



A Selection of Hittite Components for

MICROWAVE & MMWAVE



Analog, Digital & Mixed-Signal ICs, Modules, Subsystems & Instrumentation



MICROWAVE & MILLIMETERWAVE RADIO; 6 to 42 GHz, Backhaul Radio Links, Multi-Pt Radios & VSAT

Function	6 / 7 / 8 GHz	10 / 11 GHz	13 / 15 GHz	18 / 23 GHz	26 GHz	38 / 42 GHz
Low Noise Amplifier	HMC392LC4 HMC392LH5 HMC564 HMC564LC4 HMC565 HMC565LC5 HMC902 HMC902LP3E HMC903 HMC903LP3 HMC962LC4 HMC963LC4 HMC1049	HMC516LC5 HMC564 HMC564LC4 HMC565 HMC565LC5 HMC-C059 HMC903 HMC903LP3 HMC962LC4 HMC963LC4 HMC1049	HMC504LC4B HMC516LC5 HMC565 HMC565LC5 HMC903 HMC903LP3 HMC962LC4 HMC963LC4 HMC1049	HMC341LC3B HMC504LC4B HMC517LC4 HMC519 HMC519LC4 HMC565 HMC565LC5 HMC751LC4 HMC962LC4 HMC963LC4 HMC1049 HMC1040LP3E	HMC1040LP3E	HMC1040LP3E
Driver Amplifier	HMC441LP3E HMC451LC3 HMC516LC5	HMC441LP3E HMC451LC3 HMC451LP3E HMC516LC5	HMC441LC3B HMC451LC3 HMC451LP3E HMC490LP5E	HMC383LC4 HMC442LC3B HMC451LP3E HMC498LC4 HMC635 HMC635LC4	HMC635LC4 HMC-AUH249	HMC-AUH312
Gain Block	HMC788LP2E	HMC788LP2E	HMC788LP2E	HMC788LP2E		
Power Amplifier	HMC486LP5E HMC590 HMC590LP5E HMC591 HMC591LP5E HMC637 HMC637LP5E HMC-C074 HMC-C075	HMC487LP5E HMC592 HMC608LC4 HMC952LP5GE HMC1053	HMC489LP5E HMC592 HMC949 HMC950 HMC965LP5E HMC995LP5GE HMC952LP5GE HMC1053 HMC-APH462	HMC498LC4 HMC757LP4E HMC797LP5E HMC863LP4E HMC907LP5E HMC-APH196 HMC-APH462 HMC-APH478 HMC-APH518 HMC-APH596	HMC1024 HMC1029	HMC1014



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Wideband (Distributed) Amplifiers	HMC463LH250 HMC606 HMC606LC5 HMC619 HMC619LP5E HMC633 HMC633LC4 HMC634 HMC634LC4 HMC659LC5 HMC797LP5E HMC907LP5E HMC930 HMC994LP5E HMC998LP5E HMC999 HMC-C050 HMC-ALH102 HMC-ALH435 HMC-ALH444 HMC-ALH482 HMC-AUH232 HMC-AUH249 HMC-AUH312	HMC463LH250 HMC606 HMC606LC5 HMC633 HMC633LC4 HMC634 HMC634LC4 HMC797LP5E HMC907LP5E HMC930 HMC994LP5E HMC998LP5E HMC999 HMC-C050 HMC-ALH102 HMC-ALH435 HMC-ALH444 HMC-ALH482 HMC-AUH232 HMC-AUH249 HMC-AUH312	HMC463LH250 HMC606 HMC606LC5 HMC633 HMC633LC4 HMC634 HMC634LC4 HMC797LP5E HMC907LP5E HMC930 HMC994LP5E HMC998LP5E HMC-C050 HMC-ALH102 HMC-ALH216 HMC-ALH435 HMC-ALH445 HMC-ALH476 HMC-ALH482 HMC-AUH232 HMC-AUH249 HMC-AUH312	HMC463LH250 HMC606 HMC606LC5 HMC633 HMC634LC4 HMC797LP5E HMC907LP5E HMC930 HMC994LP5E HMC998LP5E HMC-C050 HMC-ALH102 HMC-ALH216 HMC-ALH435 HMC-ALH445 HMC-ALH476 HMC-ALH482 HMC-AUH232 HMC-AUH249 HMC-AUH256 HMC-AUH312	HMC930 HMC994LP5E HMC1022	HMC1022
Attenuator: Analog	HMC346LP3E HMC812LC4 HMC976LP3E HMC-C053	HMC346LP3E HMC712LP3CE HMC812LC4 HMC985LP4KE HMC-C053	HMC346LC3B HMC346LP3E HMC712LP3CE HMC812LC4 HMC985LP4KE HMC-C053	HMC346LC3B HMC712LP3CE HMC812LC4 HMC985LP4KE HMC-C053 HMC-VVD102	HMC985 HMC985LP4KE	HMC985 HMC985LP4KE HMC-VVD106
Broadband Time Delay	HMC856LC5					
Data Converters	HMCAD1520 HMCAD1511 HMCAD1510	HMCAD1520 HMCAD1511 HMCAD1510	HMCAD1520 HMCAD1511 HMCAD1510	HMCAD1520 HMCAD1511 HMCAD1510		
DC Power Management: Active Bias Controller	HMC920LP5E HMC980 HMC980LP4E HMC981 HMC981LP3E	HMC920LP5E HMC980 HMC980LP4E HMC981 HMC981LP3E	HMC920LP5E HMC980 HMC980LP4E HMC981 HMC981LP3E	HMC920LP5E HMC980 HMC980LP4E HMC981 HMC981LP3E	HMC920LP5E HMC980 HMC980LP4E HMC981 HMC981LP3E	HMC920LP5E HMC980 HMC980LP4E HMC981 HMC981LP3E
Filters - Tunable	HMC892LP5E HMC893LP5E HMC894LP5E HMC1000	HMC894LP5E HMC897 HMC1000	HMC897 HMC1000	HMC897 HMC897LP4E HMC899LP4E HMC1000	HMC899 HMC899LP4E	
Divide-by-2	HMC361S8GE	HMC364S8GE	HMC492LP3E	HMC492LP3E		
Divide-by-4	HMC362S8GE	HMC365S8GE	HMC493LP3E	HMC447LC3		
Divide-by-8	HMC363S8GE	HMC363S8GE	HMC494LP3E			



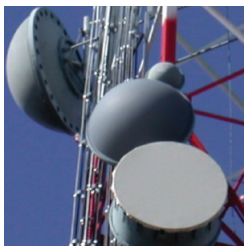
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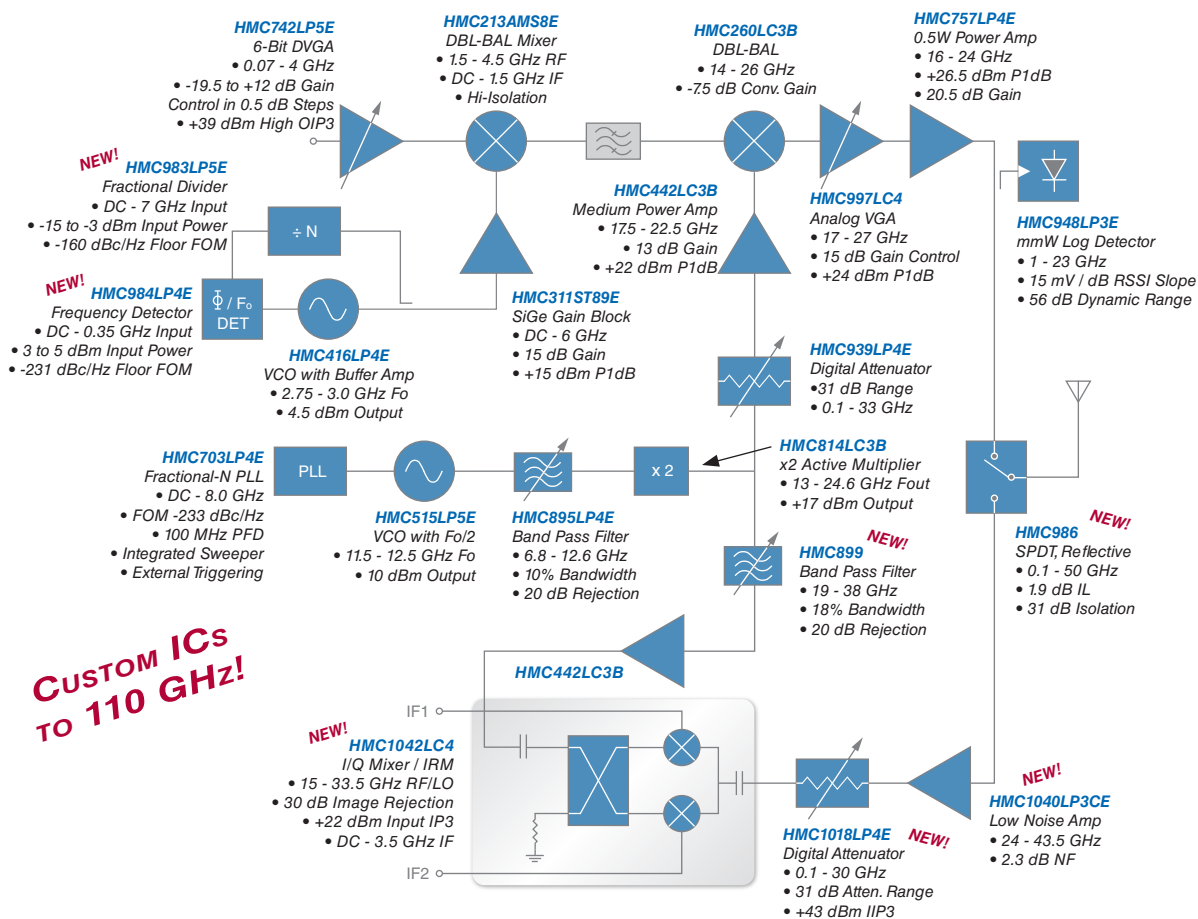
Function	6 / 7 / 8 GHz	10 / 11 GHz	13 / 15 GHz	18 / 23 GHz	26 GHz	38 / 42 GHz
Multiplier: Active X2	HMC368LP4E HMC575LP4E HMC561LP3E	HMC368LP4E HMC573LC3B HMC561LP3E HMC-XDB112	HMC368LP4E HMC573LC3B HMC561LP3E HMC942LP4E HMC-XDB112	HMC448LC3B HMC576 HMC576LC3B		
Multiplier: Active X4		HMC443LP4E	HMC370LP4E HMC-XDH158			
Multiplier: Passive X2	HMC189AMS8E	HMC189AMS8E	HMC204MS8GE	HMC204MS8GE HMC205		
I/Q Downconverter / Receiver	HMC567LC5 HMC951LP4E	HMC905LC5 HMC908LC5	HMC775LC5 HMC869LC5	HMC570 HMC570LC5 HMC571 HMC571LC5 HMC572 HMC572LC5 HMC904LC5 HMC966LP4E HMC967LP4E	HMC977LP4E	
I/Q Upconverter / Transmitter	HMC925LC5 HMC951LP4E	HMC568LC5 HMC924LC5	HMC568LC5 HMC709LC5 HMC924LC5	HMC710LC5 HMC815LC5 HMC819LC5 HMC967LP4E		
I/Q Mixer / IRM	HMC520LC4 HMC525LC4 HMC620 HMC620LC4	HMC521LC4 HMC527LC4 HMC528LC4 HMC775LC5	HMC521LC4 HMC522LC4 HMC527LC4 HMC528LC4 HMC715LC5 HMC775LC5 HMC1042LC4	HMC523 HMC523LC4 HMC524 HMC1041LC4 HMC1042LC4 HMC-MDB172	HMC524LC3B HMC1042LC4 HMC-MDB172	HMC556 HMC-MDB171
IF/Baseband Processing	HMC960LP4E HMC900LP5E	HMC960LP4E HMC900LP5E	HMC960LP4E HMC900LP5E	HMC960LP4E HMC900LP5E	HMC960LP4E HMC900LP5E	HMC960LP4E HMC900LP5E
MicroSynth®	HMC-C083					
Mixer: Fundamental	HMC129LC4 HMC144LC4 HMC219AMS8E HMC220MS8E HMC553 HMC553LC3B HMC558 HMC558LC3B HMC663LC3 HMC773LC3B HMC1048LC3B	HMC144LC4 HMC411MS8GE HMC412MS8GE HMC553 HMC553LC3B HMC558 HMC558LC3B HMC-C051 HMC663LC3 HMC773LC3B HMC1048LC3B	HMC144LC4 HMC260LC3B HMC411MS8GE HMC412MS8GE HMC553 HMC553LC3B HMC554 HMC554LC3B HMC558 HMC558LC3B HMC773LC3B HMC1048LC3B HMC-C051	HMC144LC4 HMC260LC3B HMC292LC3B HMC554 HMC554LC3B HMC773LC3B HMC-C051	HMC329LC3B HMC773LC3B HMC1043LC3	HMC774



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Mixer: Sub-Harmonic			HMC258LM3	HMC258LC3B HMC258LM3 HMC264LC3B HMC337 HMC338LC3B HMC711LC5	HMC338LC3B HMC798LC4	HMC339
Phase Shifter	HMC928LP5E HMC929LP4E	HMC931LP4E	HMC932LP4E	HMC935LP5E HMC933LP4E		
PLLs: Synthesizer ICs	HMC698LP5E HMC699LP5E HMC700LP4E HMC701LP6CE HMC704LP4E	HMC698LP5E HMC699LP5E HMC700LP4E HMC701LP6CE HMC704LP4E	HMC698LP5E HMC699LP5E HMC700LP4E HMC701LP6CE HMC704LP4E	HMC698LP5E HMC699LP5E HMC700LP4E HMC701LP6CE HMC704LP4E		
PLL + VCO	HMC764LP6CE	HMC783LP6CE	HMC807LP6CE			
Power Detector	HMC662LP3E HMC948LP3E	HMC662LP3E HMC948LP3E	HMC662LP3E HMC948LP3E	HMC662LP3E HMC948LP3E	HMC662LP3E	
SDLVA	HMC813LC4B HMC913 HMC913LC4B HMC-C078 HMC-C088	HMC813LC4B HMC913 HMC913LC4B HMC-C078 HMC-C088	HMC813LC4B HMC913 HMC913LC4B HMC-C078 HMC-C088	HMC813 HMC813LC4B HMC913 HMC913LC4B HMC-C078 HMC-C088	HMC813	
Switch	HMC547LP3E HMC641 HMC641LP4E HMC970	HMC607 HMC641 HMC641LP4E HMC970	HMC547LP3E HMC607 HMC641 HMC641LP4E HMC970	HMC547LP3E HMC641 HMC641LP4E HMC971	HMC971 HMC994LC4	HMC975 HMC986
Signal Generator	HMC-T2000 HMC-T2100 HMC-T2220 HMC-T2220B HMC-T2270	HMC-T2100 HMC-T2220 HMC-T2220B HMC-T2270	HMC-T2100 HMC-T2220 HMC-T2220B HMC-T2270	HMC-T2100 HMC-T2220 HMC-T2220B HMC-T2270	HMC-T2240 HMC-T2270	HMC-T2270
VCO & PLO: **Requires X2 or X4	HMC466LP4E HMC505LP4E HMC506LP4E HMC532LP4E HMC586LC4B HMC587LC4B	HMC513LP4E HMC515LP5E HMC534LP4E HMC582LP5E HMC588LC4B HMC735LP5E HMC132LC4B HMC732LC4B	HMC513LP4E HMC529LP4E HMC531LP5E HMC535LP5E HMC584LP5E HMC632LP5E HMC736LP4E HMC737LP4E	HMC429LP4E** HMC431LP4E** HMC733LC4B HMC738LP4E HMC739LP4E	HMC739LP4E	
VGA: Analog & Digital	HMC694 HMC694LP4E HMC926LP5E HMC972LP5E HMC996LP4E	HMC694 HMC694LP4E HMC926LP5E HMC972LP5E HMC996LP4E	HMC694 HMC694LP4E HMC926LP5E HMC972LP5E	HMC694 HMC694LP4E HMC926LP5E HMC972LP5E HMC997LC4	HMC997LC4	



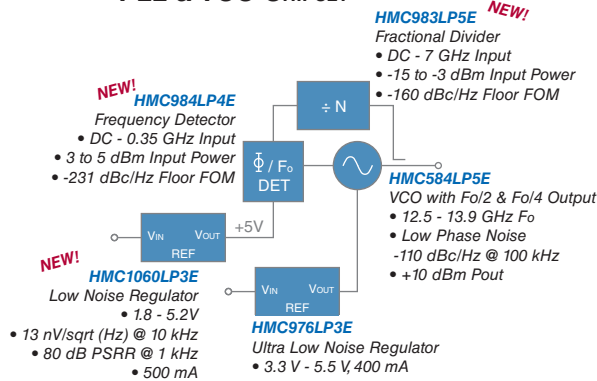
DOUBLE UPCONVERSION & DIRECT DOWNCONVERSION



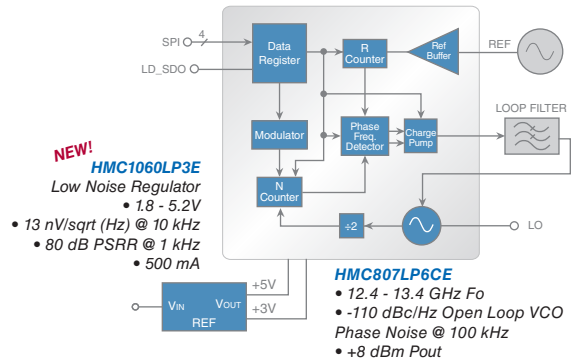


HITTITE'S HIGH FREQUENCY LO SOURCE ALTERNATIVES

PLL & VCO CHIPSET



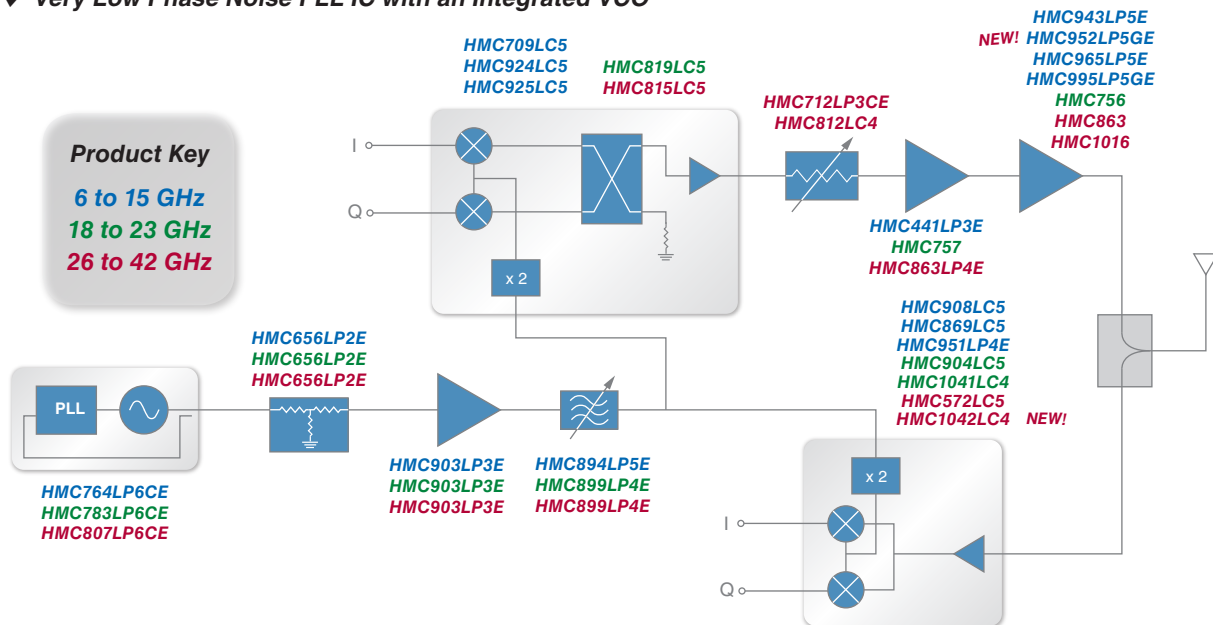
PLL WITH INTEGRATED VCO IC



CHIPSETS FOR 6 TO 42 GHz MICROWAVE RADIO BACKHAUL

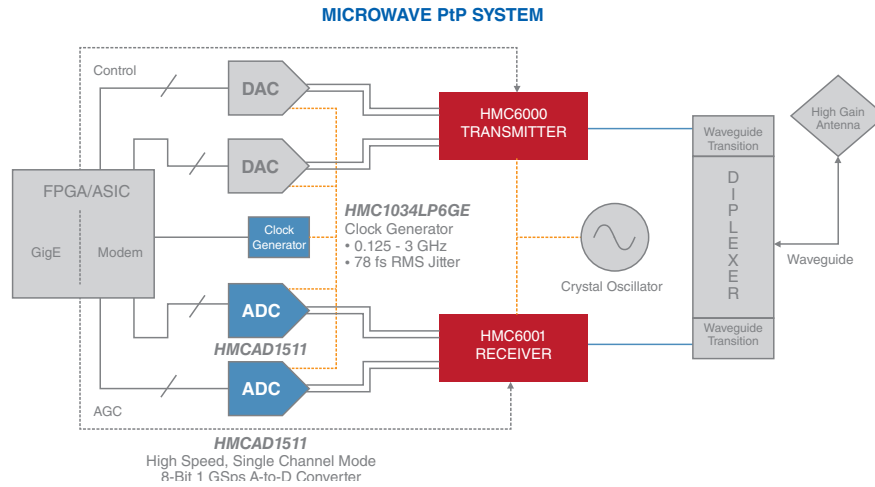
Features

- ◆ Integrated IQ TX Upconverter IC with a X2 LO Buffer & a High Linearity Driver Amplifier
- ◆ High Linearity 17 - 24 GHz Power Amplifier with 40 dBm OIP3 & 32 dBm Saturated Power
- ◆ Low Noise Image Rejection Downconverter IC with a X2 Integrated LO Buffer
- ◆ Very Low Phase Noise PLL IC with an Integrated VCO





60 GHz MICROWAVE POINT-TO-POINT SYSTEM



TRANSCEIVERS - New Product Line!

Frequency (GHz)	Function	P1dB (dBm) NF (dB)	Max Gain (dB)	Gain Adjust (dB)	Phase Noise @ 1 MHz Offset (dBc/Hz)	Power Dissipation (W)	Package	ECCN Code	Part Number
57 - 64	60 GHz Integrated Transmitter	12 dBm	38	17	-86	0.8	Chip	5A991.b	HMC6000
57 - 64	60 GHz Integrated Receiver	6 dB	67	65	-86	0.61	Chip	5A991.b	HMC6001

70 / 80 GHz E-BAND RADIO CHIPSET

