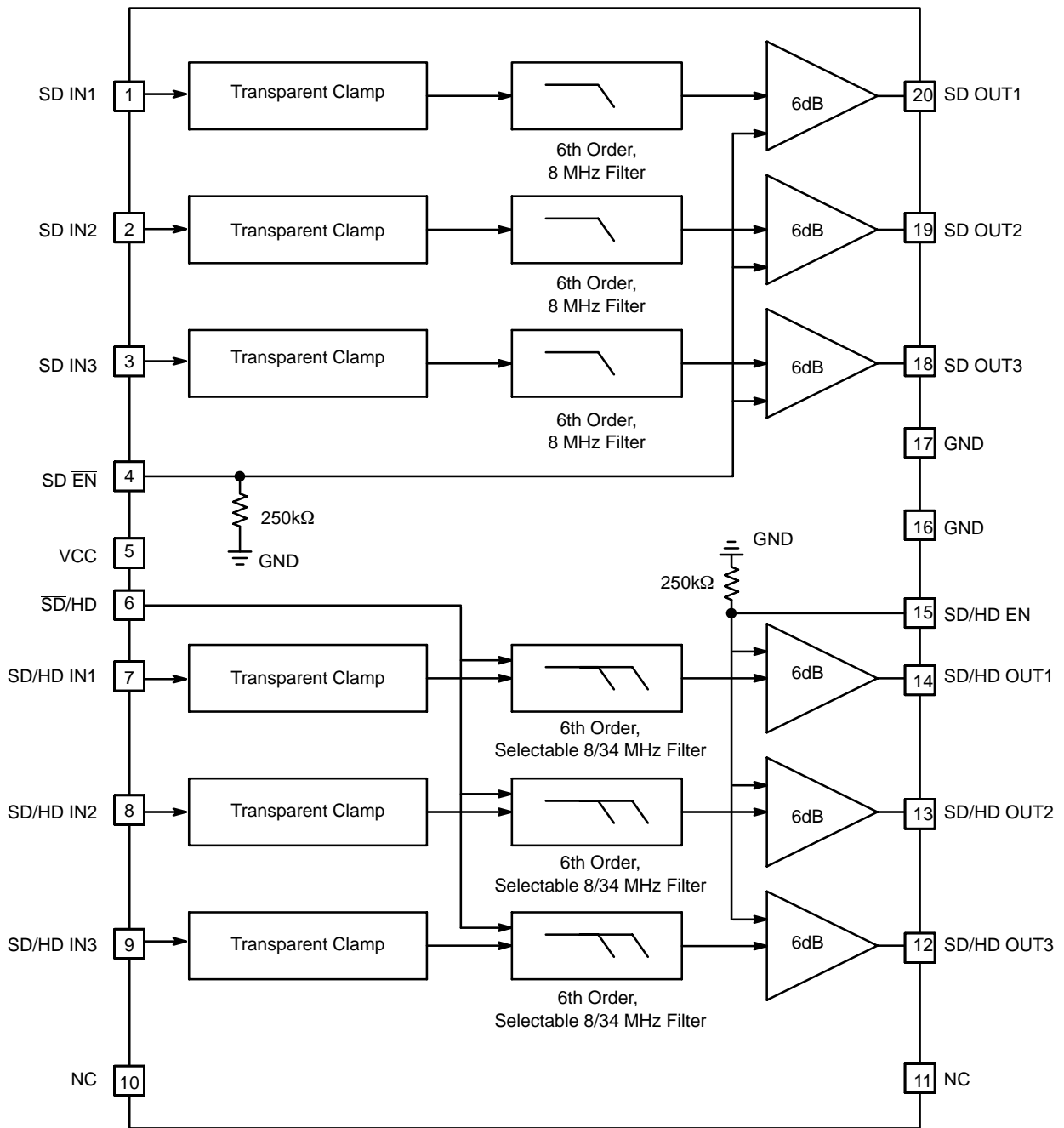


# **NCS2566**

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## **Six-Channel Video Driver with Triple SD & Triple Selectable SD/HD Filters**

# NCS2566



**Figure 1. NCS2566 Block Diagram**

**NCS2566**

# NCS2566

## MAXIMUM RATINGS

Parameter	Symbol	Rating	Unit
Power Supply Voltages	$V_{CC}$	$-0.3 \leq V_{CC} \leq 5.5$	Vdc
Input Voltage Range	$V_I$	$-0.3 \leq V_I \leq V_{CC}$	Vdc
Input Differential Voltage Range	$V_{ID}$	$-0.3 \leq V_I \leq V_{CC}$	Vdc
Output Current Per Channel	$I_O$	50	mA
Maximum Junction Temperature (Note 1)	$T_J$	150	°C
Operating Ambient Temperature	$T_A$	-40 to +85	°C
Storage Temperature Range	$T_{stg}$	-	°C

## NCS2566

**DC ELECTRICAL CHARACTERISTICS** ( $V_{CC} = +5.0\text{ V}$ ,  $R_{source} = 37.5\ \Omega$ ,  $T_A = 25^\circ\text{C}$ , inputs AC-coupled with  $0.1\ \mu\text{F}$ , all outputs AC-coupled with  $220\ \mu$ )

## NCS2566

**AC ELECTRICAL CHARACTERISTICS FOR HIGH DEFINITION CHANNELS** (Pin Numbers (7, 14), (8, 13) & (9, 12)) ( $V_{CC}$  = +5.0 V,  $V_{in} = 1 V_{PP}$ ,  $R_{source} = 37.5 \Omega$ ,  $T_A = 25^\circ C$ , Inputs AC-coupled with 0.1  $\mu F$ , All Outputs AC-coupled with 220  $\mu F$  into 150  $\Omega$  Referenced to 400 kHz; unless otherwise specified,  $\overline{SD}/HD = High$ )

Symbol

# NCS2566

## TYPICAL CHARACTERISTICS

$V_{CC} = +5.0\text{ V}$ ,  $V_{in} = 1\text{ V}_{PP}$

TYPICAL CHARACTERISTICS

$V_{CC} = +5.0\text{ V}$ ,  $V_{in} = 1\text{ V}_{PP}$ ,  $R_{source} = 37.5\ \Omega$ ,  $T_A = 25^\circ\text{C}$ , Inputs AC-coupled with  $0.1\ \mu\text{F}$ , All Outputs AC-coupled with  $220\ \mu\text{F}$  into  $150\ \Omega$  Referenced to  $400\text{ kHz}$ ; unless otherwise specified

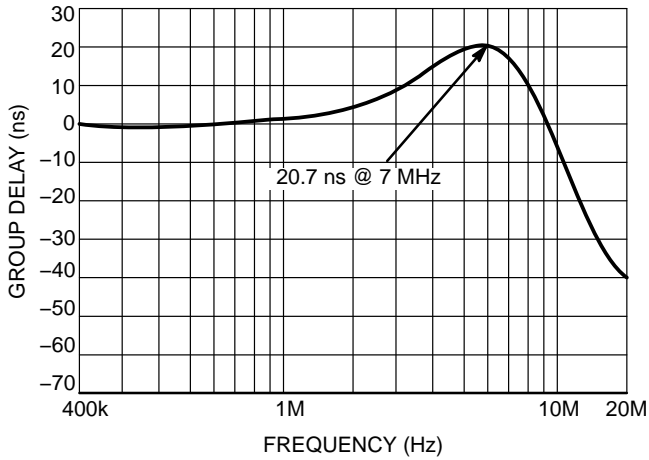


Figure 9. SD Normalized Group Delay

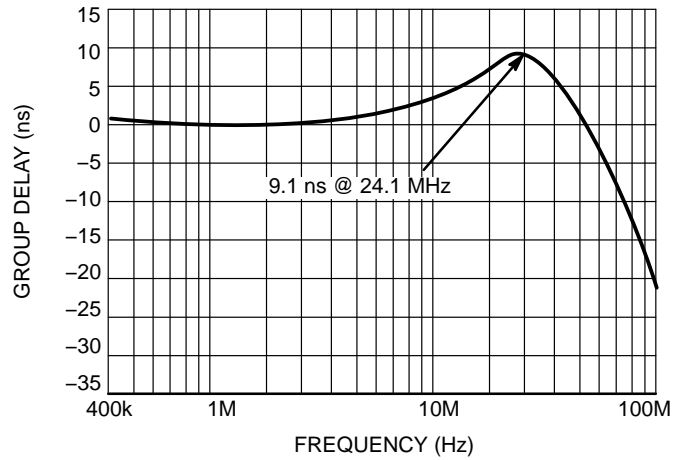


Figure 10. HD Normalized Group Delay

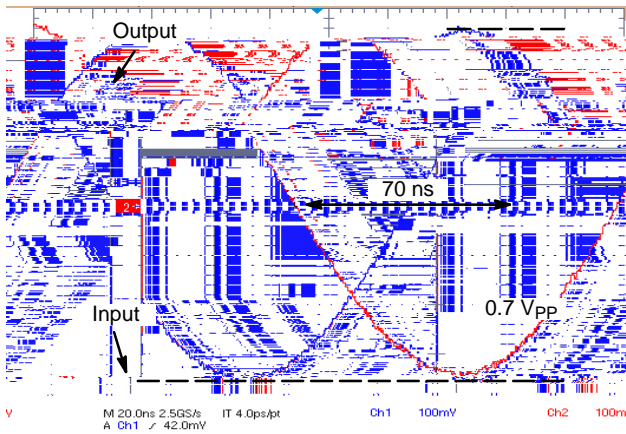


Figure 11. SD Propagation Delay

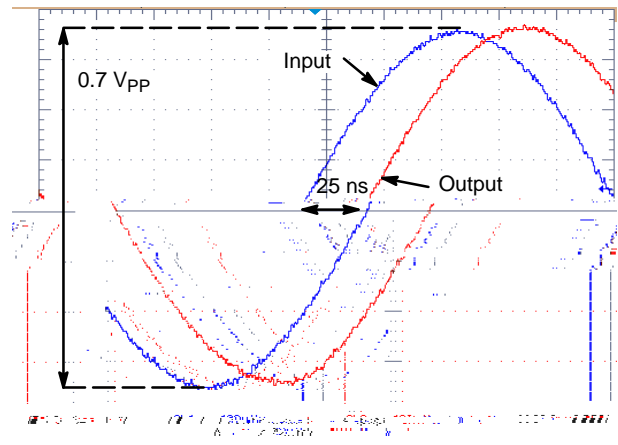


Figure 12. HD Propagation Delay

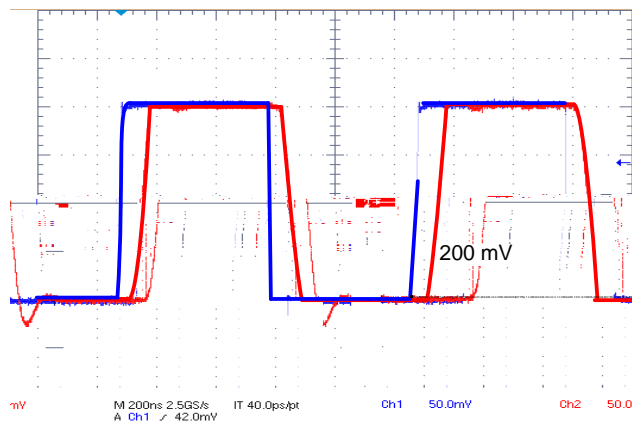


Figure 13. SD Small Signal Response

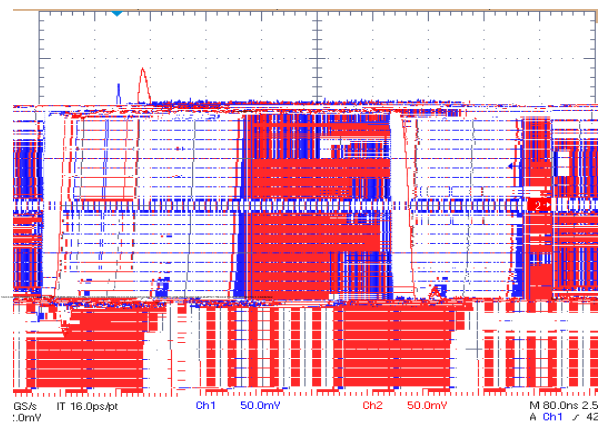


Figure 14. HD Small Signal Response





# NCS2566

## TYPICAL CHARACTERISTICS

$V_{CC} = +5.0\text{ V}$ ,  $V_{in} = 1\text{ V}_{PP}$ ,  $R_{source} = 37.5\ \Omega$ ,  $T_A = 25^\circ\text{C}$ , Inputs AC-coupled with  $0.1\ \mu\text{F}$ , All Outputs AC-coupled with  $220\ \mu\text{F}$  into  $150\ \Omega$   
 Referred to 400 kHz; unless otherwise specified

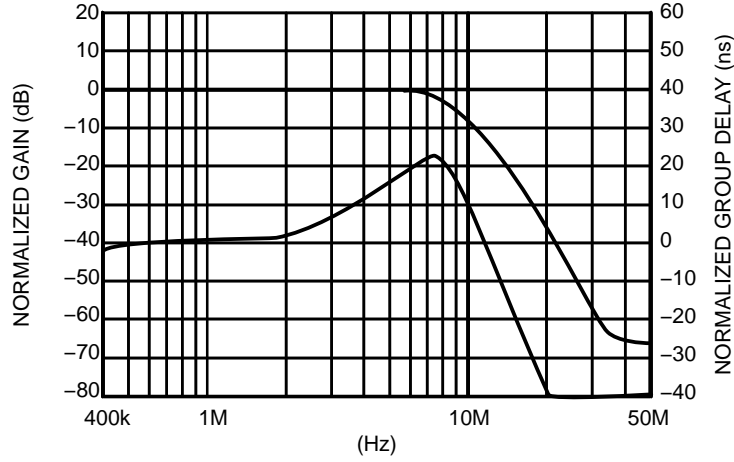


Figure 18. SD Frequency Response and Group Delay

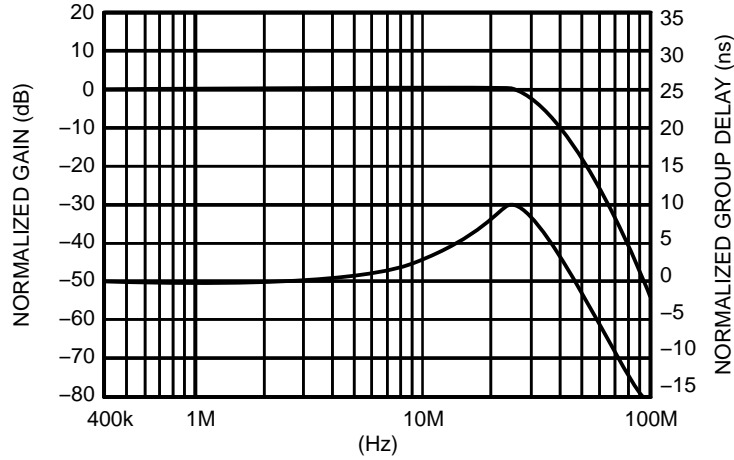


Figure 19. HD Frequency Response and Group Delay

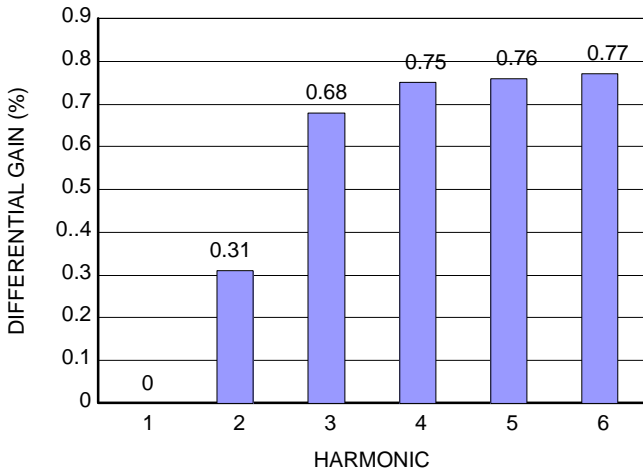


Figure 20. SD Differential Gain

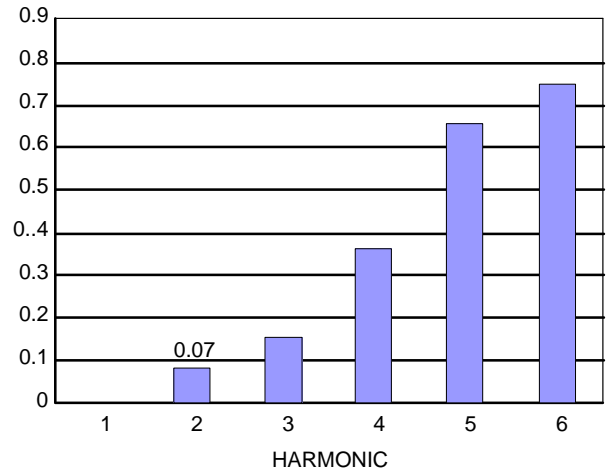


Figure 21. SD Differential Phase

**NCS2566**

NCS2566

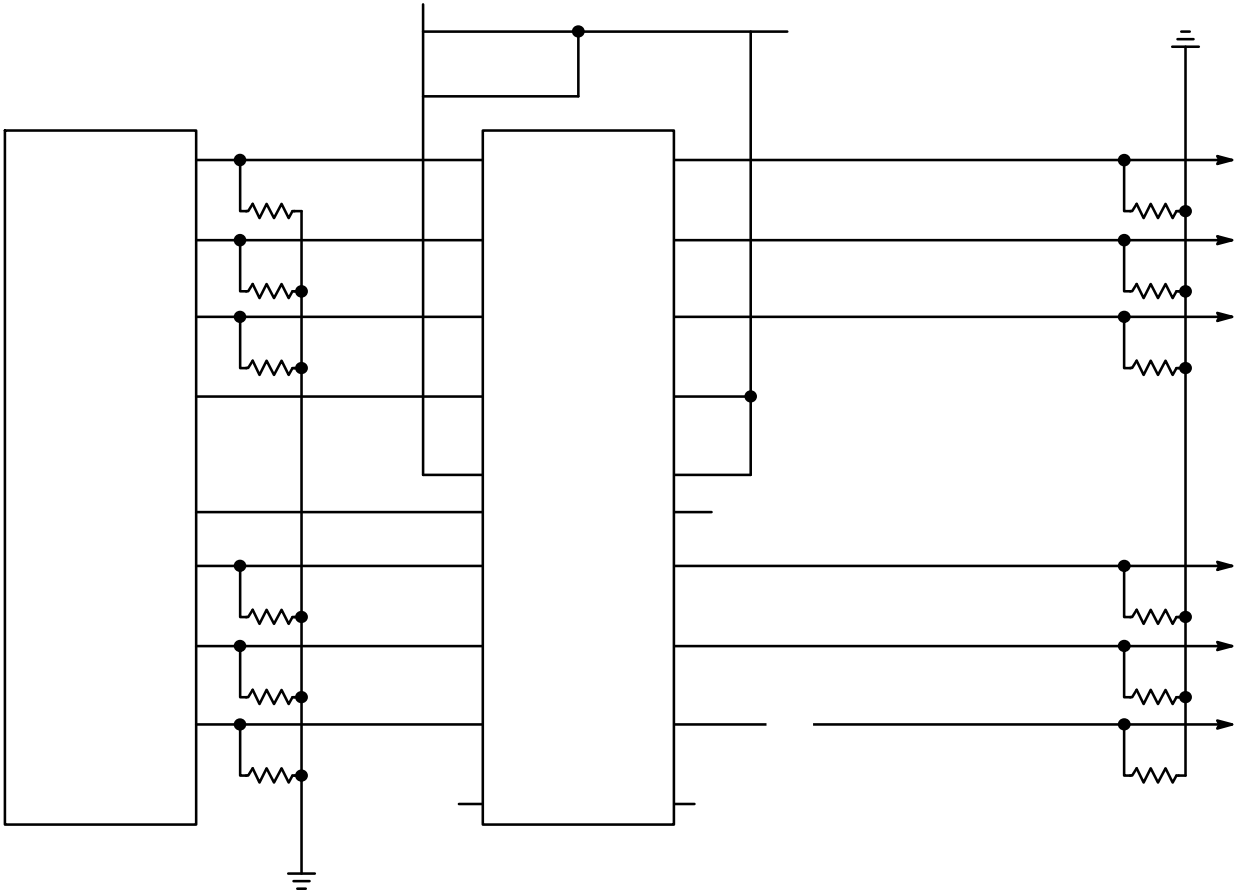
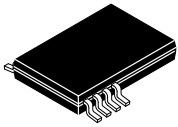


Figure 22. Typical Application



SCALE 2:1

**TSSOP-20 WB**  
CASE 948E  
ISSUE D

DATE 17 FEB 2016

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