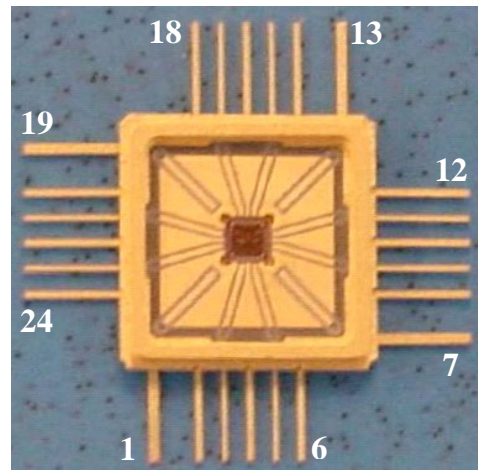
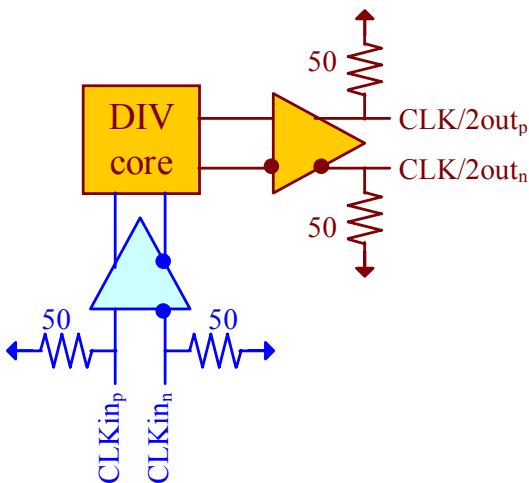


ASNT5180_KMC 50GHz Divide-by-2

- High speed broadband clock divide-by-2 circuit.
- Exhibits low jitter and limited temperature variation over industrial temperature range.
- 50GHz analog input bandwidth for the clock input.
- 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: 270mW.
- Fabricated in SiGe for high performance, yield, and reliability.
- Custom CQFP 24-pin package.

DESCRIPTION



Functional Block Diagram

Package View

The temperature stable ASNT5180-KMC SiGe IC provides broadband clock divide-by-2 functionality and is intended for use in high-speed measurement / test equipment. ASNT5180-KMC can accept an up to 50GHz clock signal and create an up to 25GHz output clock signal with 50% duty cycle. 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

TERMINAL		TYPE	DESCRIPTION
NAME	(NO.)		
vcc	2,4,6,8,10,12 14-18,20-24	PS	Power Supply: 0V (GND)
vee	1,7,13,19	PS	Power Supply: -3.3V
cp	3	Input	Differential CML high-speed clock signal inputs
cn	5		
outp	11	Output	Differential CML high-speed clock signal outputs
outn	9		

ELECTRICAL CHARACTERISTICS

PARAMETER	MIN	TYP	MAX	UNIT	COMMENTS
VEE	-3.14	-3.3	-3.47	V	±6%
VCC		0.0		V	±6%
IEE		80		mA	
Power		270		mW	
Junction Temp.	-25	50	125	°C	
Input Clock (c)					
Frequency	0.0		50	GHz	
CM Level	Vcc-0.8	Vcc-0.2	Vcc	V	
Swing (Diff or SE)	50	400	1000	mV	Peak-to-peak
Duty Cycle	40%	50%	60%		
Output Clock (out)					
Frequency	0.0		25	GHz	
CM Level	Vcc-0.25	Vcc-0.2	Vcc-0.15	V	
SE Swing	380	400	420	mV	Peak-to-peak
Rise/Fall Times	6	8	10	ps	20%-80%
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](#).