

# ADG733/ADG734—SPECIFICATIONS<sup>1</sup> ( $V_{DD} = 5\text{ V} \pm 10\%$ , $V_{SS} = 0\text{ V}$ , $GND = 0\text{ V}$ , unless otherwise noted.)

Parameter	B Version		Unit	Test Conditions/Comments
	+25°C	-40°C to +85°C		
<b>ANALOG SWITCH</b>				
Analog Signal Range		0 V to $V_{DD}$	V	
On Resistance ( $R_{ON}$ )	2.5		$\Omega$ typ	$V_S = 0\text{ V}$ to $V_{DD}$ , $I_{DS} = 10\text{ mA}$ ; Test Circuit 1
	4.5	5.0	$\Omega$ max	
On Resistance Match between Channels ( $\Delta R_{ON}$ )		0.1	$\Omega$ typ	$V_S = 0\text{ V}$ to $V_{DD}$ , $I_{DS} = 10\text{ mA}$
		0.4	$\Omega$ max	
On Resistance Flatness ( $R_{FLAT(ON)}$ )	0.5		$\Omega$ typ	$V_S = 0\text{ V}$ to $V_{DD}$ , $I_{DS} = 10\text{ mA}$
		1.2	$\Omega$ max	
<b>LEAKAGE CURRENTS</b>				
Source OFF Leakage $I_S$ (OFF)	$\pm 0.01$		nA typ	$V_{DD} = 5.5\text{ V}$ $V_D = 4.5\text{ V}/1\text{ V}$ , $V_S = 1\text{ V}/4.5\text{ V}$ ; Test Circuit 2
	$\pm 0.1$	$\pm 0.3$	nA max	
Channel ON Leakage $I_D$ , $I_S$ (ON)	$\pm 0.01$		nA typ	$V_D = V_S = 1\text{ V}$ , or $4.5\text{ V}$ ; Test Circuit 3
	$\pm 0.1$	$\pm 0.5$	nA max	
<b>DIGITAL INPUTS</b>				
Input High Voltage, $V_{INH}$		2.4	V min	
Input Low Voltage, $V_{INL}$		0.8	V max	
Input Current $I_{INL}$ or $I_{INH}$	0.005		$\mu\text{A}$ typ	$V_{IN} = V_{INL}$ or $V_{INH}$
		$\pm 0.1$	$\mu\text{A}$ max	
$C_{IN}$ , Digital Input Capacitance	4		pF typ	
<b>DYNAMIC CHARACTERISTICS<sup>2</sup></b>				
$t_{ON}$	19		ns typ	$R_L = 300\ \Omega$ , $C_L = 35\text{ pF}$ ; $V_S = 3\text{ V}$ , Test Circuit 4
		34	ns max	
$t_{OFF}$	7		ns typ	$R_L = 300\ \Omega$ , $C_L = 35\text{ pF}$ ; $V_S = 3\text{ V}$ , Test Circuit 4
		12	ns max	
ADG733 $t_{ON}(\overline{EN})$	20		ns typ	$R_L = 300\ \Omega$ , $C_L = 35\text{ pF}$ ; $V_S = 3\text{ V}$ , Test Circuit 5
		40	ns max	
$t_{OFF}(\overline{EN})$	7		ns typ	$R_L = 300\ \Omega$ , $C_L = 35\text{ pF}$ ; $V_S = 3\text{ V}$ , Test Circuit 5
		12	ns max	
Break-Before-Make Time Delay, $t_D$	13		ns typ	$R_L = 300\ \Omega$ , $C_L = 35\text{ pF}$ ; $V_S = 3\text{ V}$ , Test Circuit 6
		1	ns min	
Charge Injection	$\pm 3$		pC typ	$V_S = 2\text{ V}$ , $R_S = 0\ \Omega$ , $C_L = 1\text{ nF}$ ; Test Circuit 7
Off Isolation	-72		dB typ	$R_L = 50\ \Omega$ , $C_L = 5\text{ pF}$ , $f = 1\text{ MHz}$ ; Test Circuit 8
Channel-to-Channel Crosstalk	-67		dB typ	$R_L = 50\ \Omega$ , $C_L = 5\text{ pF}$ , $f = 1\text{ MHz}$ ; Test Circuit 9
-3 dB Bandwidth	160		MHz typ	$R_L = 50\ \Omega$ , $C_L = 5\text{ pF}$ , Test Circuit 10
$C_S$ (OFF)	11		pF typ	$f = 1\text{ MHz}$
$C_D$ , $C_S$ (ON)	34		pF typ	$f = 1\text{ MHz}$
<b>POWER REQUIREMENTS</b>				
$I_{DD}$	0.001		$\mu\text{A}$ typ	$V_{DD} = 5.5\text{ V}$ Digital Inputs = 0 V or 5.5 V
		1.0	$\mu\text{A}$ max	

## NOTES

<sup>1</sup>Temperature range is as follows: B Version: -40°C to +85°C.

<sup>2</sup>Guaranteed by design, not subject to production test.

Specifications subject to change without notice.

# SPECIFICATIONS<sup>1</sup> ( $V_{DD} = 3\text{ V} \pm 10\%$ , $V_{SS} = 0\text{ V}$ , $GND = 0\text{ V}$ , unless otherwise noted.)

Parameter	B Version		Unit	Test Conditions/Comments
	+25°C	-40°C to +85°C		
<b>ANALOG SWITCH</b>				
Analog Signal Range		0 V to $V_{DD}$	V	
On Resistance ( $R_{ON}$ )	6		$\Omega$ typ	$V_S = 0\text{ V}$ to $V_{DD}$ , $I_{DS} = 10\text{ mA}$ ; Test Circuit 1
	11	12	$\Omega$ max	
On Resistance Match between Channels ( $\Delta R_{ON}$ )		0.1	$\Omega$ typ	$V_S = 0\text{ V}$ to $V_{DD}$ , $I_{DS} = 10\text{ mA}$
On Resistance Flatness ( $R_{FLAT(ON)}$ )		0.4	$\Omega$ max	
		3	$\Omega$ typ	$V_S = 0\text{ V}$ to $V_{DD}$ , $I_{DS} = 10\text{ mA}$
<b>LEAKAGE CURRENTS</b>				
Source OFF Leakage $I_S$ (OFF)	$\pm 0.01$		nA typ	$V_{DD} = 3.3\text{ V}$ $V_S = 3\text{ V}/1\text{ V}$ , $V_D = 1\text{ V}/3\text{ V}$ ; Test Circuit 2
	$\pm 0.1$	$\pm 0.3$	nA max	
Channel ON Leakage $I_D$ , $I_S$ (ON)	$\pm 0.01$		nA typ	$V_S = V_D = 1\text{ V}$ or $3\text{ V}$ ; Test Circuit 3
	$\pm 0.1$	$\pm 0.5$	nA max	
<b>DIGITAL INPUTS</b>				
Input High Voltage, $V_{INH}$		2.0	V min	
Input Low Voltage, $V_{INL}$		0.8	V max	
Input Current $I_{INL}$ or $I_{INH}$	0.005		$\mu\text{A}$ typ	$V_{IN} = V_{INL}$ or $V_{INH}$
		$\pm 0.1$	$\mu\text{A}$ max	
$C_{IN}$ , Digital Input Capacitance	4		pF typ	
<b>DYNAMIC CHARACTERISTICS<sup>2</sup></b>				
$t_{ON}$	28		ns typ	$R_L = 300\ \Omega$ , $C_L = 35\text{ pF}$ ; $V_S = 2\text{ V}$ , Test Circuit 4
		55	ns max	$R_L = 300\ \Omega$ , $C_L = 35\text{ pF}$ ; $V_S = 2\text{ V}$ , Test Circuit 4
$t_{OFF}$	9		ns typ	$R_L = 300\ \Omega$ , $C_L = 35\text{ pF}$ ; $V_S = 2\text{ V}$ , Test Circuit 4
		16	ns max	$R_L = 300\ \Omega$ , $C_L = 35\text{ pF}$ ; $V_S = 2\text{ V}$ , Test Circuit 5
ADG733 $t_{ON}(\overline{EN})$	29		ns typ	$R_L = 300\ \Omega$ , $C_L = 35\text{ pF}$ ; $V_S = 2\text{ V}$ , Test Circuit 5
		60	ns max	$R_L = 300\ \Omega$ , $C_L = 35\text{ pF}$ ; $V_S = 2\text{ V}$ , Test Circuit 5
$t_{OFF}(\overline{EN})$	9		ns typ	$R_L = 300\ \Omega$ , $C_L = 35\text{ pF}$ ; $V_S = 2\text{ V}$ , Test Circuit 5
		16	ns max	$R_L = 300\ \Omega$ , $C_L = 35\text{ pF}$ ; $V_S = 2\text{ V}$ , Test Circuit 5
Break-Before-Make Time Delay, $t_D$	22		ns typ	$R_L = 300\ \Omega$ , $C_L = 35\text{ pF}$ ; $V_S = 2\text{ V}$ , Test Circuit 6
		1	ns min	$V_S = 1\text{ V}$ , $R_S = 0\ \Omega$ , $C_L = 1\text{ nF}$ ; Test Circuit 7
Charge Injection	$\pm 3$		pC typ	$R_L = 50\ \Omega$ , $C_L = 5\text{ pF}$ , $f = 1\text{ MHz}$ ; Test Circuit 8
Off Isolation	-72		dB typ	$R_L = 50\ \Omega$ , $C_L = 5\text{ pF}$ , $f = 1\text{ MHz}$ ; Test Circuit 9
Channel-to-Channel Crosstalk	-67		dB typ	$R_L = 50\ \Omega$ , $C_L = 5\text{ pF}$ , $f = 1\text{ MHz}$ ; Test Circuit 10
-3 dB Bandwidth	160		MHz typ	$R_L = 50\ \Omega$ , $C_L = 5\text{ pF}$ , Test Circuit 10
$C_S$ (OFF)	11		pF typ	$f = 1\text{ MHz}$
$C_D$ , $C_S$ (ON)	34		pF typ	$f = 1\text{ MHz}$
<b>POWER REQUIREMENTS</b>				
$I_{DD}$	0.001		$\mu\text{A}$ typ	$V_{DD} = 3.3\text{ V}$ Digital Inputs = 0 V or 3.3 V
		1.0	$\mu\text{A}$ max	

**NOTES**<sup>1</sup>Temperature ranges are as follows: B Version: -40°C to +85°C.<sup>2</sup>Guaranteed by design, not subject to production test.

Specifications subject to change without notice.

# ADG733/ADG734—SPECIFICATIONS<sup>1</sup>

**DUAL SUPPLY** ( $V_{DD} = +2.5\text{ V} \pm 10\%$ ,  $V_{SS} = -2.5\text{ V} \pm 10\%$ ,  $GND = 0\text{ V}$ , unless otherwise noted.)

Parameter	B Version		Unit	Test Conditions/Comments
	+25°C	-40°C to +85°C		
<b>ANALOG SWITCH</b>				
Analog Signal Range		$V_{SS}$ to $V_{DD}$	V	
On Resistance ( $R_{ON}$ )	2.5		$\Omega$ typ	$V_S = V_{SS}$ to $V_{DD}$ , $I_{DS} = 10\text{ mA}$ ; Test Circuit 1
	4.5	5.0	$\Omega$ max	
On Resistance Match between Channels ( $\Delta R_{ON}$ )		0.1	$\Omega$ typ	$V_S = V_{SS}$ to $V_{DD}$ , $I_{DS} = 10\text{ mA}$
		0.4	$\Omega$ max	
On Resistance Flatness ( $R_{FLAT(ON)}$ )	0.5		$\Omega$ typ	$V_S = V_{SS}$ to $V_{DD}$ , $I_{DS} = 10\text{ mA}$
		1.2	$\Omega$ max	
<b>LEAKAGE CURRENTS</b>				
Source OFF Leakage $I_S$ (OFF)	$\pm 0.01$		nA typ	$V_{DD} = +2.75\text{ V}$ , $V_{SS} = -2.75\text{ V}$ $V_S = +2.25\text{ V}/-1.25\text{ V}$ , $V_D = -1.25\text{ V}/+2.25\text{ V}$ ; Test Circuit 2
	$\pm 0.1$	$\pm 0.3$	nA max	
Channel ON Leakage $I_D$ , $I_S$ (ON)	$\pm 0.01$		nA typ	$V_S = V_D = +2.25\text{ V}/-1.25\text{ V}$ , Test Circuit 3
	$\pm 0.1$	$\pm 0.5$	nA max	
<b>DIGITAL INPUTS</b>				
Input High Voltage, $V_{INH}$		1.7	V min	
Input Low Voltage, $V_{INL}$		0.7	V max	
Input Current $I_{INL}$ or $I_{INH}$	0.005		$\mu\text{A}$ typ	$V_{IN} = V_{INL}$ or $V_{INH}$
		$\pm 0.1$	$\mu\text{A}$ max	
$C_{IN}$ , Digital Input Capacitance	4		pF typ	
<b>DYNAMIC CHARACTERISTICS<sup>2</sup></b>				
$t_{ON}$	21		ns typ	$R_L = 300\ \Omega$ , $C_L = 35\text{ pF}$ ; $V_S = 1.5\text{ V}$ , Test Circuit 4
		35	ns max	
$t_{OFF}$	10		ns typ	$R_L = 300\ \Omega$ , $C_L = 35\text{ pF}$ ; $V_S = 1.5\text{ V}$ , Test Circuit 4
		16	ns max	
ADG733 $t_{ON}(\overline{EN})$	21		ns typ	$R_L = 300\ \Omega$ , $C_L = 35\text{ pF}$ ; $V_S = 1.5\text{ V}$ , Test Circuit 5
		40	ns max	
$t_{OFF}(\overline{EN})$	10		ns typ	$R_L = 300\ \Omega$ , $C_L = 35\text{ pF}$ ; $V_S = 1.5\text{ V}$ , Test Circuit 5
		16	ns max	
Break-Before-Make Time Delay, $t_D$	13		ns typ	$R_L = 300\ \Omega$ , $C_L = 35\text{ pF}$ ; $V_S = 1.5\text{ V}$ , Test Circuit 6
		1	ns min	
Charge Injection	$\pm 5$		pC typ	$V_S = 0\text{ V}$ , $R_S = 0\ \Omega$ , $C_L = 1\text{ nF}$ ; Test Circuit 7
Off Isolation	-72		dB typ	$R_L = 50\ \Omega$ , $C_L = 5\text{ pF}$ , $f = 1\text{ MHz}$ ; Test Circuit 8
Channel-to-Channel Crosstalk	-67		dB typ	$R_L = 50\ \Omega$ , $C_L = 5\text{ pF}$ , $f = 1\text{ MHz}$ ; Test Circuit 9
-3 dB Bandwidth	200		MHz typ	$R_L = 50\ \Omega$ , $C_L = 5\text{ pF}$ , Test Circuit 10
$C_S$ (OFF)	11		pF typ	$f = 1\text{ MHz}$
$C_D$ , $C_S$ (ON)	34		pF typ	$f = 1\text{ MHz}$
<b>POWER REQUIREMENTS</b>				
$I_{DD}$	0.001		$\mu\text{A}$ typ	$V_{DD} = 2.75\text{ V}$ Digital Inputs = 0 V or 2.75 V
		1.0	$\mu\text{A}$ max	
$I_{SS}$	0.001		$\mu\text{A}$ typ	$V_{SS} = -2.75\text{ V}$ Digital Inputs = 0 V or 2.75 V
		1.0	$\mu\text{A}$ max	

## NOTES

<sup>1</sup>Temperature range is as follows: B Version: -40°C to +85°C.

<sup>2</sup>Guaranteed by design, not subject to production test.

Specifications subject to change without notice.

## ABSOLUTE MAXIMUM RATINGS<sup>1</sup>

(T<sub>A</sub> = 25°C, unless otherwise noted.)

V <sub>DD</sub> to V <sub>SS</sub> .....	7 V
V <sub>DD</sub> to GND .....	-0.3 V to +7 V
V <sub>SS</sub> to GND .....	+0.3 V to -3.5 V
Analog Inputs <sup>2</sup> .....	V <sub>SS</sub> - 0.3 V to V <sub>DD</sub> + 0.3 V or 30 mA, Whichever Occurs First
Digital Inputs <sup>2</sup> .....	-0.3 V to V <sub>DD</sub> + 0.3 V or 30 mA, Whichever Occurs First
Peak Current, S or D .....	100 mA (Pulsed at 1 ms, 10% Duty Cycle max)
Continuous Current, S or D .....	30 mA
Operating Temperature Range	
Industrial (A, B Versions) .....	-40°C to +85°C
Storage Temperature Range .....	-65°C to +150°C

Junction Temperature .....	150°C
16-Lead TSSOP, θ <sub>JA</sub> Thermal Impedance .....	150.4°C/W
20-Lead TSSOP, θ <sub>JA</sub> Thermal Impedance .....	143°C/W
16-Lead QSOP, θ <sub>JA</sub> Thermal Impedance .....	149.97°C/W
Lead Temperature, Soldering (10 sec) .....	300°C
IR Reflow, Peak Temperature (<20 sec) .....	235°C

### NOTES

<sup>1</sup> Stresses above those listed under Absolute Maximum Ratings may cause permanent damage to the device. This is a stress rating only; functional operation of the device at these or any other conditions above those listed in the operational sections of this specification is not implied. Exposure to absolute maximum rating conditions for extended periods may affect device reliability. Only one absolute maximum rating may be applied at any one time.

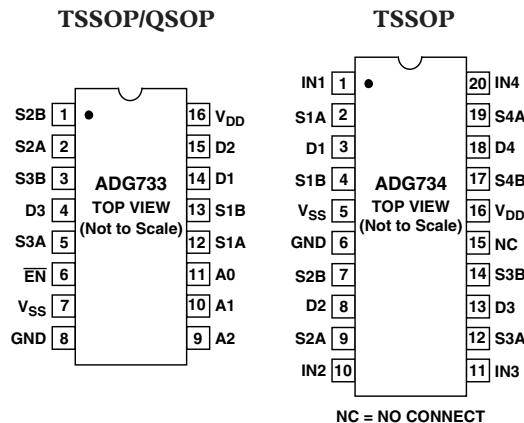
<sup>2</sup> Overvoltages at A, EN, IN, S, or D will be clamped by internal diodes. Current should be limited to the maximum ratings given.

## CAUTION

ESD (electrostatic discharge) sensitive device. Electrostatic charges as high as 4000 V readily accumulate on the human body and test equipment and can discharge without detection. Although the ADG733/ADG734 feature proprietary ESD protection circuitry, permanent damage may occur on devices subjected to high energy electrostatic discharges. Therefore, proper ESD precautions are recommended to avoid performance degradation or loss of functionality.



## PIN CONFIGURATIONS



# ADG733/ADG734

**Table I. ADG733 Truth Table**

A2	A1	A0	$\overline{\text{EN}}$	ON Switch
X	X	X	1	None
0	0	0	0	D1-S1A, D2-S2A, D3-S3A
0	0	1	0	D1-S1B, D2-S2A, D3-S3A
0	1	0	0	D1-S1A, D2-S2B, D3-S3A
0	1	1	0	D1-S1B, D2-S2B, D3-S3A
1	0	0	0	D1-S1A, D2-S2A, D3-S3B
1	0	1	0	D1-S1B, D2-S2A, D3-S3B
1	1	0	0	D1-S1A, D2-S2B, D3-S3B
1	1	1	0	D1-S1B, D2-S2B, D3-S3B

**Table II. ADG734 Truth Table**

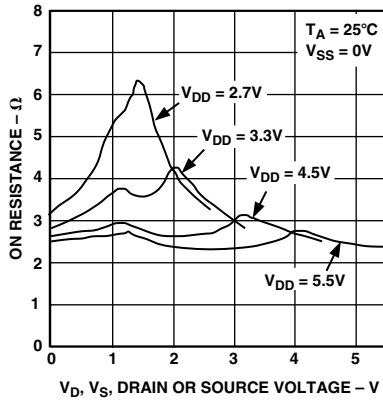
Logic	Switch A	Switch B
0	OFF	ON
1	ON	OFF

X = Don't Care.

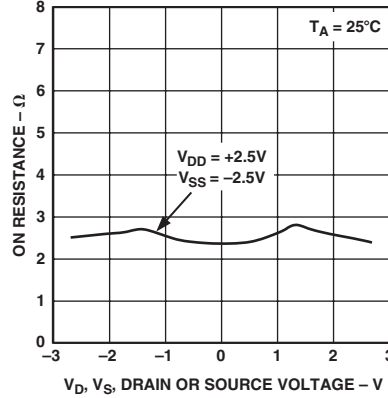
## TERMINOLOGY

$V_{DD}$	Most Positive Power Supply Potential
$V_{SS}$	Most Negative Power Supply in a Dual Supply Application. In single supply applications, this should be tied to ground close to the device.
$I_{DD}$	Positive Supply Current
$I_{SS}$	Negative Supply Current
GND	Ground (0 V) Reference
S	Source Terminal. May be an input or output.
D	Drain Terminal. May be an input or output.
$A_X$	Logic Control Input
$\overline{\text{EN}}$	Active low device enable
$V_D (V_S)$	Analog Voltage on Terminals D and S
$R_{ON}$	Ohmic Resistance between D and S
$\Delta R_{ON}$	On Resistance Match between any Two Channels (i.e., $R_{ON,max}$ and $R_{ON,min}$ )
$R_{FLAT(ON)}$	Flatness is defined as the difference between the maximum and minimum value of on resistance as measured over the specified analog signal range.
$I_S$ (OFF)	Source Leakage Current with the Switch "OFF"
$I_D, I_S$ (ON)	Channel Leakage Current with the Switch "ON"
$V_{INL}$	Maximum Input Voltage for Logic "0"
$V_{INH}$	Minimum Input Voltage for Logic "1"
$I_{INL}(I_{INH})$	Input Current of the Digital Input
$C_S$ (OFF)	"OFF" Switch Source Capacitance. Measured with reference to ground.
$C_D, C_S(ON)$	"ON" Switch Capacitance. Measured with reference to ground.
$C_{IN}$	Digital Input Capacitance
$t_{ON}$	Delay Time Measured between the 50% and 90% Points of the Digital Inputs and the Switch "ON" Condition
$t_{OFF}$	Delay Time Measured between the 50% and 90% Points of the Digital Input and the Switch "OFF" Condition
$t_{ON}(\overline{\text{EN}})$	Delay Time between the 50% and 90% Points of the $\overline{\text{EN}}$ Digital Input and the Switch "ON" Condition
$t_{OFF}(\overline{\text{EN}})$	Delay Time between the 50% and 90% Points of the $\overline{\text{EN}}$ Digital Input and the Switch "OFF" Condition
$t_{OPEN}$	"OFF" Time Measured between the 80% Points of Both Switches when Switching from One Address State to Another
Charge	A Measure of the Glitch Impulse Transferred Injection from the Digital Input to the Analog Output during Switching
Off Isolation	A Measure of Unwanted Signal Coupling through an "OFF" Switch.
Crosstalk	A Measure of Unwanted Signal that Is Coupled through from One Channel to Another as a Result of Parasitic Capacitance
On Response	The Frequency Response of the "ON" Switch
Insertion Loss	The Loss Due to the On Resistance of the switch

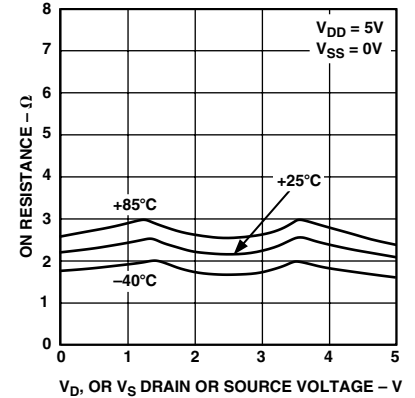
# Typical Performance Characteristics—ADG733/ADG734



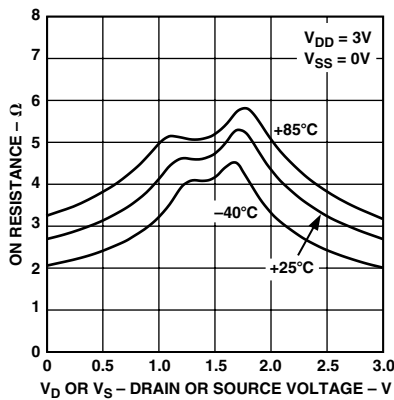
TPC 1. On Resistance as a Function of  $V_D$  ( $V_S$ ) for Single Supply



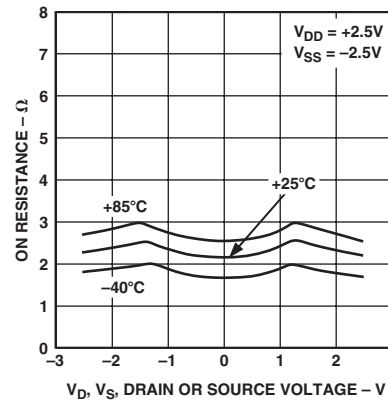
TPC 2. On Resistance as a Function of  $V_D$  ( $V_S$ ) for Dual Supply



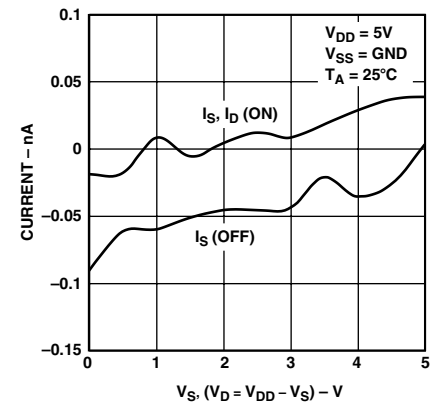
TPC 3. On Resistance as a Function of  $V_D$  ( $V_S$ ) for Different Temperatures, Single Supply



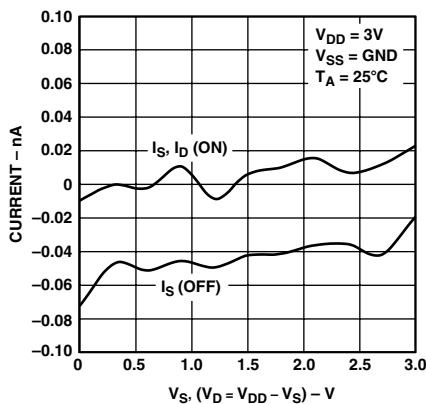
TPC 4. On Resistance as a Function of  $V_D$  ( $V_S$ ) for Different Temperatures, Single Supply



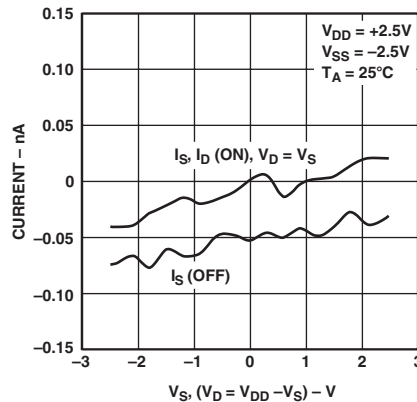
TPC 5. On Resistance as a Function of  $V_D$  ( $V_S$ ) for Different Temperatures, Dual Supply



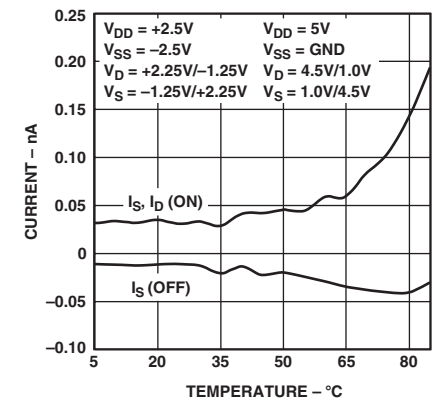
TPC 6. Leakage Currents as a Function of  $V_D$  ( $V_S$ )



TPC 7. Leakage Currents as a Function of  $V_D$  ( $V_S$ )

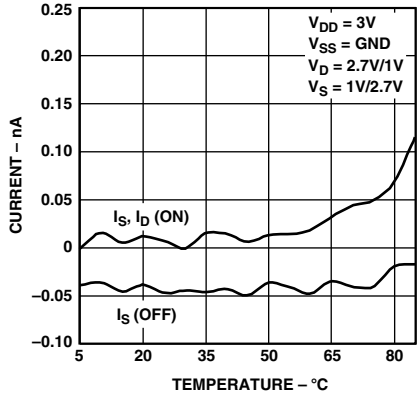


TPC 8. Leakage Currents as a Function of  $V_D$  ( $V_S$ )

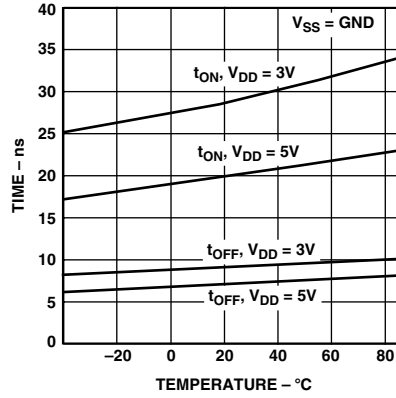


TPC 9. Leakage Currents as a Function of Temperature

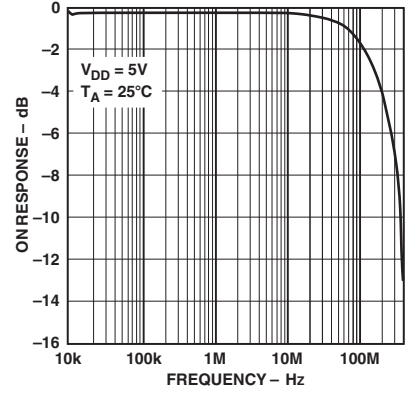
# ADG733/ADG734



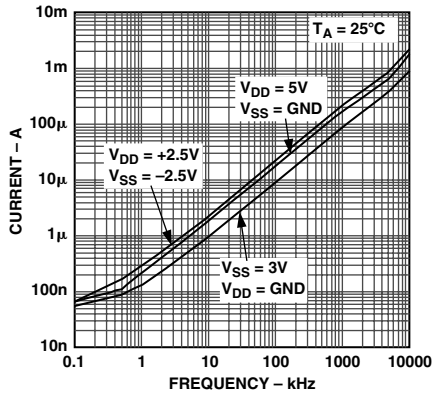
TPC 10. Leakage Currents as a Function of Temperature



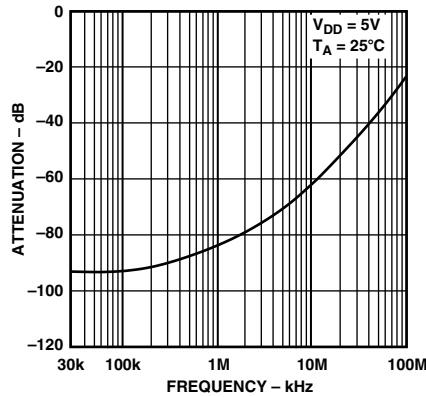
TPC 11.  $t_{ON}/t_{OFF}$  Times vs. Temperature



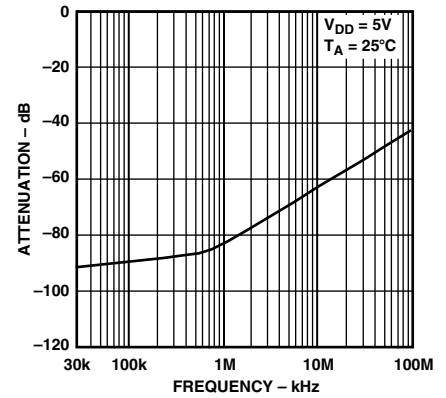
TPC 12. On Response vs. Frequency



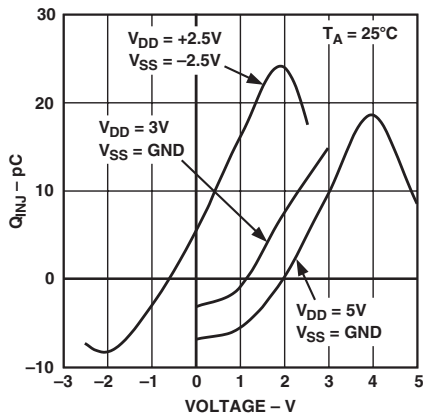
TPC 13. Input Current,  $I_{DD}$  vs. Switching Frequency



TPC 14. Off Isolation vs. Frequency

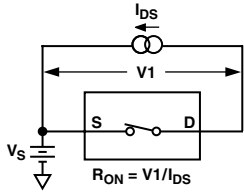


TPC 15. Crosstalk vs. Frequency

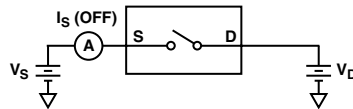


TPC 16. Charge Injection vs. Source Voltage

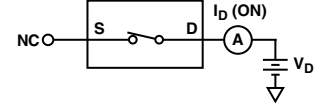
# Test Circuits



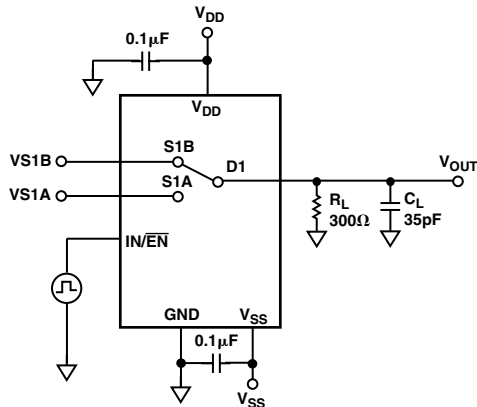
Test Circuit 1. On Resistance



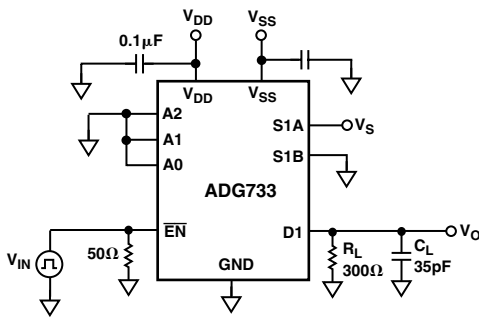
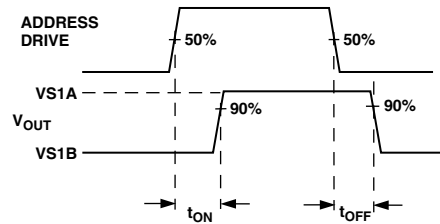
Test Circuit 2.  $I_S$  (OFF)



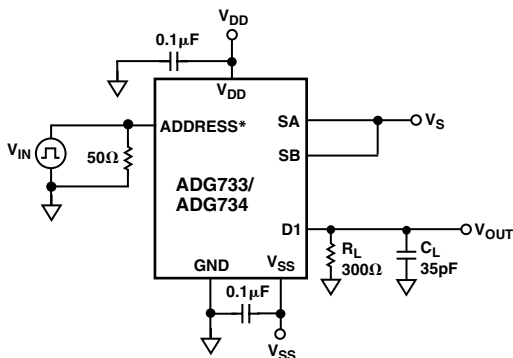
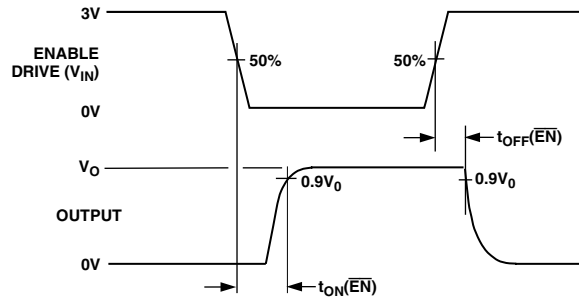
Test Circuit 3.  $I_D$  (ON)



Test Circuit 4. Switching Times,  $t_{ON}$ ,  $t_{OFF}$

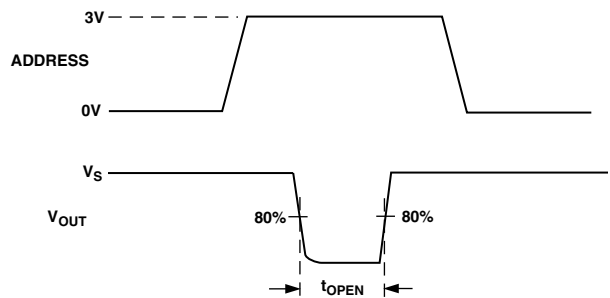


Test Circuit 5. Enable Delay,  $t_{ON}(\overline{EN})$ ,  $t_{OFF}(\overline{EN})$



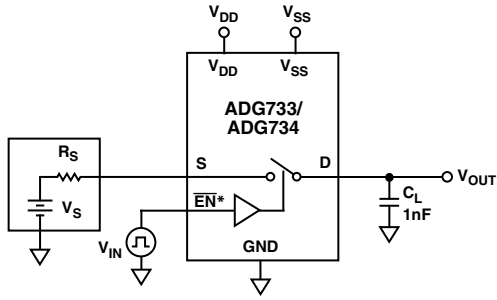
\*A0, A1, A2 FOR ADG733, IN1-4 FOR ADG734

Test Circuit 6. Break-Before-Make Delay,  $t_{OPEN}$

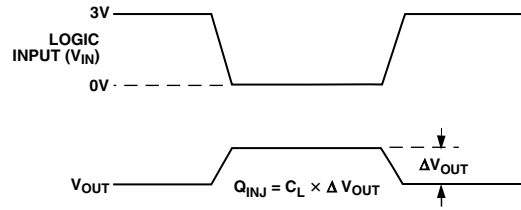




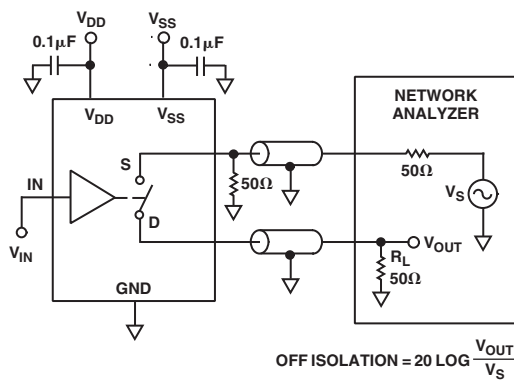
# ADG733/ADG734



\* IN1-4 FOR ADG734

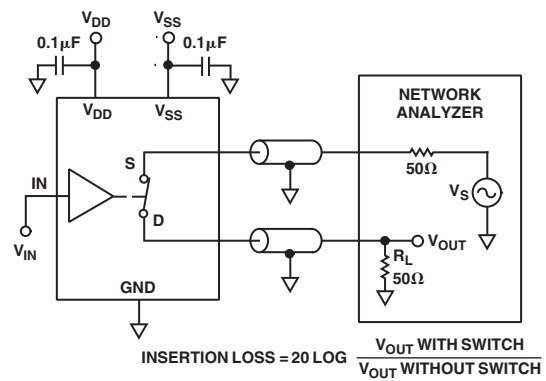


Test Circuit 7. Charge Injection



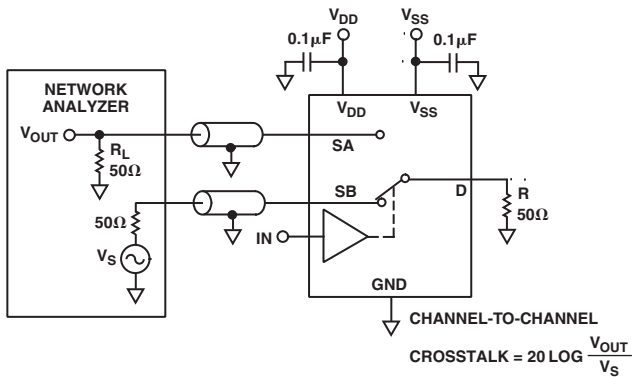
$$\text{OFF ISOLATION} = 20 \text{ LOG} \frac{V_{OUT}}{V_S}$$

Test Circuit 8. Off Isolation



$$\text{INSERTION LOSS} = 20 \text{ LOG} \frac{V_{OUT} \text{ WITH SWITCH}}{V_{OUT} \text{ WITHOUT SWITCH}}$$

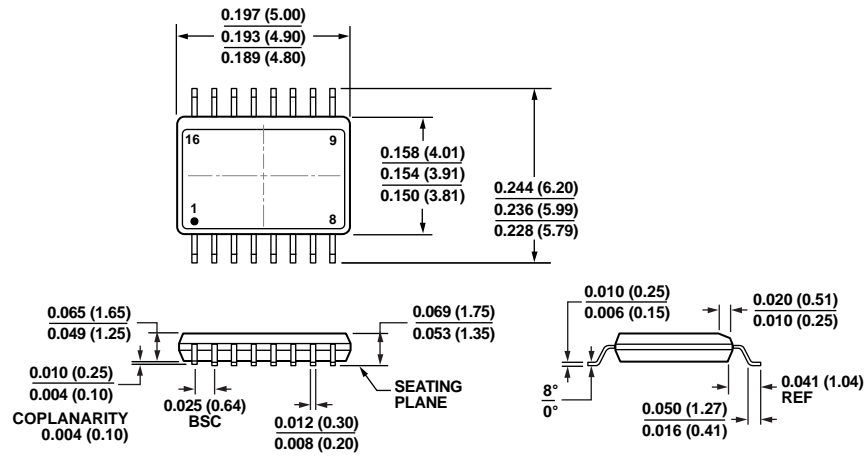
Test Circuit 10. Bandwidth



$$\text{CHANNEL-TO-CHANNEL CROSSTALK} = 20 \text{ LOG} \frac{V_{OUT}}{V_S}$$

Test Circuit 9. Channel-to-Channel Crosstalk

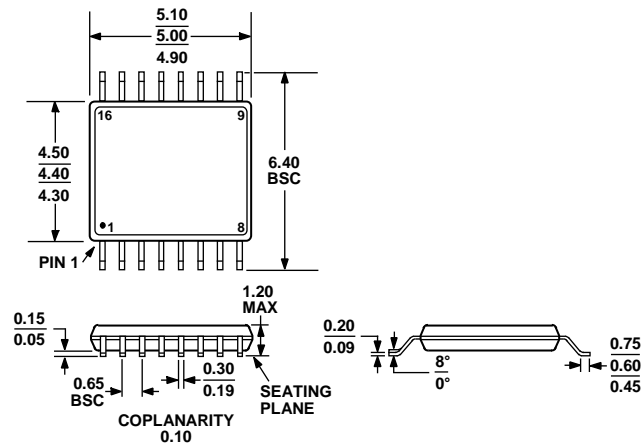
OUTLINE DIMENSIONS



COMPLIANT TO JEDEC STANDARDS MO-137-AB  
 CONTROLLING DIMENSIONS ARE IN INCHES; MILLIMETER DIMENSIONS  
 (IN PARENTHESES) ARE ROUNDED-OFF INCH EQUIVALENTS FOR  
 REFERENCE ONLY AND ARE NOT APPROPRIATE FOR USE IN DESIGN.

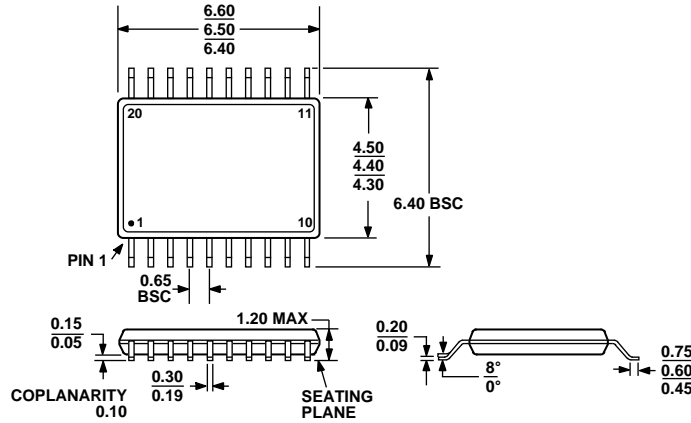
Figure 11. 16-Lead Shrink Small Outline Package [QSOP]  
 (RQ-16)  
 Dimensions shown in inches and (millimeters)

01-28-2008-A



COMPLIANT TO JEDEC STANDARDS MO-153-AB

Figure 12. 16-Lead Thin Shrink Small Outline Package [TSSOP]  
 (RU-16)  
 Dimensions shown in millimeters



COMPLIANT TO JEDEC STANDARDS MO-153-AC  
 Figure 13. 20-Lead Thin Shrink Small Outline Package [TSSOP] (RU-20)  
 Dimensions shown in millimeters

**ORDERING GUIDE**

Model <sup>1</sup>	Temperature Range	Package Description	Package Option
ADG733BRQZ	-40°C to +85°C	16-Lead Shrink Small Outline Package [QSOP]	RQ-16
ADG733BRQZ-REEL	-40°C to +85°C	16-Lead Shrink Small Outline Package [QSOP]	RQ-16
ADG733BRU-REEL7	-40°C to +85°C	16-Lead Thin Shrink Small Outline Package [TSSOP]	RU-16
ADG733BRUZ	-40°C to +85°C	16-Lead Thin Shrink Small Outline Package [TSSOP]	RU-16
ADG733BRUZ-REEL	-40°C to +85°C	16-Lead Thin Shrink Small Outline Package [TSSOP]	RU-16
ADG733BRUZ-REEL7	-40°C to +85°C	16-Lead Thin Shrink Small Outline Package [TSSOP]	RU-16
ADG734BRU	-40°C to +85°C	20-Lead Thin Shrink Small Outline Package [TSSOP]	RU-20
ADG734BRU-REEL	-40°C to +85°C	20-Lead Thin Shrink Small Outline Package [TSSOP]	RU-20
ADG734BRUZ	-40°C to +85°C	20-Lead Thin Shrink Small Outline Package [TSSOP]	RU-20
ADG734BRUZ-REEL	-40°C to +85°C	20-Lead Thin Shrink Small Outline Package [TSSOP]	RU-20
ADG734BRUZ-REEL7	-40°C to +85°C	20-Lead Thin Shrink Small Outline Package [TSSOP]	RU-20

<sup>1</sup> Z = RoHS Compliant Part.

**REVISION HISTORY**

**4/14—Rev. A to Rev. B**

Updated Outline Dimensions ..... 11  
 Changes to Ordering Guide ..... 12

**11/02—Data Sheet changed from REV. 0 to REV. A.**

Changes to FEATURES ..... 1  
 Changes to PRODUCT HIGHLIGHTS ..... 1  
 Changes to SPECIFICATIONS..... 2  
 Changes to ABSOLUTE MAXIMUM RATINGS Note 2 ..... 5  
 Changes to TERMINOLOGY table ..... 6  
 Replaced TPCs 2, 5, 8, and 9 ..... 7  
 Edits to TPCs 6 and 7..... 7  
 Replaced TPC 12..... 8  
 Edits to TPCs 13 and 16..... 8  
 Replaced Test Circuits 8 and 9 ..... 10  
 Added Test Circuit 10 ..... 10  
 Updated OUTLINE DIMENSIONS ..... 11

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