

DG2535E, DG2733E

Vishay Siliconix

0.3 Ω, Low Voltage Dual SPDT Analog Switches

DESCRIPTION

je, low (SPDT) on-resistance, dual single-pole/double-throw (SPDT) monolithic CMOS analog switches designed for high performance switching of analog signals. Combining package size, the DG2535E and DG2733E are ideal for and small The DG2535E and DG2733E are low voltage, low-power, high speed, low on-resistance, portable and battery powered applications.

The DG2535E and DG2733E have an operation range from 1.65 V to 5.5 V single supply. The DG2535E has two separate control pins for independent control of the two SPDT switches. The DG2733E has an EN pin to enable the device when the logic is high.

The DG2535E and DG2733E have guaranteed 1.65 V logic compatible, allowing easy interface with low voltage DSP or MCU control logic

The switches conduct signals within the power rails equally well in both directions when on, and blocks up to the power supply level when off. Break-before-make is guaranteed.

The DG2535E and DG2733E are built on Vishay Siliconix's sub micron CMOS low voltage process technology and provide greater than 400 mA latch-up protection, as tested The DG2535E and DG2733E are available in lead (Pb)-free 10-lead DFN and SOIC packages

1.65 V to 5.5 V single power operation

• 0.3 Ω typ. switch on resistance at V+ = 5 V • Fast switching: $t_{ON} = 55 \text{ ns at } 2.7 \text{ V, } t_{OFF} = 15 \text{ ns at } 2.7 \text{ V}$

ROHS COMPLIANT HALOGEN

Latch-up current > 400 mA (JESD78)

 Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

BENEFITS

- Low switch resistance
- Low voltage logic compatible
- Wide operation voltage range
 - Fast switching time

APPLICATIONS

- Audio and video signal routing
 - Battery operated systems

0.5

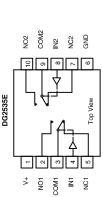
0.4

0.3

0.2

- Relay replacement
- Automatic test equipment
- · Process control and automation
- Data acquisition systems
- Medical and healthcare systems Meters and instruments
 - PCMCIA cards
- Communication systems

FUNCTIONAL BLOCK DIAGRAM AND PIN CONFIGURATION



NO2 COM2 EN	GND
	iew 6
4	Top View
4 to 00 com1	NC1

DG2733E

E DG2535E	
NC1, NC2	NO1, NO2
NO	OFF
OFF	NO
	NCTH TABLE DG2535E

TRUTH TABLE	ABLE DG	DG2733E	
Z	S	NC1, NC2	NO1, NO2
0	1	NO	OFF
1	1	OFF	NO
0	0	OFF	OFF

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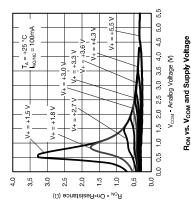
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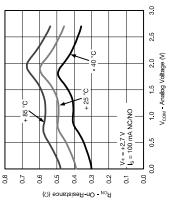
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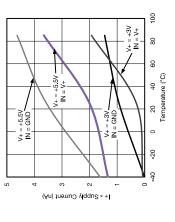
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TYPICAL CHARACTERISTICS ($T_A = 25$ °C, unless otherwise noted)





Ron vs. Analog Voltage and Temperature



Supply Current vs. Temperature

0.0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0

0.0

 $V_{+} = +5.5 \text{ V}$ $I_{S} = 100 \text{ mA NC/NO}$

0.1

V_{COM} - Analog Voltage (V)

Ron vs. Analog Voltage and Temperature

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