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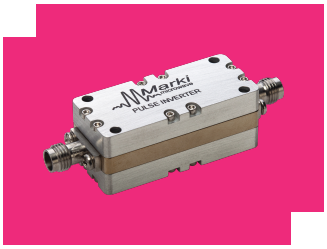
INV-0065

BROADBAND PULSE INVERTER (1 MHz to 65 GHz)

DEVICE OVERVIEW

General Description

The INV-0065 is a broadband pulse inverter that operates over a 1 MHz to 65 GHz bandwidth. This inverter features fast rise and fall times and low insertion loss. Inverters use both magnetic and capacitive coupling to create an inverted version of a voltage signal. In the frequency domain, inverters introduce a broadband 180° phase shift relative to the input signal, while maintaining a flat group delay to ensure signal integrity.



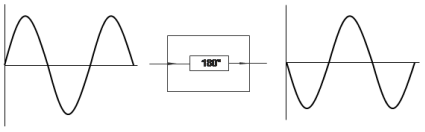
Features

- 1 MHz to 65 GHz Pulse Inverter
- Fastest Rise and Fall Time
- Low Insertion Loss
- Matched 50 Ohm Impedance on Input and Output Ports

Applications

N/A

Functional Block Diagram



Part Ordering Options

Part Number	Description	Connectors	Green Status	Product Lifecycle	Export Classification
INV-0065	BROADBAND PULSE INVERTER (1 MHz to 65 GHz)	Standard	Non-RoHS	Released	EAR99

Table Of Contents

Revision History

Revision Code	Revision Date	Comment
-	2011-08-01	Datasheet initial Release
A	2019-04-01	Added Low Frequency insertion loss plot

Specifications

Package Information

Parameter	Details	Rating
Weight	-	43g
Dimensions	-	43.18 x 18.8 mm

Electrical Specifications

Specifications guaranteed from -55 to +100°C, measured in a 50Ω system.

Parameter	Test Conditions	Minimum Frequency (GHz)	Maximum Frequency (GHz)	Min	Typ	Max	Unit
Delay	-	-	-	-	280	-	ps
Insertion Loss	-	0.001	7	-	2	3	dB
Insertion Loss	-	7	26	-	1.2	2	dB
Insertion Loss	-	26	38	-	2.5	5	dB
Insertion Loss	-	38	65	-	5	8	dB
Nominal Phase Shift [1]	-	-	-	-	180	-	°
Risetime/Falltime [2]	-	-	-	-	12	-	ps
VSWR	-	0.001	24	-	1.35	-	
VSWR	-	24	65	-	2	-	
Weight	-	-	-	-	43	-	g

[1] Relative to the phase of a transmission line with same group delay
[2] Specified as 90%/10%. Calculated from Tau_inv2 = (Tau_out2 – Tau_in2)

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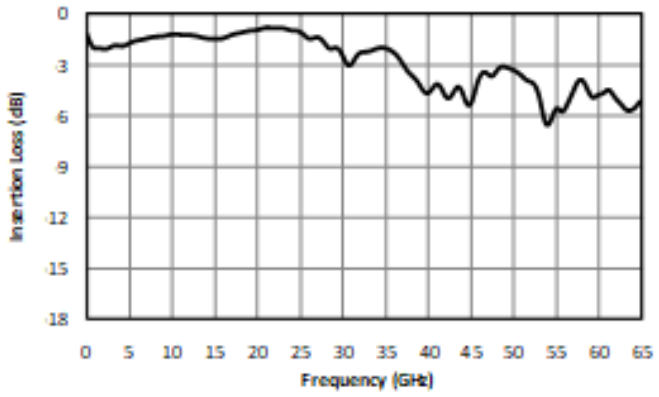
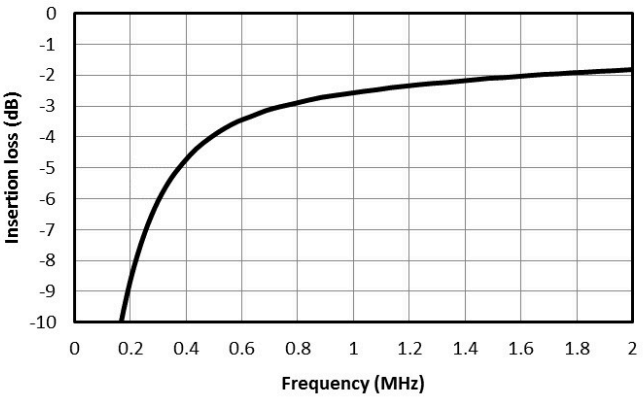
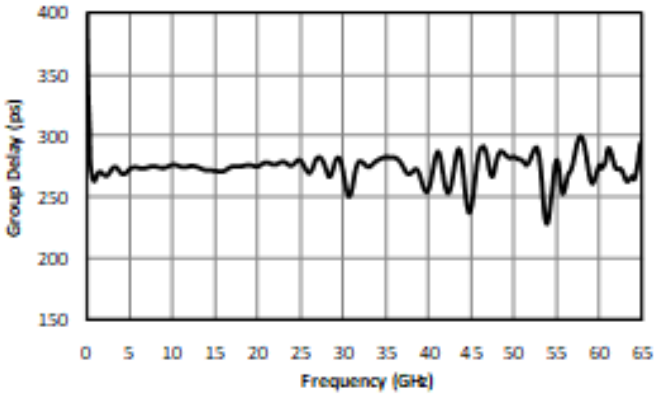
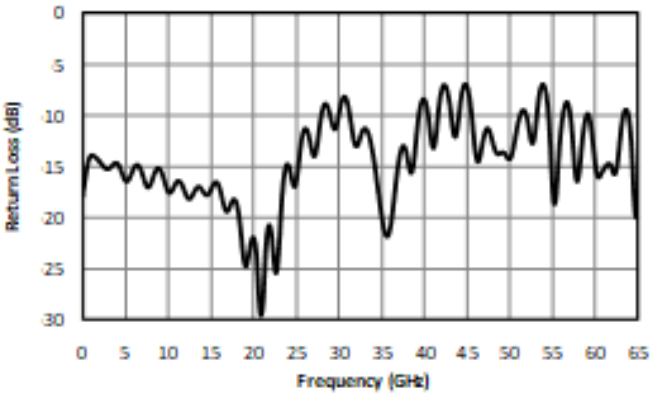
Typical Performance









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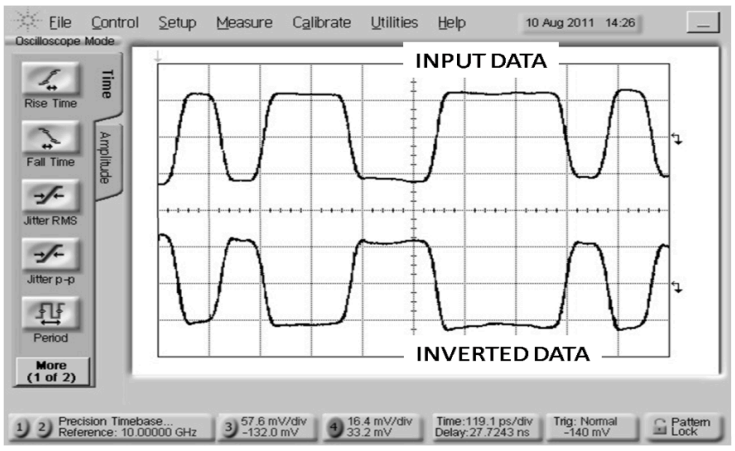
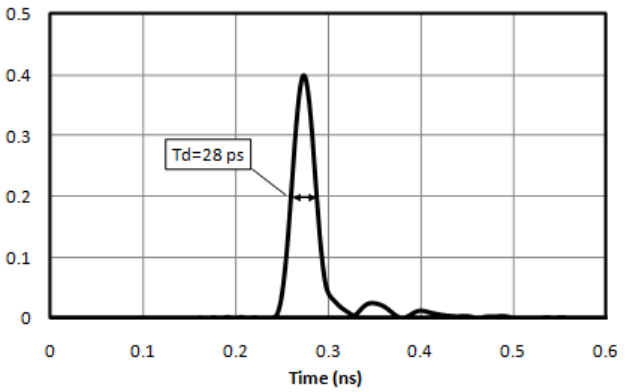
Time Domain Performance Plots

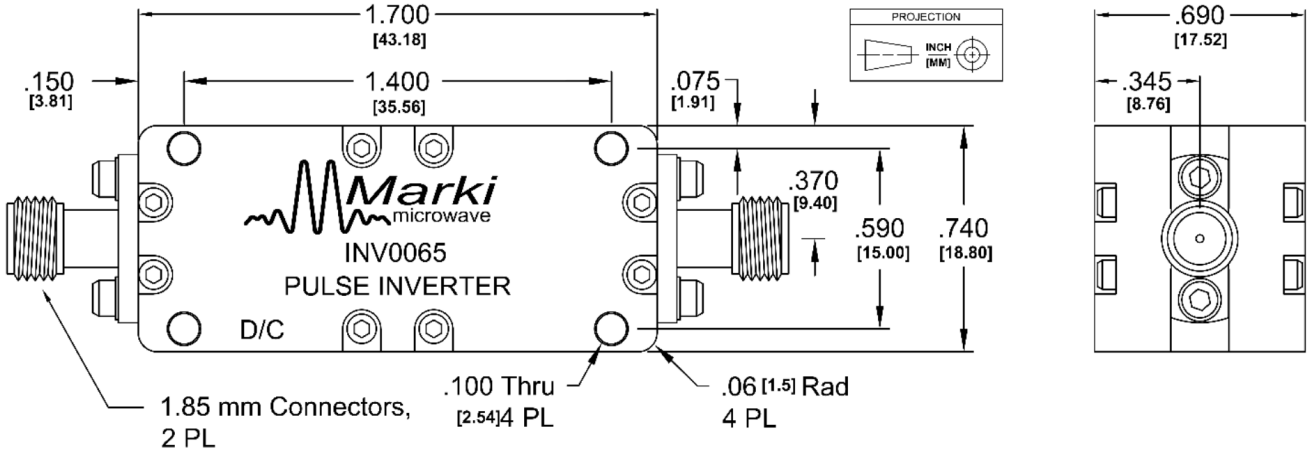




Mechanical Data

Outline Drawing

Download : Outline 2D Drawing | Outline 3D Drawing | Outline 3D STP



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