

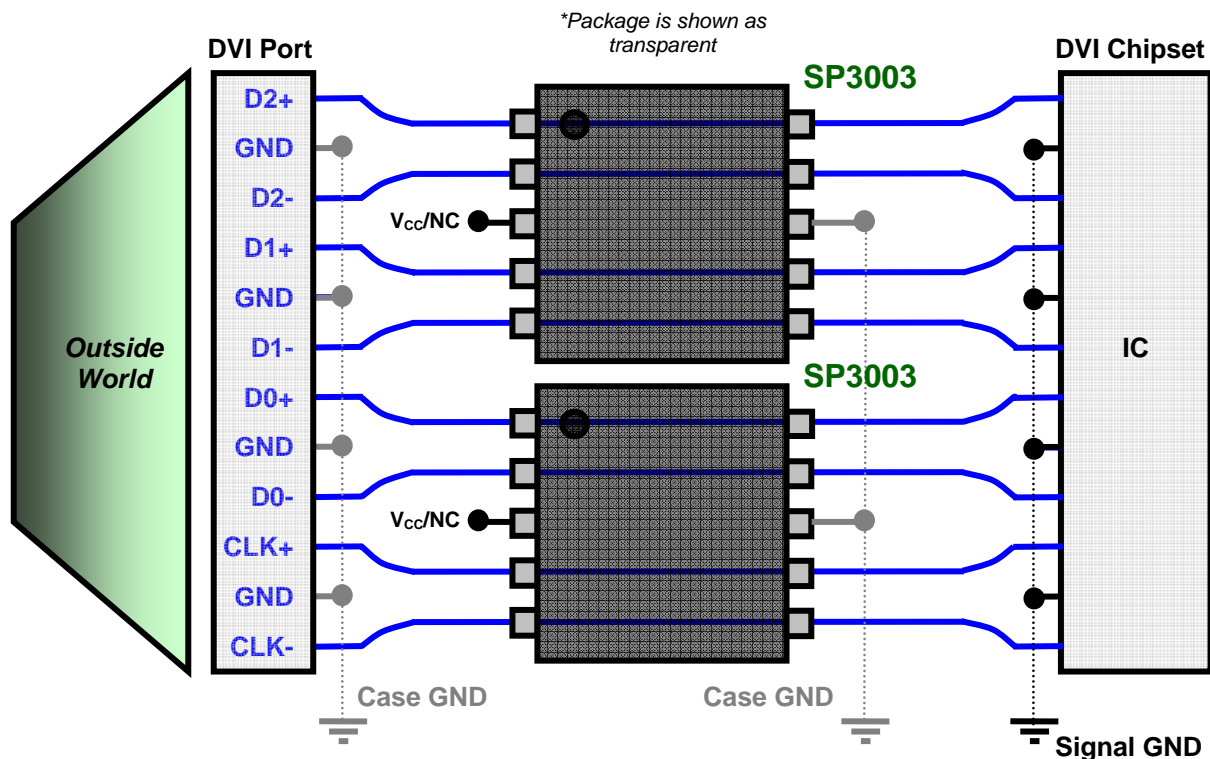
## Application Guide

### DVI

#### Considerations:

- A DVI port may have single or dual link capability
  - Each link has 3 differential lanes of data (i.e.  $D0\pm$ ,  $D1\pm$ ,  $D2\pm$ ) plus a clock ( $CLK\pm$ )
  - For single link, the maximum throughput can approach a total of 4.95Gbps or 1.65Gbps per lane
  - For dual link, the maximum throughput can approach a total of 8Gbps or 2.67Gbps per lane
- To maintain signal integrity a very low capacitance device must be used
- To maintain the differential impedance the designer should avoid using 90° angles and vias.
  - This can be accomplished by the use of an ESD device that offers a “straight-through” routing scheme
- Requires 8 channels of protection per port ( $D0\pm$ ,  $D1\pm$ ,  $D2\pm$ ,  $CLK\pm$ )

#### Application Schematic:



#### Recommended SPA Devices:

Ordering Number	ESD Level (Contact)	I/O Capacitance	# of Channels	$V_{RWM}$	Packaging
SP3003-04ATG	$\pm 8kV$	0.65pF	4	6V	MSOP-10
SP3010-04UTG	$\pm 8kV$	0.45pF	4	6V	$\mu$ DFN-10 (2.5x1.0mm)