



ADSANTEC

Ultra High-Speed Mixed Signal ASICs

Advanced Science And Novel
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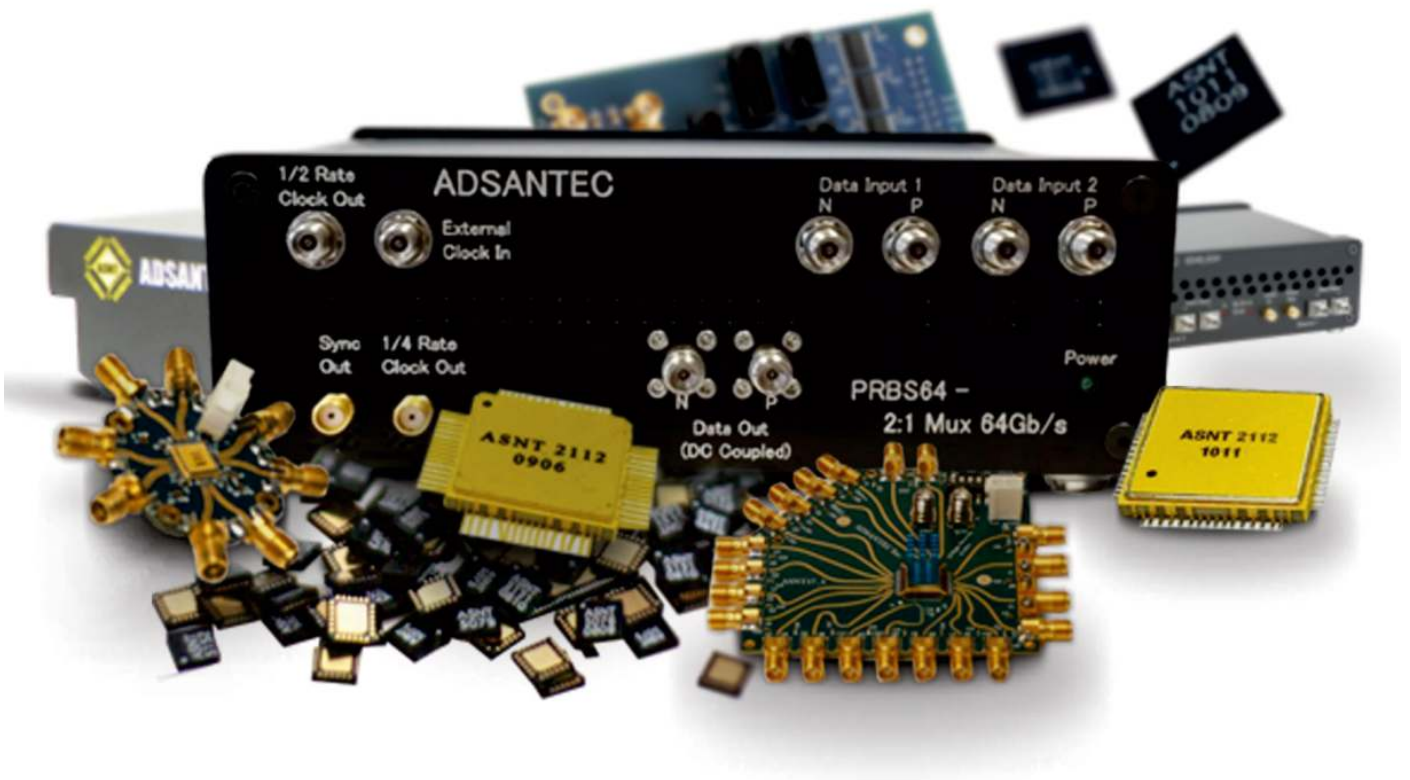


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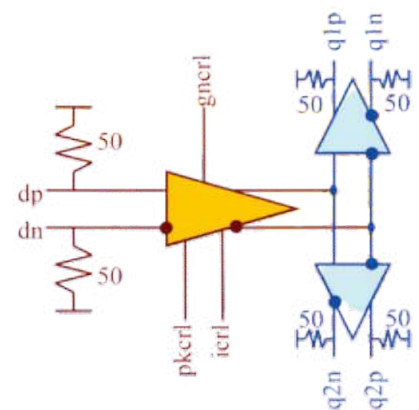
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New Devices

Linear Signal Splitters

ASNT6790-KHC
ASNT6790-KMC

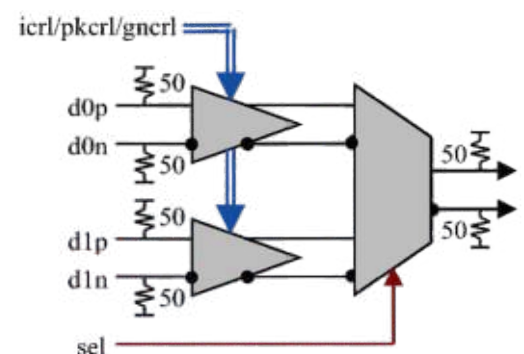
- DC to 35GHz broadband linear signal splitter
- Exhibits an extra-flat frequency response ideal for PAM3 and PAM4 applications
- One differential CML-type input port and two phase-matched differential CML-type output ports
- Adjustable gain and high-frequency peaking
- Single +3.6V or -3.6V power supply
- Power consumption: 760mW typical
- Up to 1.2 V linearity range



Linear Selectors and Switches

ASNT6760-KHC
ASNT6760-KMC

- DC to 33GHz broadband operation
- Exhibits an extra-flat frequency response ideal for PAM3 and PAM4 applications
- Two differential CML-type input ports and one differential CML-type output port
- Adjustable high-frequency peaking
- Adjustable internal currents for power consumption and bandwidth control
- Single +3.6V or -3.6V power supply
- Power consumption: 700mW
- Up to 1.2 V linearity range

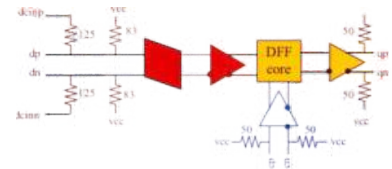


New Devices

D-Type Flip-Flops

ASNT5711-KHC
ASNT5711-KMC

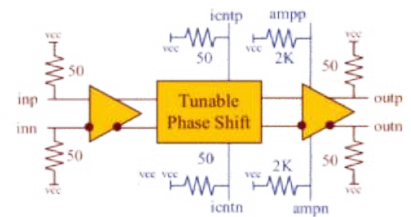
- High speed broadband D-Type FlipFlop for data retiming with full-rate clock
- Input data common mode control
- 2ps set-up/hold time capability
- 88% clock phase margin for retiming of data input eye
- Fully differential CML input interfaces
- Fully differential CML output interface
- Single +3.3V or -3.3V power supply
- Power consumption: 530mW



SiGe 8 HP Technology

ASNT5108A-KMC

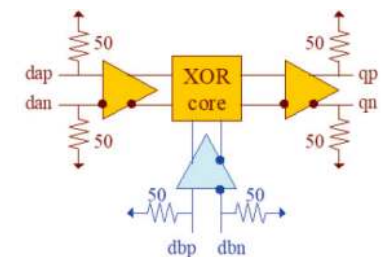
- DC-30Gbps/24GHz Signal Phase Shifter
- Delay adjustment range over 160ps
- 1GHz of bandwidth for the phase adjustment tuning ports
- Adjustable output amplitude up to 1V



Boolean Logic Gates

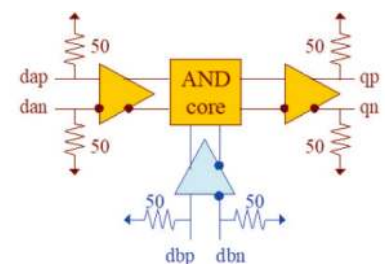
ASNT5740-KHC
ASNT5740-KMC

- High speed broadband Exclusive-OR (XOR) Boolean Logic Gate
- Fully differential CML input interfaces
- Fully differential CML output interface
- Single +3.3V or -3.3V power supply
- Power consumption: 345mW



ASNT5760-KHC
ASNT5760-KMC

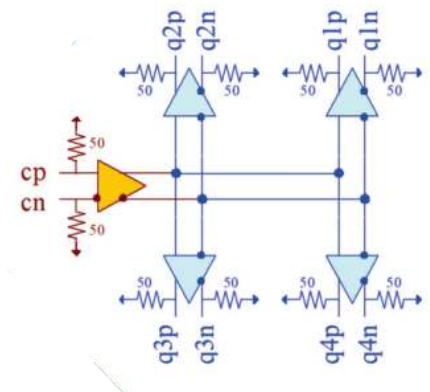
- High speed broadband AND/OR Boolean Logic Gate
- Fully differential CML input interfaces
- Fully differential CML output interface
- Single +3.3V or -3.3V power supply
- Power consumption: 315mW



New Devices

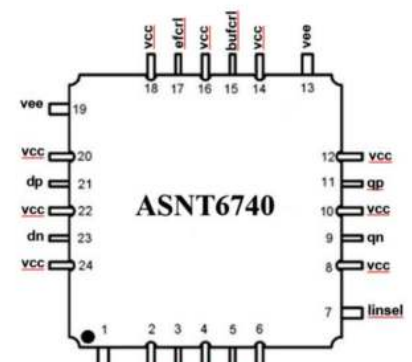
ASNT5723-PQC

- High-speed broadband Digital Data/Clock Distributor
- One differential input signal port and four differential amplified output signal ports
- Fully differential CML input interface
- Fully differential CML output interfaces with 600mV single-ended swing
- Matched phase delays for all outputs
- Linearized output buffers for minimized undershoot/overshoot
- Single +3.3V or -3.3V power supply
- Power consumption: 850mW
- Fabricated in SiGe for high performance, yield, and reliability
- Exhibits low jitter and limited temperature variation over industrial temperature range
- Standard QFN 24-pin package



ASNT6740-KHC

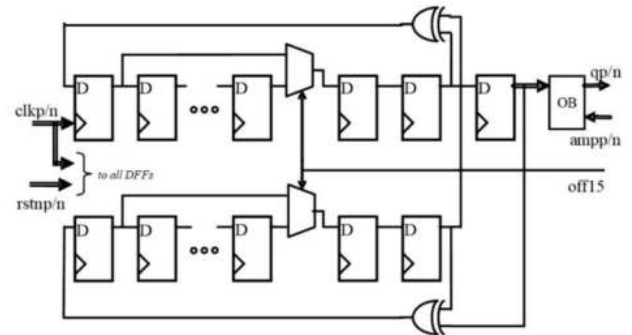
- DC to 40GHz broadband analog amplifier
- Adjustable gain from -5dB to 25dB
- Adjustable high-frequency peaking
- Adjustable internal currents for power consumption and bandwidth control
- Differential CML-type input/output interfaces
- Extra-flat frequency response ideal for PAM3 and PAM4 applications
- Single +3.6V or -3.6V power supply
- Power consumption: 970mW typical
- Fabricated in SiGe for high performance, yield, and reliability
- Custom CQFN 24-pin package



New Devices

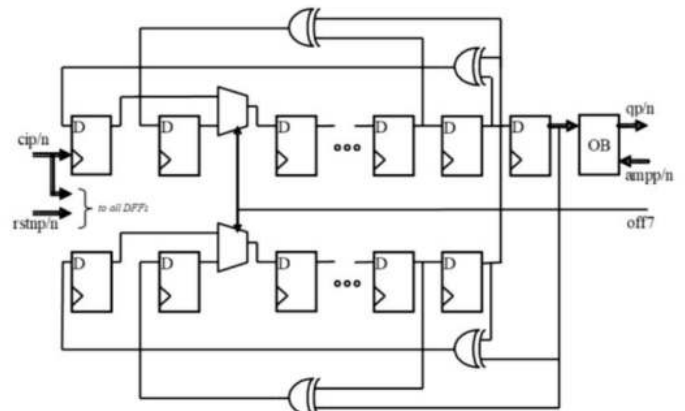
ASNT8742-KHC

- Full-length (215-1) or (27-1) pseudorandom binary sequence (PRBS) generator
- Selectable power of the Polynomial
- DC to 52 Gbps output data rate
- External output amplitude control
- Asynchronous reset signal for elimination of the “all zeros” initial state
- Fully differential CML input interface
- Fully differential CML output interface
- Single +3.3V or -3.3V power supply
- Power consumption: 1020/780mW (depending on the output amplitude and polynomial)
- Custom CQFN 24-pin package



ASNT8743-KHC

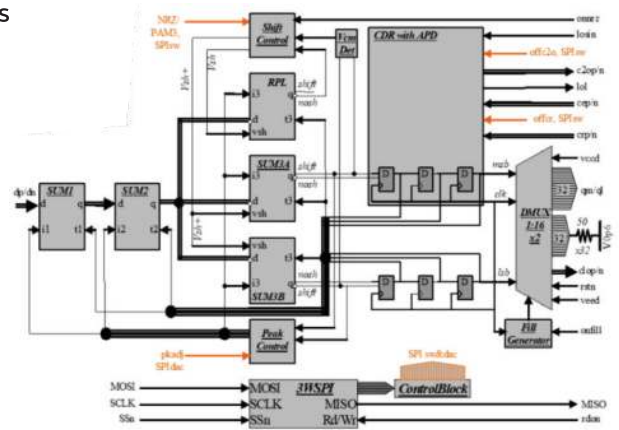
- Full-length (29-1) or (27-1) pseudorandom binary sequence (PRBS) generator
- Selectable power of the Polynomial
- DC to 52 Gbps output data rate
- External output amplitude control
- Asynchronous reset signal for elimination of the “all zeros” initial state
- Fully differential CML input interface
- Fully differential CML output interface
- Single +3.3V or -3.3V power supply
- Power consumption: 1200/900 mW (depending on the output amplitude)
- Custom CQFN 24-pin package



New Devices

ASNT8761-KMT

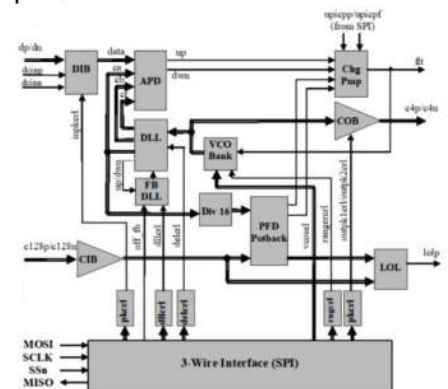
- High-speed CDR for NRZ or PAM3 signals
- Optional high-speed external clock mode with CDR off
- On-chip adaptive 3-tap DFE
- Selectable automatic or manual DFE control
- High-speed CMOS 3-wire interface for manual chip control
- Fully differential CML-type analog input data interface
- Fully differential CML high-speed input clock interface
- Pseudo-differential SSTL interfaces for low-speed data outputs
- LVDS interface for reference clock input and low-speed clock output
- Two analog and two digital power supplies
- Average power consumption: 2.3W
- Die size 2.4x2.4mm²
- Custom CQFN 100-pin package



- Up to 128Gb/s quarter-rate clock recovery circuit
- Input data range from 80Gb/s to 128Gb/s
- NRZ and PAM4 input data format
- Input data and output clock peaking adjustment
- CML compliant differential input and output high-speed data and clock interfaces

ASNT8762-KMF

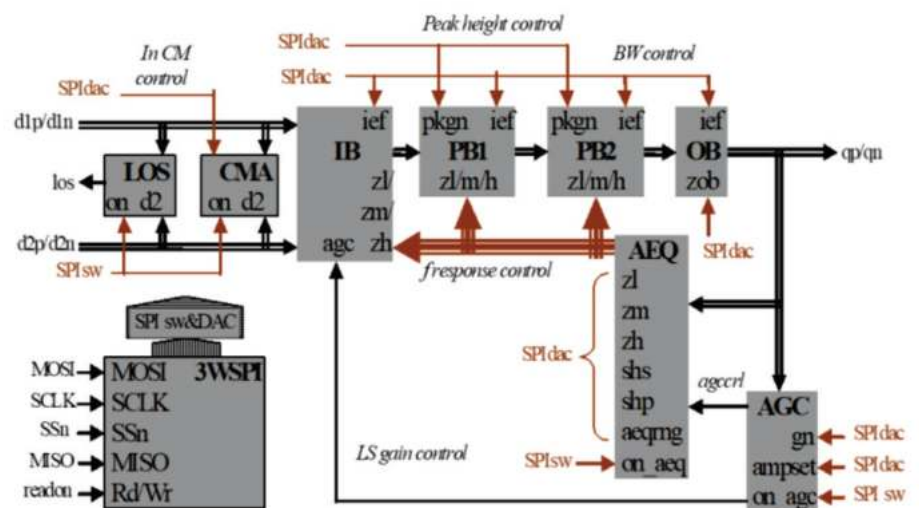
- CML compliant differential input reference clock interface
- Quarter-rate clock output up to 32GHz for a 128Gb/s input data signal
- Single +3.3V or -3.3V power supply
- Power consumption of 2.2W at the maximum operational speed
- Industrial temperature range
- Custom CQFP 64-pin package



New Devices

ASNT6751-KHS

- High-speed adjustable linear equalizer
- Selectable automatic or manual adaptation mode
- Selectable automatic or manual AGC mode
- High-speed CMOS 3-wire interface for manual chip control
- Fully differential CML-type analog input and output interfaces
- Three power supplies for the data paths and AC control circuitry
- Average power consumption: 0.5W
- Fabricated in SiGe for high performance, yield, and reliability
- Limited temperature variation over industrial temperature range
- Die size 1.5x1.5mm²
- Custom CQFN 44-pin package



Top Selling Devices

ASNT6193-KHC
ASNT6194-KHC

Linear signal splitter

ASNT6163-KHC

Linear selector and switch

ASNT6153-KHS
ASNT6154-KHS

Signal spectrum converter

ASNT6155
ASNT_PRBS45

Instrumentation

Programmable Multiplexers with Integrated CMU

P/N	Function	Frequency		Power (mW)	Package
		(min)	(max)		
ASNT1011-KMA	Digital 16:1 Multiplexer	DC	17Gbps	660	100-pin CQFP
ASNT1011-PQA	Digital 16:1 Multiplexer	DC	16Gbps	660	100-pin QFN
ASNT1011A-KMA	Digital 16:1 Multiplexer	DC	17Gbps	660	100-pin CQFP
ASNT1011A-PQA	Digital 16:1 Multiplexer	DC	17Gbps	660	100-pin QFN
ASNT1016-PQA	Digital 16:1 Multiplexer with 9.8-12.5GHz Integrated CMU	DC/9.8	12.5/17Gbps	660	100-pin QFN
ASNT1017-PQA	Digital 16:1 Multiplexer with 12-14.3GHz Integrated CMU	DC/12	14.3/17Gbps	660	100-pin QFN

Digital Multiplexers

P/N	Function	Frequency		Power (mW)	Package
		(min)	(max)		
ASNT1121-KMM	Broadband Digital 4:1 Multiplexer	DC	50Gbps	960	44-pin CQFP
ASNT1123-KMM	Broadband Digital DDR 4:1 Multiplexer	DC	64Gbps	1150	44-pin CQFP
ASNT1123-PQB	Broadband Digital DDR 4:1 Multiplexer	DC	32Gbps	1150	40-pin QFN
ASNT1123-PQP	Broadband Digital DDR 4:1 Multiplexer	DC	32Gbps	1150	36-pin QFN
ASNT1124-KMM	Broadband Digital DDR 4:1 Multiplexer With Duty Cycle & Amplitude Control	DC	64Gbps	1180	44-pin CQFP
ASNT1140-KMA	Programmable DDR 16:1 Multiplexer/Serializer with Reset, Duty Cycle & Amplitude Control	DC	50Gbps	1520	100-pin CQFP
ASNT5050-KMC	Broadband Digital 2:1 Multiplexer/Selector	DC	32Gbps	450	24-pin CQFP
ASNT5050-PQC	Broadband Digital 2:1 Multiplexer/Selector	DC	32Gbps	450	24-pin QFN
ASNT5150-KMC	Broadband Digital 2:1 Multiplexer/Selector	DC	50Gbps	315	24-pin CQFP
ASNT5151-KMC	Broadband Digital 2:1 Multiplexer/Selector	DC	64Gbps	415	24-pin CQFP
ASNT5153-KMC	Broadband Digital 2:1 Multiplexer/Selector With Duty Cycle & Amplitude Control	DC	56Gbps	500	24-pin CQFP
ASNT5153-BD	Broadband Digital 2:1 Multiplexer/Selector With Duty Cycle & Amplitude Control	DC	56Gbps	500	Bare Die
ASNT5153-KHC	Broadband Digital 2:1 Multiplexer/Selector With Duty Cycle & Amplitude Control	DC	56Gbps	500	24-pin CQFN
ASNT5153-MOD	Broadband Digital 2:1 Multiplexer/Selector With Duty Cycle & Amplitude Control	DC	64Gbps	500	Module
ASNT5650-BD	Broadband Digital 2:1 Multiplexer/Selector With Duty Cycle & Amplitude Control	DC	112Gbps	810	Flip Chip

Programmable Demultiplexers with Integrated CDR

P/N	Function	Frequency		Power (mW)	Package
		(min)	(max)		
ASNT2011-KMA	Digital 1:16 Demultiplexer	DC	17Gbps	730	100-pin CQFP
ASNT2011-PQA	Digital 1:16 Demultiplexer	DC	17Gbps	730	100-pin QFN
ASNT2016-PQA	Digital 1:16 Demultiplexer with Integrated Full Rate CDR	DC/11.3	12.5/17Gbps	730	100-pin QFN
ASNT2017-PQA	Digital 1:16 Demultiplexer with Integrated Full Rate CDR	DC/12.5	13.6/17Gbps	890	100-pin QFN
ASNT2110C-KMF	Reconfigurable 1:2 Demultiplexer with Integrated Half Rate PAM4 CR	25.2	32.5GHz	1600	64-pin CQFP
ASNT2110D-KMF	Reconfigurable 1:2 Demultiplexer with Integrated Half Rate PAM4 CR	25.2	32GHz	1600	64-pin CQFP
ASNT2111-KMF	Reconfigurable 1:2 Demultiplexer with Integrated Half Rate PAM4 CR	18	36GHz	1800	64-pin CQFP
ASNT2112-KMF	Reconfigurable 1:2 Demultiplexer with Integrated Half Rate PAM4 CR	22.2	28.2GHz	1600	64-pin CQFP
ASNT2116-KMF	Reconfigurable 1:1 Full Rate PAM4 CR	25	31.5GHz	250	64-pin CQFP
ASNT8160C-KMF	Reconfigurable Half Rate CR	24.5	32GHz	1600	64-pin CQFP
ASNT8161-KMF	Reconfigurable Half Rate CR	18	36GHz	1700	64-pin CQFP

Selectors and Switches

P/N	Function	Frequency		Power (mW)	Package
		(min)	(max)		
ASNT1122-KMC	Broadband 1 of 4 Selector/Switch	DC	32Gbps	300	24-pin CQFP
ASNT1122-KHC	Broadband 1 of 4 Selector/Switch	DC	32Gbps	300	24-pin CQFN
ASNT5051-KMC	High Isolation Selector/Switch 1 of 2	DC	32Gbps/17GHz	287	24-pin CQFP
ASNT5051-PQC	High Isolation Selector/Switch 1 of 2	DC	17Gbps/17GHz	287	24-pin QFN
ASNT5152-PQC	Broadband 1 of 2 High Isolation Selector/Switch	DC	17Gbps/17GHz	315	24-pin QFN

Digital Demultiplexers

P/N	Function	Frequency		Power (mW)	Package
		(min)	(max)		
ASNT2121-KMM	Broadband Digital 1:4 Demultiplexer	DC	50Gbps	1350	44-pin CQFP
ASNT2123-KMM	Broadband Digital DDR 1:4 Demultiplexer	DC	64Gbps	1160	44-pin CQFP
ASNT2123-PQP	Broadband Digital DDR 1:4 Demultiplexer	DC	32Gbps	1160	36-pin QFN
ASNT2124-KMM	Broadband Digital DDR 1:4 Demultiplexer With Duty Cycle Control	DC	64Gbps	1250	44-pin CQFP
ASNT2140-KMA	Programmable DDR Demultiplexer 1:16 Deserializer with Reset & Duty Cycle Control	DC	32Gbps	1350	100-pin CQFP
ASNT5090-KMC	Broadband Digital 1:2 Demultiplexer	DC	48Gbps	730	24-pin CQFP
ASNT5090-PQC	Broadband Digital 1:2 Demultiplexer	DC	32Gbps	730	24-pin QFN
ASNT5190-KMC	Broadband Digital 1:2 Demultiplexer	DC	60Gbps	560	24-pin CQFP
ASNT5190A-KMC	Broadband Digital 1:2 Demultiplexer	DC	64Gbps	600	24-pin CQFP
ASNT5190B-KMC	Broadband Digital 1:2 Demultiplexer With Duty Cycle Control	DC	64Gbps	600	24-pin CQFP
ASNT5190B-MOD	Broadband Digital 1:2 Demultiplexer With Duty Cycle Control	DC	64Gbps	600	Module
ASNT5690-BD	Broadband Digital 1:2 Demultiplexer With Duty Cycle & Amplitude Control	DC	112Gbps	1000	Flip Chip

Broadband Digital Signal Delay Lines

P/N	Function	Frequency		Power (mW)	Package
		(min)	(max)		
ASNT5071-PQC	Clock/Data Phase Shifter with 320ps Delay Variation	DC	10GHz	1435	24-pin QFN
ASNT5073A-PQC	Clock Phase Shifter with Amplitude Control And 150ps Delay Variation	0.5MHz	17GHz	1305	24-pin QFN
ASNT5075-PQC	Clock/Data Phase Shifter with Phase Modulation & 260ps Delay Variation	DC	14GHz	1585	24-pin QFN
ASNT5079-KMC	Clock/Data Phase Shifter with Linear Output Buffer & 280ps Delay Variation	DC	14GHz	1600	24-pin CQFP

ASNT5079-PQC	Clock/Data Phase Shifter with Linear Output Buffer & 280ps Delay Variation	DC	14GHz	1600	24-pin QFN
ASNT5101-KMC	Clock/Data Phase Shifter with 105ps Delay Variation	DC	23GHz	745	24-pin CQFP
ASNT5102-KMC	Clock Phase Shifter with 105ps Delay Variation	DC	32.5GHz	875	24-pin CQFP
ASNT5105A-KMC	Clock/Data Phase Shifter w/ External Freq. Response Control & 110ps Delay Variation	DC	32GHz	1250	24-pin CQFP
ASNT5106-KMC	Clock/Data Phase Shifter w/ External Freq. Response Control & 250ps Delay Variation	DC	32Gbps/26GHz	1080-1450	24-pin CQFP
ASNT5106-KHC	Clock/Data Phase Shifter w/ External Freq. Response Control & 250ps Delay Variation	DC	32Gbps/26GHz	1080-1450	24-pin CQFN
ASNT5106-PQC	Clock/Data Phase Shifter w/ External Freq. Response Control & 250ps Delay Variation	DC	28Gbps/18GHz	1080-1450	24-pin QFN
ASNT5107-KMC	Clock/Data Phase Shifter w/ External Freq. Response Control & 110ps Delay Variation	DC	32Gbps/26GHz	630-1150	24-pin CQFP
ASNT5107-KHC	Clock/Data Phase Shifter w/ External Freq. Response Control & 110ps Delay Variation	DC	32Gbps/26GHz	630-1150	24-pin CQFN
ASNT5108A-KMC	Clock/Data Phase Shifter w/ Amplitude Ctrl	DC	32Gbps/26GHz	1400	24-pin CQFP
ASNT5108A-KHC	Clock/Data Phase Shifter w/ Amplitude Ctrl	DC	32Gbps/26GHz	1400	24-pin CQFN
ASNT5108A-PQC	Clock/Data Phase Shifter w/ Amplitude Ctrl	DC	18Gbps/18GHz	1400	24-pin QFN
ASNT5170-PQC	Low-Power Clock/Data Phase Shifter 250ps Delay Variation, 100MHz Delay Control	DC	17Gbps/14GHz	610	24-pin QFN
ASNT5173-PQC	Clock/Data Phase Shifter w/ Amplitude Ctrl 135ps Delay Variation, 100MHz Delay Control	DC	17Gbps/13GHz	495	24-pin QFN
ASNT5174-KMC	Low-Power Clock/Data Phase Shifter 135ps Delay Variation, 100MHz Delay Control	DC	28Gbps/15GHz	415	24-pin CQFP
ASNT5175-PQC	Low-Power Clock/Data Phase Shifter 255ps Delay Variation, 1GHz Delay Control	DC	17Gbps/14GHz	610	24-pin QFN

Narrowband Digital Delay Lines

P/N	Function	Frequency		Power (mW)	Package
		(min)	(max)		
ASNT5072-PQC	Clock Phase Shifter with 140ps Delay Variation	11	17GHz	910	24-pin QFN

Linear Signal Splitters

P/N	Function	Frequency		Power (mW)	Package
		(min)	(max)		
ASNT6112-KMM	1-to-4 Analog Signal Splitter with Differential Outputs	DC	25GHz	1350	44-pin CQFP
ASNT6113-KMC	1-to-3 Analog Signal Splitter with Differential Outputs	DC	25GHz	1000	24-pin CQFP
ASNT6113-KHC	1-to-3 Analog Signal Splitter with Differential Outputs	DC	25GHz	1000	24-pin CQFN
ASNT6114-KMC	1-to-2 Analog Signal Splitter with Differential Outputs/ PAM4	DC	25GHz	660	24-pin CQFP
ASNT6114-KHC	1-to-2 Analog Signal Splitter with Differential Outputs/ PAM4	DC	25GHz	660	24-pin CQFN
ASNT6114A-KMC	1-to-2 Analog Signal Splitter with Differential Outputs	DC	32GHz	760	24-pin CQFP
ASNT6193-KHC	1-to-3 Analog Signal Splitter with Differential Outputs	DC	32GHz	1050	24-pin CQFN
ASNT6194-KHC	1-to-2 Analog Signal Splitter with Differential Outputs	DC	35GHz	760	24-pin CQFN
ASNT6194-KMC	1-to-2 Analog Signal Splitter with Differential Outputs	DC	32GHz	760	24-pin CQFP
ASNT6790-KHC	1-to-2 Analog Signal Splitter with Gain, Peaking, Bandwidth Controls	DC	35GHz	760	24-pin CQFN
ASNT6790-KMC	1-to-2 Analog Signal Splitter with Gain, Peaking, Bandwidth Controls	DC	35GHz	760	24-pin CQFP

Linear Selectors and Switches

P/N	Function	Frequency		Power (mW)	Package
		(min)	(max)		
ASNT6160A-KMC	Analog Signal Selector 1-of-2	DC	17GHz	810	24-pin CQFP
ASNT6160B-KMM	Analog Signal Selector 1-of-2	DC	17GHz	810	44-pin CQFP
ASNT6161-KMM	Analog Signal Selector 1-of-4	DC	17GHz	2100	44-pin CQFP
ASNT6162-KMM	Linear Non-Blocking Cross-Switch 2x2	DC	17GHz	1260	44-pin CQFP
ASNT6163-KMC	Analog Signal Selector 1-of-2	DC	32GHz	700	24-pin CQFP
ASNT6163-KHC	Analog Signal Selector 1-of-2	DC	32GHz	700	24-pin CQFN
ASNT6164-KMM	Linear Non-Blocking Cross-Switch 2x2	DC	32GHz	1400	44-pin CQFP
ASNT6760-KMC	Analog Signal Selector 1-of-2 with Gain, Peaking, Bandwidth Controls	DC	35GHz	700	24-pin CQFP
ASNT6760-KHC	Analog Signal Selector 1-of-2 with Gain, Peaking, Bandwidth Controls	DC	35GHz	700	24-pin CQFN
ASNT6164-KHS	Linear Non-Blocking Cross-Switch 2x2	DC	32GHz	1400	44-pin CQFN
ASNT6161-BD	Analog Signal Selector 1-of-4	DC	17GHz	2100	-

Linear Amplifiers

P/N	Function	Frequency		Power (mW)	Package
		(min)	(max)		
ASNT6141-KMC	Linear Amplifier	DC	12GHz	530	24-pin CQFP
ASNT6141-BD	Linear Amplifier	DC	12GHz	530	Bare Die
ASNT6142-KMC	Linear Amplifier	DC	20GHz	695	24-pin CQFP
ASNT6142-KHC	Linear Amplifier	DC	20GHz	695	24-pin CQFN
ASNT6142-BD	Linear Amplifier	DC	20GHz	695	Bare Die

Delays and FIR Filters

P/N	Function	Frequency		Power (mW)	Package
		(min)	(max)		
ASNT6170-KMC	Analog Signal Adjustable Delay	DC	20GHz	560	24-pin CQFP
ASNT6171-KMO	15-Tap Analog FIR Filter	DC	10GHz/20Gbps	<2650	64-pin CQFP
ASNT6172-KMN	Asynchronous FIR Filter & 2x2 Analog Switch	DC	20GHz/28Gbps	1250	64-pin CQFP
ASNT8172-KMF	2V Driver with Asynchronous Finite Impulse Response Filter	DC	10GHz	1240	64-pin CQFP
ASNT6173-KMN	Asynchronous FIR Filter and 2x2 Analog Switch	DC	28GHz/21Gbps	<1250	64-pin CQFP

Transimpedance Amplifiers (TIAs)

P/N	Function	Frequency		Power (mW)	Package
		(min)	(max)		
ASNT6121-BD	High Gain Transimpedance Amplifier With Limiting Amp, Auto Offset Control & Input Peak Detector	DC	45Gbps	480	Bare Die
ASNT6122-BD	Low Power, Low Gain Transimpedance Amplifier with Auto Offset Control & Input Peak Detector	DC	50Gbps	330	Bare Die
ASNT6123-BD	Dual Transimpedance Amplifier with Auto Offset Control & Input Peak Detector	DC	25Gbps	495	Bare Die
ASNT6124-BD	Transimpedance Amplifier with Linear Amplifier and Auto Gain Control	DC	28Gbps	776	Bare Die

Drivers

P/N	Function	Frequency		Power (mW)	Package
		(min)	(max)		
ASNT6119-KMF	Advanced Driver/Amplifier with Digital Pre-Emphasis, PAM4 Encoding with Standard CMOS 3-wire SPI Interface	1	32.5Gbps	4000	64-pin CQFP
ASNT6119A-KMF	Advanced Driver/Amplifier with Digital Pre-Emphasis, PAM4 Encoding with High-Speed CML 3-wire SPI Interface	1	32.5Gbps	4000	64-pin CQFP
ASNT6119B-KMF	Advanced Driver/Amplifier with Digital Pre-Emphasis, PAM4 Encoding with Standard CMOS 3-wire SPI Interface	1	32.5Gbps	4000	64-pin CQFP

Signal Spectrum Converters

P/N	Function	Frequency		Power (mW)	Package
		(min)	(max)		
ASNT6150-KMM	Balanced I/Q Modulator (Upconverter) with LPF	DC	18GHz	446	44-pin CQFP
ASNT6151-KMM	Balanced I/Q Modulator (Upconverter)	DC	18GHz	430	44-pin CQFP
ASNT6152-KMM	Dual CTLE with Error Detection & Pre-Emphasis	DC	28Gbps	1000-1400	44-pin CQFP

ASNT6153-KHM	Dual 2-Channel CTLE with Peak Detectors	DC	32Gbps	1400	44-pin CQFN
ASNT6154-KHS	Dual 2-Channel CTLE, Selectable Input Term	DC	32Gbps	1400	44-pin CQFN
ASNT6155-KHS	Dual 2-Channel CTLE with Peak Detectors with Bandwidth/Power Control	DC	32Gbps	1400	44-pin CQFN
ASNT6750-KHS	CTLE with Selectable Automatic Adaptation or Manual Control			500	44-pin CQFN

Limiting Amplifiers

P/N	Function	Frequency		Power (mW)	Package
		(min)	(max)		
ASNT5037-PQC	Limiting Amp with Amplitude Control	DC	17Gbps	660	24-pin QFN
ASNT5037-KMC	Limiting Amp with Amplitude Control	DC	28Gbps	660	24-pin CQFP
ASNT5131-PQC	Limiting Amp w/ Amplitude Control(5V)	DC	17Gbps	500	24-pin QFN
ASNT5131-KMC	Limiting Amp w/ Amplitude Control(5V)	DC	28Gbps	500	24-pin CQFP
ASNT5136-KMC	Limiting Amplifier	DC	45Gbps	365	24-pin CQFP
ASNT5136-BD	Limiting Amplifier	DC	45Gbps	365	Bare Die

Digital Signal Splitters

P/N	Function	Frequency		Power (mW)	Package
		(min)	(max)		
ASNT5020-BD	Data/Clock Signal Distributor 1-to-2	DC	28Gbps	560	Bare Die
ASNT5020-PQC	Data/Clock Signal Distributor 1-to-2	DC	28Gbps	560	24-pin QFN
ASNT5020-PQD	Data/Clock Signal Distributor 1-to-2	DC	26Gbps	560	16-pin QFN
ASNT5021-PQC	Data/Clock Signal Distributor 1-to-3	DC	28Gbps	780	24-pin QFN
ASNT5021-PQD	Data/Clock Signal Distributor 1-to-3	DC	26Gbps	780	16-pin QFN
ASNT5022-BD	Data/Clock Signal Distributor 1-to-3	DC	28Gbps	810	Bare Die
ASNT5023-KMM	Data/Clock Signal Distributor 1-to-4	DC	28Gbps	1220	44-pin CQFP
ASNT5024-KMC	Data/Clock Signal Distributor 1-to-3	DC	28Gbps	780	24-pin CQFP
ASNT5024-PQC	Data/Clock Signal Distributor 1-to-3	DC	28Gbps	780	24-pin QFN
ASNT5121-KMC	Data/Clock Signal Distributor 1-to-3	DC	50Gbps	580	24-pin CQFP
ASNT5121-KHC	Data/Clock Signal Distributor 1-to-3	DC	50Gbps	580	24-pin CQFN
ASNT5121B-KMC	Clock Signal Distributor 1-to-3	DC	35GHz	760	24-pin CQFP
ASNT5121B-KHC	Clock Signal Distributor 1-to-3	DC	35GHz	760	24-pin CQFN
ASNT5121C-KMC	Data/Clock Signal Distributor 1-to-3	DC	50Gbps	580	24-pin CQFP
ASNT5121D-KMC	Clock Signal Distributor 1-to-3	DC	35GHz	760	24-pin CQFP
ASNT5121E-KMC	Data Signal Distributor 1-to-3	DC	64Gbps	710	24-pin CQFP

Boolean Logic Gates

P/N	Function	Frequency		Power (mW)	Package
		(min)	(max)		
ASNT5040-KMC	XOR Logic Gate	DC	25GHz	415	24-pin CQFP
ASNT5040-PQC	XOR Logic Gate	DC	17GHz	415	24-pin QFN
ASNT5140-KMC	XOR Logic Gate	DC	30GHz	270	24-pin CQFP
ASNT5142-ALP	XOR Logic Gate with 5 Output Drivers	DC	32GHz	1150	32-pin LGA
ASNT5143-ALD	XOR Logic Gate	DC	32GHz	250	16-pin LGA
ASNT5160-KMC	AND/OR Logic Gate	DC	50Gbps	270	24-pin CQFP
ASNT5160-KHC	AND/OR Logic Gate	DC	50Gbps	270	24-pin CQFN
ASNT5740-KMC	XOR Logic Gate	DC	64Gbps	325	24-pin CQFP
ASNT5740-KHC	XOR Logic Gate	DC	64Gbps	325	24-pin CQFN
ASNT5760-KMC	AND/OR Logic Gate	DC	64Gbps	325	24-pin CQFP
ASNT5760-KHC	AND/OR Logic Gate	DC	64Gbps	325	24-pin CQFN

D-Type Flip-Flops

P/N	Function	Frequency		Power (mW)	Package
		(min)	(max)		
ASNT5010-KMC	D-Type Flip-Flop w/ 12.5GHz Analog Bandwidth	DC	32Gbps	415	24-pin FN
ASNT5010-PQC	D-Type Flip-Flop	DC	17Gbps	415	24-pin QFN
ASNT5012-KMC	D-Type Flip-Flop w/ Increased Input Sensitivity & 13GHz Analog Bandwidth	DC	32Gbps	465	24-pin CQFP
ASNT5012-PQC	D-Type Flip-Flop w/ Increased Input Sensitivity	DC	17Gbps	465	24-pin QFN
ASNT5013-KMC	D-Type Flip-Flop w/ Single-Ended Output Amplitude Control up to 700mV	DC	30Gbps	510	24-pin CQFP
ASNT5014-KMC	D-Type Flip-Flop w/ Single-Ended Output Amplitude Control up to 1V	DC	25Gbps	725	24-pin CQFP
ASNT5110-KMC	D-Type Flip-Flop with Amplitude Control	DC	40Gbps	300	24-pin CQFP
ASNT5111-KMC	D-Type Flip-Flop with Amplitude Control	DC	50Gbps	720	24-pin CQFP
ASNT5112-KMC	Low Power D-Type Flip Flop w/ Increased Input Sensitivity & 15GHz Analog Bandwidth	DC	32Gbps	300	24-pin CQFP
ASNT5113-KMC	D-Type Flip-Flop w/ Increased Input Sensitivity, Common Mode Level Adjustment & 30GHz Input Bandwidth	DC	32Gbps	510	24-pin CQFP
ASNT5114-KMC	Linearized D-Type Flip-Flop with Increased Input Sensitivity & Common Mode Level Adjustment	DC	32Gbps	530	24-pin CQFP

ASNT5115-KMM	Dual D-Type Flip-Flop w/ Increased Input Sensitivity & Common Mode Level Adjustment	DC	32Gbps	1020	44-pin CQFP
ASNT5116-KMM	Linearized Dual D-Type Flip-Flop with Increased Input Sensitivity & Common Mode Level Adjustment	DC	32Gbps	1010	44-pin CQFP
ASNT5117-KMC	D-Type Flip-Flop with Increased Input Sensitivity, Output Amplitude & Common Mode Level Adjustment Control	DC	40Gbps	726	24-pin CQFP
ASNT5710-KMM	Dual D-Type Flip-Flop w/ Increased Input Sensitivity & Common Mode Level Adjustment	DC	64Gbps	1060	44-pin CQFP
ASNT5710-KHM	Dual D-Type Flip-Flop w/ Increased Input Sensitivity & Common Mode Level Adjustment	DC	64Gbps	1060	44-pin CQFN
ASNT5711-KMC	D-Type Flip-Flop with Increased Input Sensitivity, Output Amplitude & Common Mode Level Adjustment Control	DC	64Gbps	530	24-pin CQFP
ASNT5711-KHC	D-Type Flip-Flop with Increased Input Sensitivity, Output Amplitude & Common Mode Level Adjustment Control	DC	64Gbps	530	24-pin CQFN

Programmable CMUs

P/N	Function	Frequency		Power (mW)	Package
		(min)	(max)		
ASNT8050-PQB	Programmable PLL w/ Integrated VCOs	7.4-10.8	8.8-12.7	630	40-pin QFN
ASNT8051-PQB	Programmable PLL w/ Integrated VCOs	9.9-11	12.1-12.9	570	40-pin QFN
ASNT8052-PQB	Programmable PLL w/ Integrated VCOs	11-13	13.3-14.4	585	40-pin QFN
ASNT8151-KMC	Programmable Low Phase Noise PLL w/ Integrated VCOs	24	32.1	450-530	24-pin CQFP
ASNT8151-KHC	Programmable Low Phase Noise PLL w/ Integrated VCOs	24	32.1	450-530	24-pin CQFN

Frequency Dividers

P/N	Function	Frequency		Power (mW)	Package
		(min)	(max)		
ASNT8110-PQB	Programmable Integer Divider	DC	24GHz	2030-3150	40-pin QFN
ASNT8110A-PQB	Programmable Integer Divider w/ SPI	DC	24GHz	2030-3150	40-pin QFN
ASNT8111-PQB	Programmable Integer Divider	DC	24GHz	2030-3150	40-pin QFN
ASNT8111A-PQB	Programmable Integer Divider w/ SPI	DC	24GHz	2030-3150	40-pin QFN
ASNT8112-KMM	Programmable Integer Divider w/ SPI	DC	32GHz	1400-2240	44-pin CQFP
ASNT8130-KMC	High Sensitivity Clock Divider-by-2/by-4	DC	36GHz	260	24-pin CQFP
ASNT8132-KMC	Broadband Clock Divider-by-2	DC	54GHz	630	24-pin CQFP
ASNT8132-KHC	Broadband Clock Divider-by-2	DC	54GHz	630	24-pin CQFN
ASNT8132-MOD	Broadband Clock Divider-by-2	DC	54GHz	630	Module
ASNT8133-KMC	Broadband Clock Divider-by-1/by-2/by-4	DC	50GHz	845	24-pin CQFP
ASNT8134-KMC	Broadband Clock Divider-by-1/by-2/by-4	DC	50GHz	855	24-pin CQFP
ASNT8135-KMC	Broadband Clock Divider-by-2/4/8/16	DC	50GHz	800	24-pin CQFP
ASNT8630-KMC	High Sensitivity Clock Divider-by-2/by-4	DC	64GHz	1000	24-pin CQFP
ASNT8630-KHC	High Sensitivity Clock Divider-by-2/by-4	DC	64GHz	1000	24-pin CQFN
ASNT8730-KMC	Broadband Clock Divider-by-2	DC	56GHz	440	24-pin CQFP
ASNT8730-KHC	Broadband Clock Divider-by-2	DC	56GHz	440	24-pin CQFN
ASNT8130-PQC	Broadband Clock Divider by-2 / by-4	DC	32GHz	265	24-pin QFN

Multipliers

P/N	Function	Frequency		Power (mW)	Package
		(min)	(max)		
ASNT5141-KMC	Frequency Doubler	4	32GHz	545	24-pin
ASNT5141A-KMC	Frequency Doubler	6	32GHz	545	24-pin
ASNT5144-KMC	Frequency Doubler	8	32GHz	660	24-pin
ASNT5144-KHC	Frequency Doubler	8	32GHz	660	24-pin

Phase Detectors

P/N	Function	Frequency		Power (mW)	Package
		(min)	(max)		
ASNT8121-KMC	Linear Phase Detector	DC	28.6Gbps2GHz	760	24-pin CQFP

PRBS Signal Generators

P/N	Function	Frequency		Power (mW)	Package
		(min)	(max)		
ASNT8141-KMC	PRBS7 Generator w/ (x^7+x^6+1) Polynomial	DC	23Gbps	530	24-pin CQFP
ASNT8142-KMC	PRBS7/PRBS15 Generator w/ (x^7+x^6+1) & $(x^{15}+x^{14}+1)$ Polynomials	DC	23Gbps	740	24-pin CQFP
ASNT8143-KMC	PRBS9/PRBS10 Generator w/ (x^9+x^4+1) & $(x^{10}+x^7+1)$ Polynomials	DC	24Gbps	805	24-pin CQFP
ASNT8143-KHC	PRBS9/PRBS10 Generator w/ (x^9+x^4+1) & $(x^{10}+x^7+1)$ Polynomials	DC	24Gbps	805	24-pin CQFN
ASNT8144-KMC	PRBS7/PRBS15 Generator w/ (x^7+x^6+1) & $(x^{15}+x^{14}+1)$ Polynomials & Integrated Sync Output	DC	23Gbps	850	24-pin CQFP
ASNT8145-KHM	PRBS9/PRBS10 Generator w/ (x^9+x^4+1) & $(x^{10}+x^7+1)$ Polynomials with CTLE	DC	32Gbps	1650	44-pin CQFN
ASNT8146-KHC	PRBS9/PRBS10 Generator w/ (x^9+x^4+1) & $(x^{10}+x^7+1)$ Poly w/ Amplitude Control	DC	32Gbps	1220	24-pin CQFN
ASNT8740-KMC	PRBS7/PRBS15 Generator w/ (x^7+x^6+1) & $(x^{15}+x^{14}+1)$ Polynomials w/Reset	DC	64Gbps	860/990	24-pin CQFP
ASNT8740-KHC	PRBS7/PRBS15 Generator w/ (x^7+x^6+1) & $(x^{15}+x^{14}+1)$ Polynomials w/Reset	DC	64Gbps	860/990	24-pin CQFN
ASNT8741-KMC	PRBS9/PRBS10 Generator w/ (x^9+x^4+1) & $(x^{10}+x^7+1)$ Polynomials w/Reset	DC	64Gbps	1020	24-pin CQFP
ASNT8741-KHC	PRBS9/PRBS10 Generator w/ (x^9+x^4+1) & $(x^{10}+x^7+1)$ Polynomials w/ Reset	DC	64Gbps	1020	24-pin CQFN
ASNT8146-KMC	PRBS9/PRBS10 Generator (x^9+x^4+1) and $(x^{10}+x^7+1)$ Polynomials with Output Amplitude Control	DC	32Gbps	1220	24-pin CQFN

Encoders

P/N	Function	Frequency		Power (mW)	Package
		(min)	(max)		
ASNT6101-KMM	PAM4 Signal Generator/Encoder	2	53Gbps	1250	44-pin CQFP
ASNT6102-KMM	PAM4 Signal Generator/Encoder	1	72Gbps(36Gbaud)	1250	44-pin CQFP
ASNT6103-KMF	PAM4 Signal Generator/Encoder	1	72Gbps(36Gbaud)	4000	64-pin CQFP
ASNT6105-KMM	PAM4 Signal Asynchronous Encoder	1	64Gbps(32Gbaud)	1000	44-pin CQFP
ASNT6105-KHM	PAM4 Signal Asynchronous Encoder	1	64Gbps(32Gbaud)	1000	44-pin CQFN

Decoders

P/N	Function	Frequency		Power (mW)	Package
		(min)	(max)		
ASNT6104-KMM	PAM4 Decoder	DC	50Gbps/25Gbaud	2100	44-pin CQFP
ASNT6104-PQB	PAM4 Decoder	DC	32Gbps/16Gbaud	2100	40-pin QFN
ASNT6106-KMM	PAM4 Decoder	DC	64Gbps/32Gbaud	2400	44-pin CQFP
ASNT6106-KHM	PAM4 Decoder	DC	64Gbps/32Gbaud	2400	44-pin CQFN

Interface & Level Converters

P/N	Function	Frequency		Power (mW)	Package
		(min)	(max)		
ASNT3010-PQB	LVDS/CMOS Converter& Signal Splitter	DC	2Gbps	115	40-pin QFN
ASNT3111-KMC	Single-Channel CML-to-PCML Level Shifter	DC	40Gbps	260	24-pin CQFP
ASNT3111-PQC	Single-Channel CML-to-PCML Level Shifter	DC	20Gbps	260	24-pin QFN
ASNT3112-KMC	Dual-Channel Linear Signal Level Down Shifter	DC	32Gbps	1150	24-pin CQFP
ASNT3114-PQC	LVDS-to-3PCML Converter	DC	6Gbps/7GHz	150-350	24-pin QFN

Analog to Digital Converters

P/N	Function	Frequency		Power (mW)	Package
		(min)	(max)		
ASNT7113-KMC	Differential Track-and-Hold Amplifier w/ up to 4GSps Sampling Speed	DC	14GHz	1750	24-pin CQFP
ASNT7113A-KMC	Differential Track-and-Hold Amplifier w/ up to 4GSps Sampling Speed	DC	20GHz	1750	24-pin CQFP
ASNT7113A-KHC	Differential Track-and-Hold Amplifier w/ up to 4GSps Sampling Speed	DC	20GHz	1750	24-pin CQFN
ASNT7113A-KMM	Differential Track-and-Hold Amplifier w/ up to 4GSps Sampling Speed	DC	20GHz	1750	44-pin CQFP

ASNT7114-KHM	Differential Track-and-Hold Amplifier w/ up to 4GSps Sampling Speed	DC 32GHz	1500-2000	44-pin CQFN
ASNT7120A-KMA	Differential Track-and-Hold Splitter Amplifier w/ up to 6GSps in Each Channel	DC 20GHz	3500	100-pin CQFP
ASNT7121-KMA	4-bit Flash Analog-to-Digital Converter w/ 20GHz Input Analog Bandwidth	DC 20GHz	2800-2850	100-pin CQFP
ASNT7122-KMA	4-bit Flash Analog-to-Digital Converter w/ 20GHz Input Analog Bandwidth & PRBS15 Generation	DC 20GHz	4340	100-pin CQFP
ASNT7123-KMA	15GS/s 4-bit Flash Analog-to-Digital Converter w/ 20GHz Input Analog Bandwidth & HS Outputs	DC 15GHz	4620	100-pin CQFP
ASNT7123A-KMA	16GS/s 4-bit Flash Analog-to-Digital Converter w/ 20GHz Input Analog Bandwidth & HS Outputs	DC 16GHz	4620	100-pin CQFP

Digital to Analog Converters

P/N	Function	Frequency		Power (mW)	Package
		(min)	(max)		
ASNT7151-KMA	Radiation-Hardened 12-Bit DAC, 1GSps	DC	2.8GHz	1000	100-pin CQFP

Board Level Products

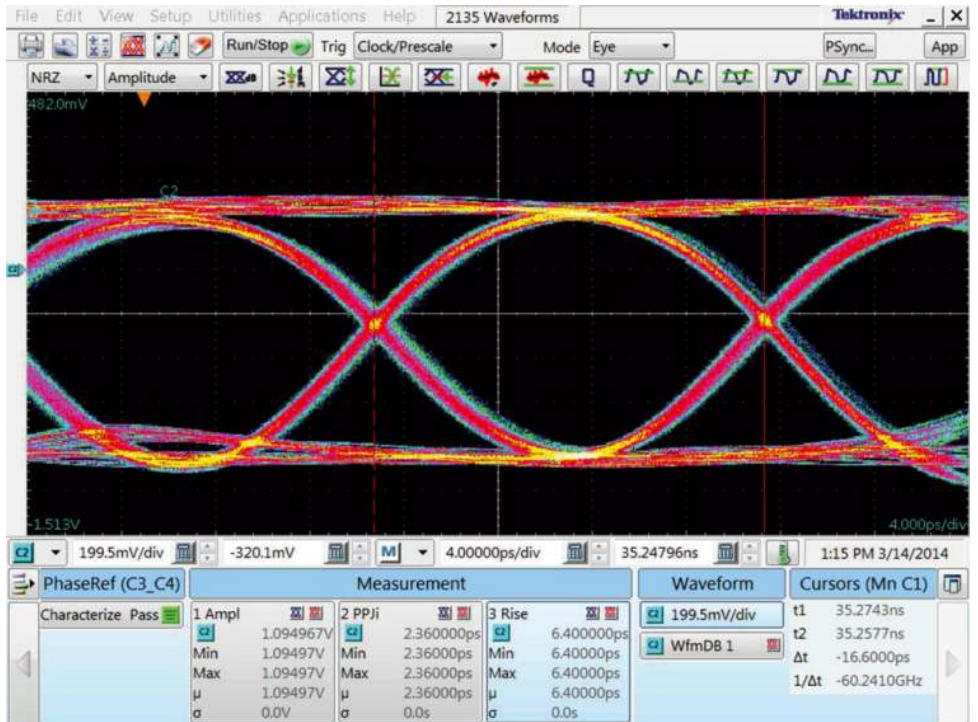
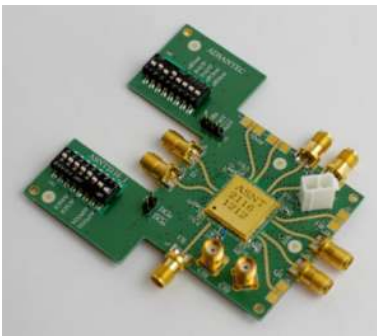
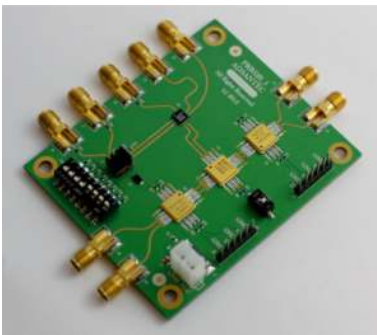
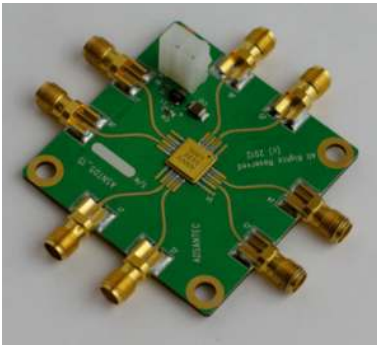
P/N	Function	Frequency		Power (mW)	Package
		(min)	(max)		
ASNTu2s v2.0	USB to 2-Channel 3-Wire Interface Bridge With Tigerboard				Board
ASNTu2s v5.0	USB to 5-Channel 3-Wire Interface Bridge With Tigerboard				Board
ASNT28_1	Clock Divider by-4/1-to-512	2KHz	32GHz	3795	Board
ASNT501	Clock Divider-by-8/2-to-1024	2KHz	41GHz	3630	Board
ASNT502	Clock Divider-by-8/2-to-1024	2KHz	46GHz	4300	Board
ASNTPRBS20_1	PRBS7 Generator w/ Jitter Insertion Sync Outputs & Amplitude Control	20Mbps	18Gbps	6930	Board
ASNTPRBS20B_1	PRBS7/15 Generator w/ Jitter Insertion Sync Outputs & Amplitude Control	20Mbps	18Gbps	7200	Board

ASNTPRBS20CV2	PRBS7/15 Generator w/Jitter Insertion Sync Outputs, Amplitude Control with USB Control Interface	20Mbps 22Gbps	7200	Board
ASNTPRBS32_1	PRBS7 Generator with Sync Outputs	8Gbps 34Gbps	5400	Board
ASNTPRBS34_1	PRBS7/15 Generator with Sync Outputs	8Gbps 34Gbps	5600	Board
ASNTPRBS34A v2	Selectable PRBS9/10 Generator with USB Control Interface	2Gbps 32Gbps	10500	Board
ASNTPRBS40_1	PRBS7 Generator with Sync Outputs	4Gbps 44Gbps	6800	Board
ASNTPRBS56_1	PRBS7/15 Generator with Sync Outputs	4Gbps 52Gbps	7000	Board
ASNT9001-JI	Advanced Jitter Generation/Insertion Module with USB Control Interface	DC 29GHz	16000	Board

Instrumentation

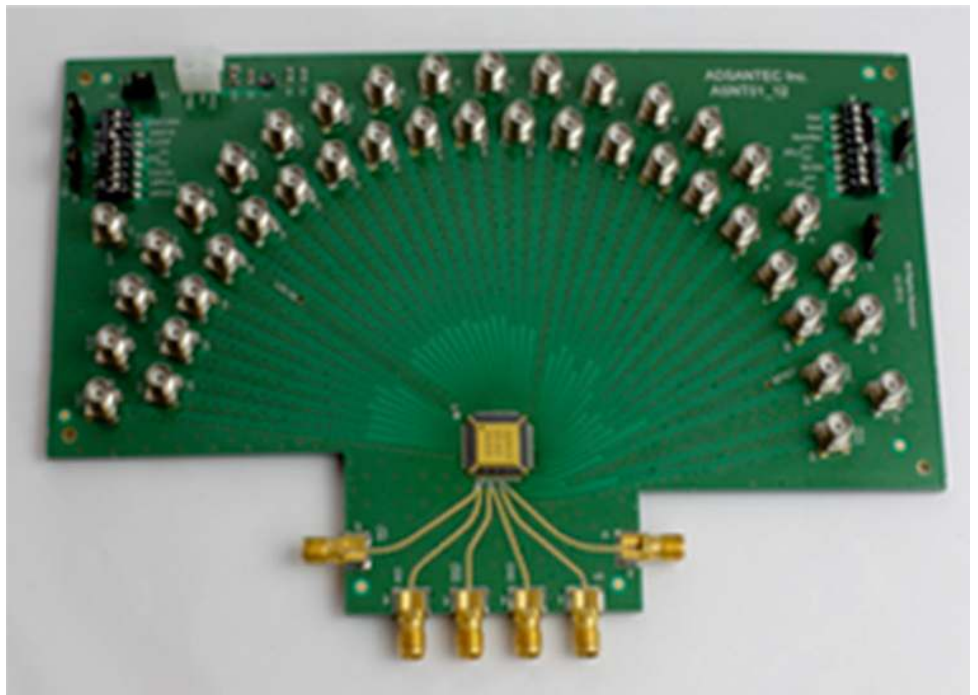
P/N	Function	Frequency		Power (mW)	Package
		(min)	(max)		
ASNT6118-MOD	Modular Advanced Driver/Amplifier with Digital Pre-Emphasis, PAM4 Encoding & Less than 200fs p-p jitter	1	32.5Gbps	10000	Benchtop
ASNT_MUX64	2:1 Multiplexer with USB Control Interface	2Mbps	64Gbps	15000	Benchtop
ASNT_DMUX64	1:2 Demultiplexer w/ USB Control Interface	2Mbps	64Gbps	3500	Benchtop
ASNT_PRBS43A	PRBS7/15 Generator with USB Control Interface and on-board PLL	10kbps	48Gbps	20000	Benchtop
ASNT_PRBS45	PRBS7-to-PRBS31 Pattern Generator With USB Control Interface	4	45Gbps	21250	Benchtop
ASNT_MPSG	Synchronous 4-Channel 40Gbps PRBS Generator with USB Control Interface	100Mbps	40Gbps	15000	Benchtop
ASNT_6900-MOD	128Gbps PAM4 Data Generator with USB Control Interface	1Gbaud	64Gbaud	TBD	Benchtop
ASNT_6901-MOD	128Gbps PAM4 Data Generator with USB Control Interface	1Gbaud	64Gbaud	TBD	Benchtop
ASNT_6902-MOD	112Gbps PAM4 Data Generator with USB Control Interface	1Gbaud	56Gbaud	22500	Benchtop

Capability Overview



60GB EYE

ADSANTEC OFFERS EVALUATION BOARDS FOR MOST OF ITS ICS





Established January 2002



Located in Torrance,
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