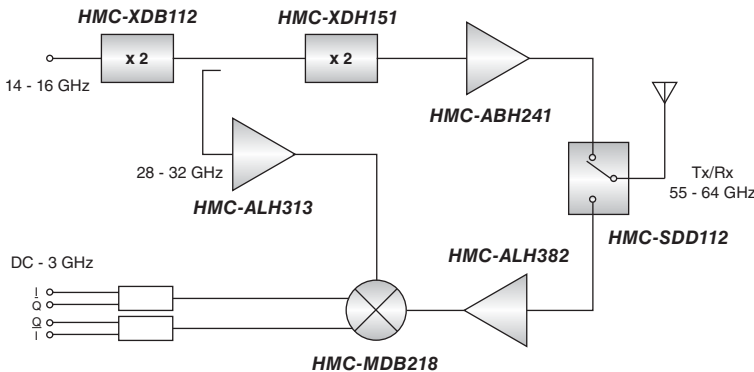
60 GHz Tx/Rx CHIPSET

FEATURES:

- ◆ < 4 dB LNA Noise Figure
- ◆ +18 dBm Psat PA Output Power
- ◆ Sub-Harmonic Option Available
- ◆ I/Q or Double-Balanced Mixer Products Available



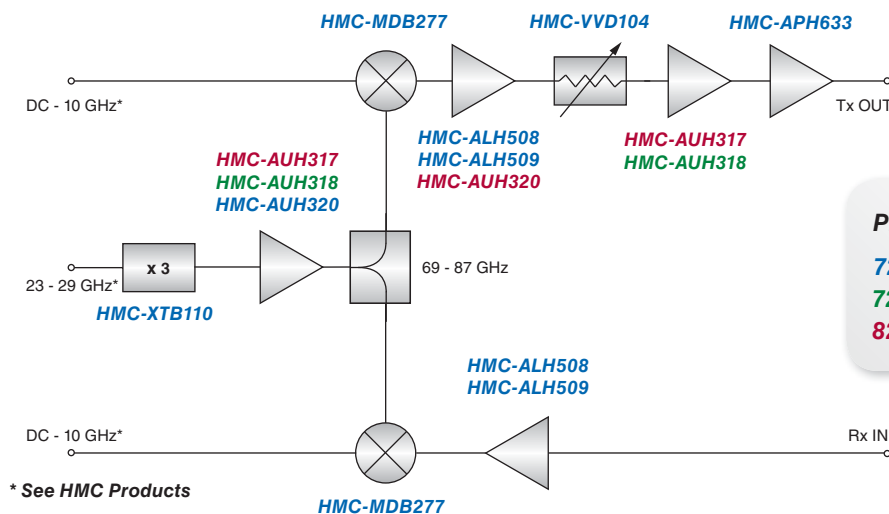
SUB-HARMONIC OPTION FOR 60 GHz CHIPSET



APPLICATIONS:

- ◆ Short Haul High Capacity Links
- ◆ Picocell Mobile Phone Links
- ◆ Network Backbone & Branch Links
- ◆ HDTV Wireless Component Links

72 & 82 GHz Tx/Rx CHIPSET FOR HIGH CAPACITY COMMUNICATION LINKS



Product Key

- 72 & 82 GHz
- 72 GHz Only
- 82 GHz Only

* See HMC Products

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