

## DESCRIPTION

The MP2735/MP2736 are low voltage, low on-resistance, dual single-pole/double-throw (SPDT) monolithic CMOS analog switches designed for high performance switching of analog signals. Combining low-power, high speed, low on-resistance, and small package size, the MP2735/MP2736 are ideal for portable and battery power applications.

The MP2735/MP2736 have an operation range from 1.65V to 5.5V single supply. The MP2735 has two separate control pins and two separate SPDT switches. The MP2736 includes an EN pin. All switches are at high impedance mode when the EN is high.

The MP2735/MP2736 are guaranteed 1.65V logic compatible, allowing the easy interface with low voltage DSP or MCU control logic and ideal for one cell Li-ion battery direct power.

## ELECTRICAL SPECIFICATIONS

Parameter	Symbol	Value	Units
Input Supply Voltage	V <sub>+</sub>	1.65 – 5.5	V
Analog Signal Voltage	V <sub>ANALOG</sub>	0 – V <sub>+</sub>	V
Output Current (Max)	I <sub>OUT MAX</sub>	300	mA

## FEATURES

- Low Voltage Operation (1.65V to 5.5V)
- Low On-Resistance - R<sub>ON</sub>: 0.45Ω at 2.7V
- Fast Switching: T<sub>ON</sub> = 29ns at 2.7V
- T<sub>OFF</sub> = 23ns at 2.7V
- Latch-Up Current >300mA (JESD78)
- 1.4mm x 1.8mm FCQFN10 Package
- ESD Human-Body Model ±4000V

## APPLICATIONS

- Cellular Phones
- Speaker Headset Switching
- Audio and Video Signal Routing
- PCMCIA Cards
- Battery Powered Systems
- Portable Media Player
- Handheld Test Instruments

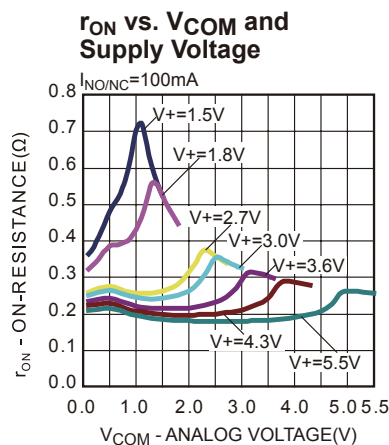
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## EV2735DQG-00A EVALUATION BOARD

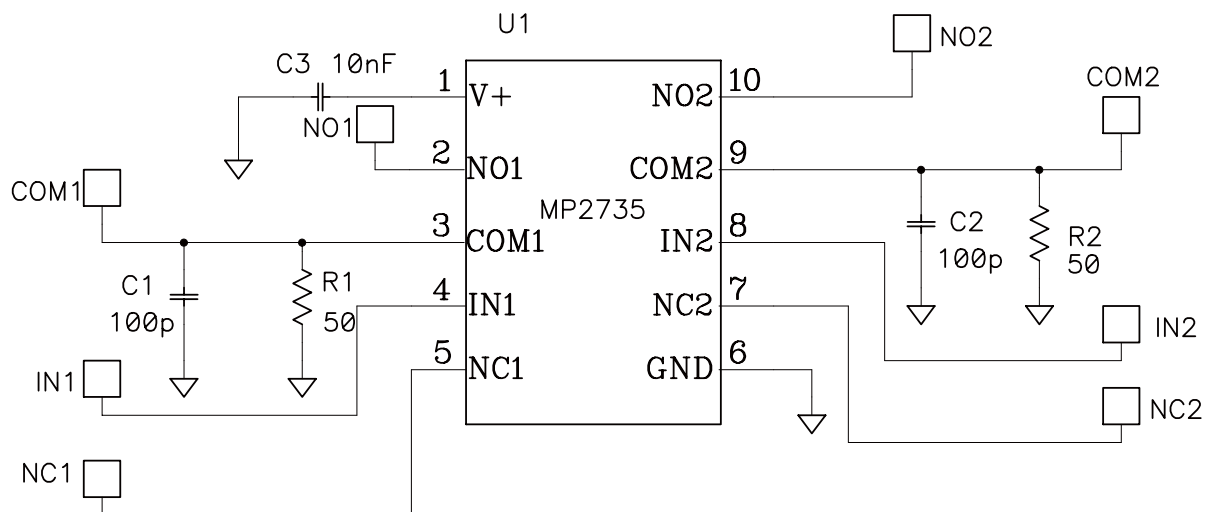


(L x W) 2.0" x 2.0"  
(5.0cm x 5.0cm)

Board Number	MPS IC Number
EV2735DQG-00A	MP2735DQG



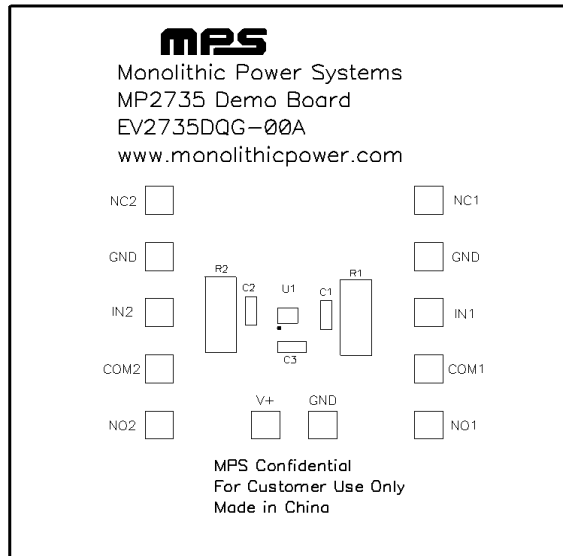
## EVALUATION BOARD SCHEMATIC



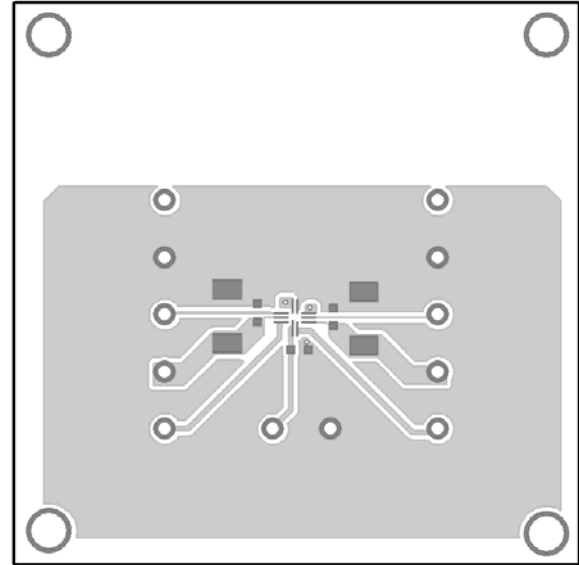
## EVALUATION BOARD SCHEMATIC BILL OF MATERIALS

Qty	Ref Des	Value	Description	Package	Manufacturer	Manufacturer P/N
2	C1, C2	100pF	Ceramic Cap., 50V, C0G	0603	TDK	C1608C0G1H101J
1	C3	10nF	Ceramic Cap., 50V, X7R	0603	TDK	C1608X7R1H103K
2	R1, R2	51Ω	Film Resistor, 1/4W, 1%	1206	Yageo	RC1206JR-070051L
1	U1		Dual SPDT Analog Switch	FCQFN10	MPS	MP2735DQG

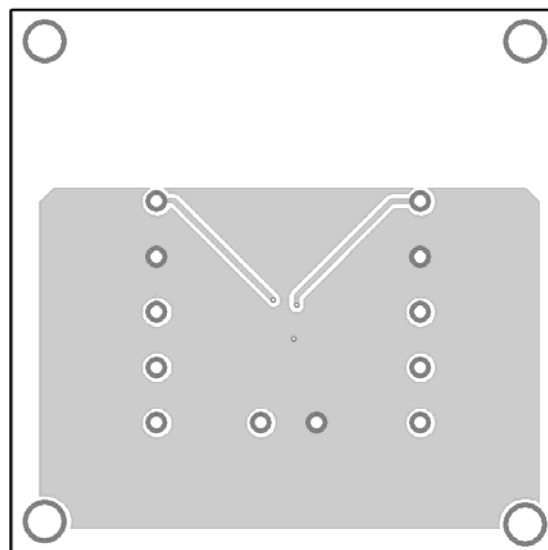
## PRINTED CIRCUIT BOARD LAYOUT



**Figure 1—Top Silk Layer**



**Figure 2—Top Layer**



**Figure 3—Bottom Layer**

## **QUICK START GUIDE**

1. Preset the power supply output to between 1.65V and 5.5V, then turn off the power supply.
2. Connect the positive and negative terminals of the power supply output to the V+ and GND pins, respectively.
3. Turn the power supply on. The NC1 and NC2 channels will automatically turn on. NO1 and NO2 channels are open.
4. Drive IN1 or IN2 higher than 2.5V to turn on NO1 or NO2 channels respectively. Or drive IN1 or IN2 less than 0.4V to turn on NC1 or NC2 channels.

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