14GHz Divide-by-32
DV032

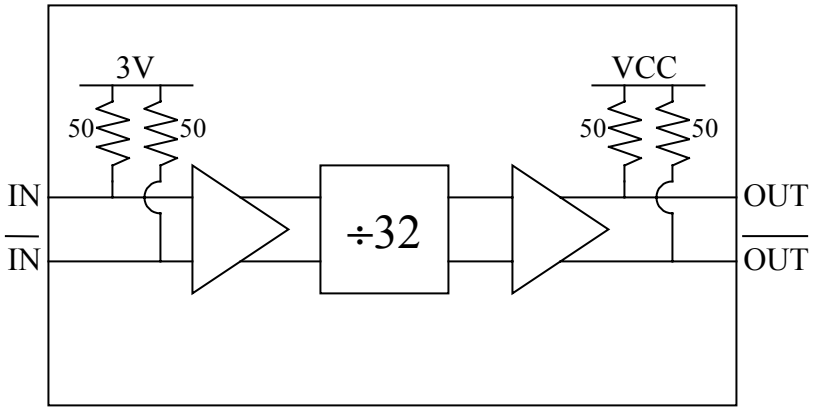
PRODUCT DESCRIPTION

DV032 is a high-speed divide-by-32 static divider in 16-pin 3x3mm plastic QFN package. Due to its high input sensitivity, low output phase noise, and small size, DV032 is well suited for wide-range of applications from communications, instrumentation, radios/radar, to medical etc. It has differential input and output and accepts input frequency from 0.2GHz (sine wave, DC for square wave) to 14GHz. A single power supply of +5V is required.

KEY FEATURES

- 0.2-14GHz Bandwidth
- Low phase noise: -140 dBc/Hz
- High input sensitivity: -25 dBm
- Output amplitude: 800 mVp-p (differential)
- Differential input and output
- 50Ω input/output impedance
- Single power supply: +5V
- Current consumption: 72mA
- 16-pin 3x3mm plastic QFN package

BLOCK DIAGRAM



ELECTRICAL SPECIFICATIONS

Room temperature, Zo=50Ω, Vcc=+5V

Parameter	Conditions	Min	Typical	Max	Units
Ambient Temperature		-40	25	85	°C
Max input frequency	Sine wave input		14		GHz
Min input frequency[1]	Sine wave input		0.2		GHz
Input power[2]	*f*in=0.2-10GHz, single ended	-25		10	dBm
Output amplitude 1	*f*in=10GHz, single ended		400		mVp-p
Output amplitude 2	*f*in=10GHz, differential		800		mVp-p
Feedthrough	Input frequency at output		-25		dB
Reverse isolation	< 10GHz		30		dB
Phase noise	SSB 100kHz offset		-140		dBc/Hz
Output rise/fall time	20% to 80%		50		ps
Input/output return loss	< 10GHz		12		dB
Output Impedance	DC, output pin to Vcc	45	50	55	Ω
Current Consumption			72		mA

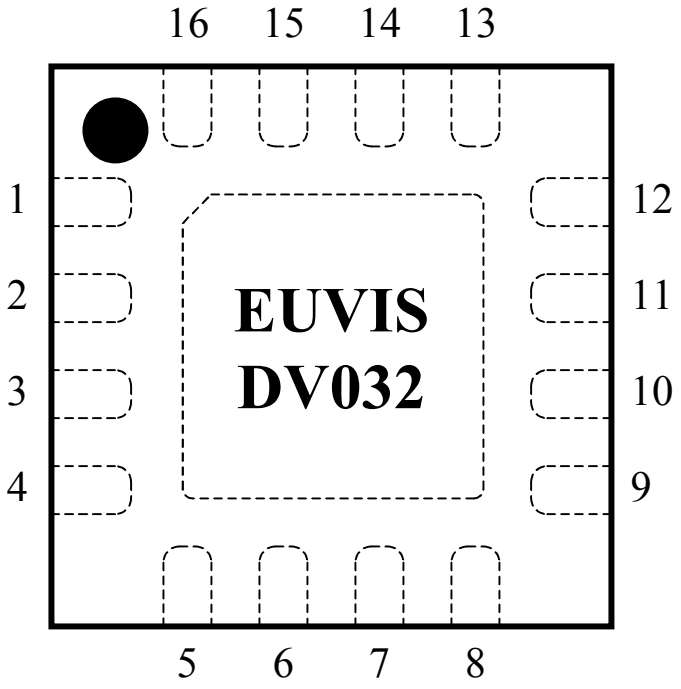
[1] Minimum input frequency is DC with square-wave input signal.
[2] AC coupling is recommended for input signals. Common mode voltage of 3V is required for DC-coupled input signals in order to match internal input bias of 3V.

PIN DESCRIPTION

Pin No.	Name	Signal
1, 5, 7, 9, 12	GND	Ground
2	IN	Input
3	IN_	Complimentary input
4, 13, 14, 15, 16	VCC	Positive power supply (+5V)
6, 8	N/C	No connection
10	OUT	Divided output
11	OUT_	Divided complimentary output

PIN ASSIGNMENT

- Package type: 16-pin 3mm x 3mm plastic QFN
- Thickness: 1mm



Top View

ORDERING INFORMATION

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