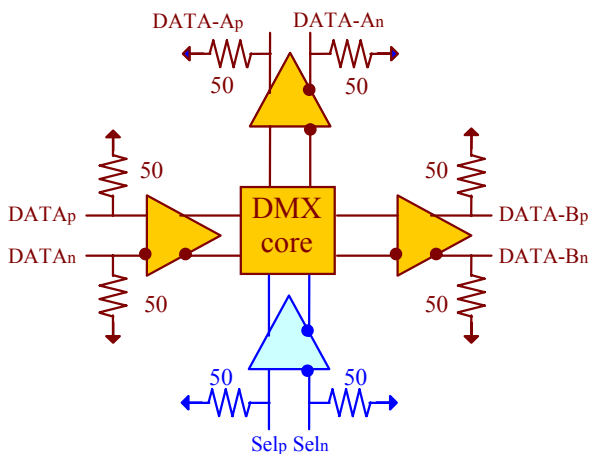


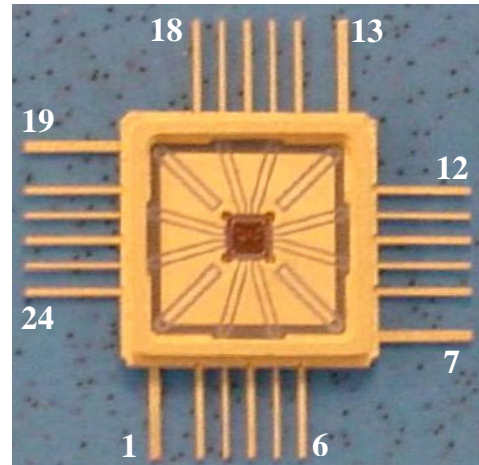
## ASNT5190-KMC 50Gbps 1:2 Demultiplexer

- High speed broadband 1:2 Demultiplexer gate.
- Exhibits low jitter and limited temperature variation over industrial temperature range.
- 30GHz analog input bandwidth for both data and clock inputs.
- Ideal for high speed proof-of-concept prototyping.
- Fully differential input and output buffers with on-chip 50Ω termination.
- CML output interface with 400mV single-ended swing.
- Single -3.3V power supply.
- Power consumption: 560mW.
- Fabricated in SiGe for high performance, yield, and reliability.
- Custom CQFP 24-pin package.

### DESCRIPTION



*Functional Block Diagram*



*Package View*

The temperature stable and broadband ASNT5190-KMC SiGe IC can be utilized as a high speed 1:2 demultiplexer (DMX) and is intended for use in high-speed measurement / test equipment. ASNT5190-KMC can receive up a 50Gbps input data signal and effectively demultiplex it into two 25Gbps NRZ output data signals by using an input 25GHz clock signal on its selector signal inputs. The part's I/Os support the CML logic interface with on chip 50Ω termination and may be used differentially, AC/DC coupled, single-ended, or in any combination. It operates from a single -3.3V power supply.



## TERMINAL FUNCTIONS

vcc	2,4,6,8,10,12 14,16,18,20,22,24	PS	Power Supply: 0V
vee	1,7,13,19	PS	Power Supply: -3.3V
dp	21	Input	Differential CML high-speed data signal inputs
dn	23		
selp	3	Input	Differential CML high-speed clock signal inputs
seln	5		
dap	17	Output	Differential CML high-speed data signal outputs
dan	15		
dbp	11	Output	Differential CML high-speed data signal outputs
dbn	9		

## ELECTRICAL CHARACTERISTICS

PARAMETER	MIN	TYP	MAX	UNIT	COMMENTS
<b>VEE</b>	-3.1	-3.3	-3.5	V	±6%
<b>VCC</b>		0.0		V	
<b>IEE</b>		170		mA	
<b>Power</b>		560		mW	
<b>Junction Temp.</b>	-25	50	125	°C	
<b>Input Data (d)</b>					
Frequency	0.0		50	Gbps	
CM Level	Vcc-0.8	Vcc-0.2	Vcc	V	
SE Swing	50	400	1000	mV	Peak-to-peak
<b>Input Clock (sel)</b>					
Frequency	0.0		25	GHz	
CM Level	Vcc-0.8	Vcc-0.2	Vcc	V	
SE Swing	50	400	1000	mV	Peak-to-peak
Duty Cycle	40%	50%	60%		
<b>Output Datas (da/db)</b>					
Frequency	0.0		25	Gbps	
CM Level	Vcc-0.3	Vcc-0.2	Vcc-0.1	V	
SE Swing	380	400	420	mV	Peak-to-peak
Rise/Fall Times	6	8	10	ps	20%-80%
Additive Jitter			<1	ps	Peak-to-peak

## PACKAGE INFORMATION

The chip is packaged in ADSANTEC's custom 24-pin metal-ceramic package (CQFP). The package's mechanical information is available on the company's [website](#).