



Specification sheet

# SPIKE-D

2-in-1 EMI/OverVoltage Spike Module

## PRODUCT SPECIFICATION

<b>Unit characteristics:</b>	2 channels Overvoltage Protection
<b>Dimensions:</b>	80,4 mm x 31,4 mm x 23 mm / 3.16" x 1.24" x 0.9"
<b>Voltage range:</b>	9..36VDC
<b>Voltage protection:</b>	
- Transcend voltage:	150V at 2second max, both polarities;
- Under-voltage protection lockout:	7.4V;
- Under-voltage protection relies:	8.2V;
- Over-voltage protection lockout:	44.3V;
- Over-voltage protection relies:	41.6V;
- Reverse connection protection:	80V, not less;
<b>Over current protection:</b>	5A, not less

### Performance:

- Filtration DO-160G, chapter 21, Emission of Radio Frequency Energy:
  - More than 10dB;
- Output current, not less than:
  - Steady: 4A per channel;
  - Pulse 1/3: 5A per channel;
- Output power, not less than:
  - Steady: 4A at 9..36VDC per channel;
  - Pulse 1/3: 5A at 9..36VDC per channel;
- Input power, not more than:
  - Steady: 4A at 9..36VDC per channel;
  - Pulse 1/3: 5A at 9..36VDC per channel;

<b>Warm up time:</b>	0.5sec
<b>Ambient temperature:</b>	-40°C..+85°C
<b>Overheat protection:</b>	+85°C

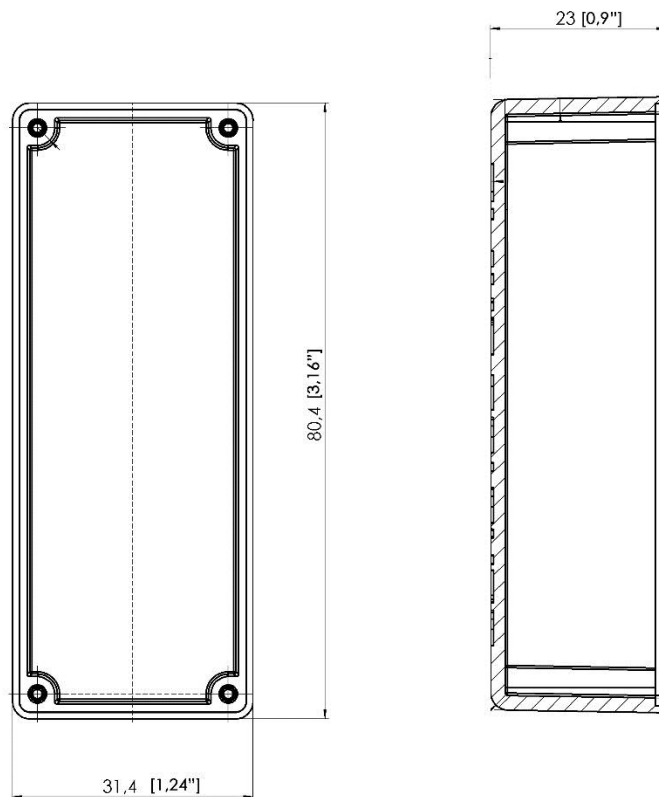
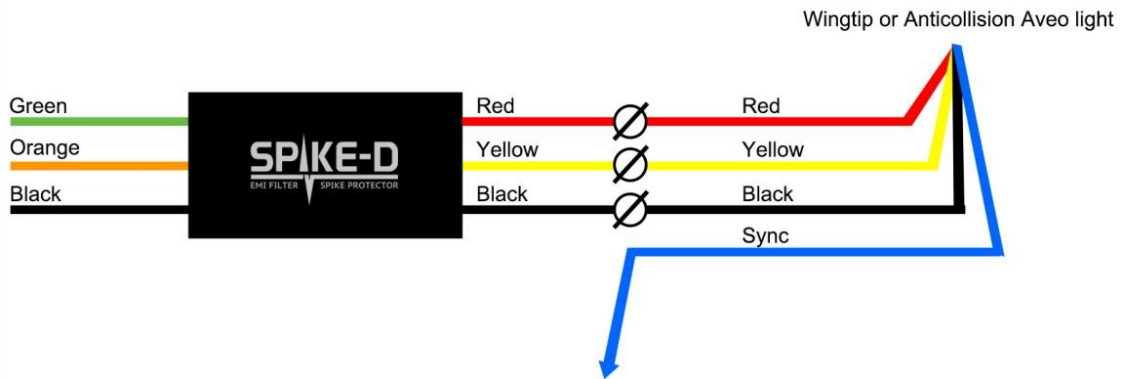
### Wiring:

- a. wire type: FEP High Temperature teflon wire, 20 AWG
- b. wire length: min. 10 inch (280mm)

### Wire color code:

1. Input, power supply side:
  - a. 20AWG Green +9...36V, first channel input
  - b. 20AWG Orange +9...36V, second channel input
  - c. 20AWG Black Common return VRTN to power supply for first and second channel
2. Output, light side:
  - a. 20AWG Red +9...36V, first channel output
  - b. 20AWG Yellow +9...36V, second channel output
  - c. 20AWG Black GND light

Please, do not connect black wires from input and output together.



**Spike-D can be use with lights:**

- Ultra Galactica, Ultra Embedded Galactica, Ultra Aurora, Ultra Embedded Aurora, LSA, Andromeda
- PowerBurst, PowerBurst Plues, Gliderburst
- PosiStrobe CP Aurora, PosiStrobe CP Galactica, PosiStrobe XP, MiniMax
- RedBaron XP Aurora, RedBaron XP Galactica, RedBaron Maxi, RedBaron Mini, RedBaron MaxiMini (NOT HISL!!)
- R2D2
- AveoMaxx
- Vega TL, Vega TLR, Vega Helo
- Nebulon, Pegatron
- All EyeBeam series

**Device RTCA/DO160F qualified:**

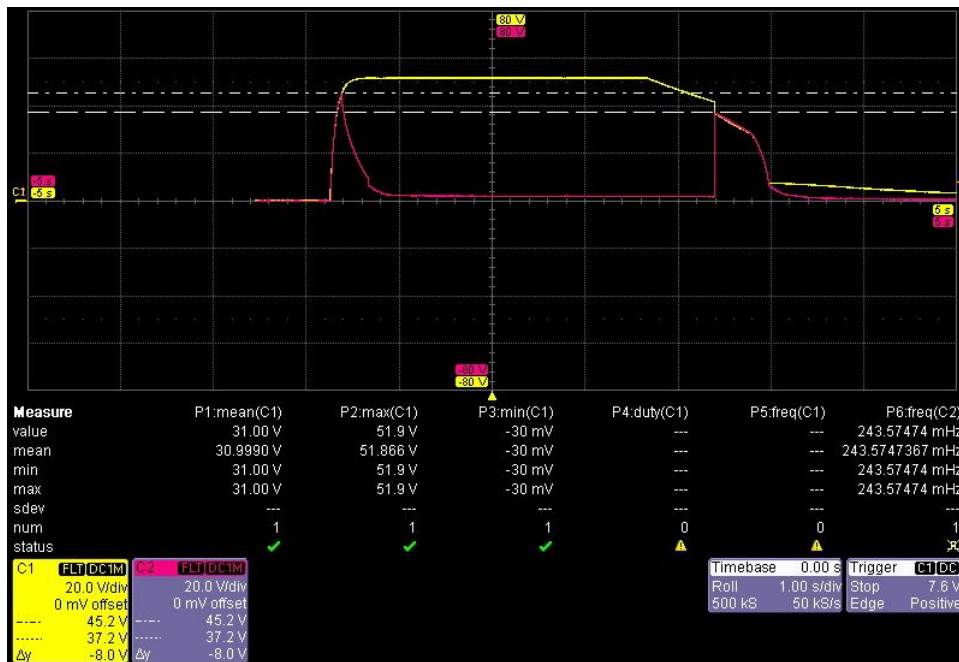
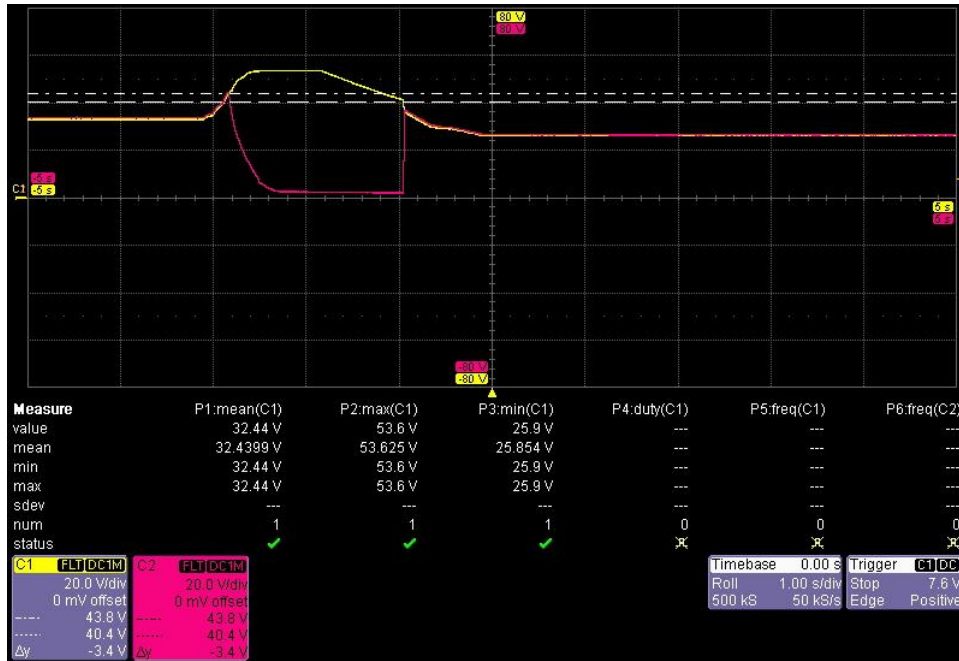
- a. chapter 4, Temperature - Altitude, Category F2
- b. chapter 5, Temperature Variation, Category A
- c. chapter 6, Humidity, Category C
- d. chapter 7, Operational Shocks and Crash Safety, Category C
- e. chapter 8, Vibration, Category R
- f. chapter 9, Explosion proofness, Category H
- g. chapter 10, Waterproofness , Category S
- h. chapter 11, Fluids Susceptibility, Category F
- i. chapter 12, Sand and Dust, Category D
- j. chapter 13, Fungus resistance, Category F
- k. chapter 14, Salt spray, Category T
- l. chapter 15, Magnetic effects, Category Z
- m. chapter 16, Power Input, Category B
- n. chapter 17, Voltage Spike, Category B
- o. chapter 18, Audio Frequency Conducted Susceptibility, Category B
- p. chapter 19, Induced Signal Susceptibility, Category AC
- q. chapter 20, Radio Frequency Susceptibility, Category T
- r. chapter 21, Emission of Radio Frequency Energy, Category H
- s. chapter 22, Lightning induced transient susceptibility test, Category B4
- t. chapter 23, Lightning Direct Effects, Category 2A2A
- u. chapter 24, Icing, Category A
- v. chapter 25, Electrostatic Discharge (ESD), Category A
- w. chapter 26, Fire, Flammability, Category C

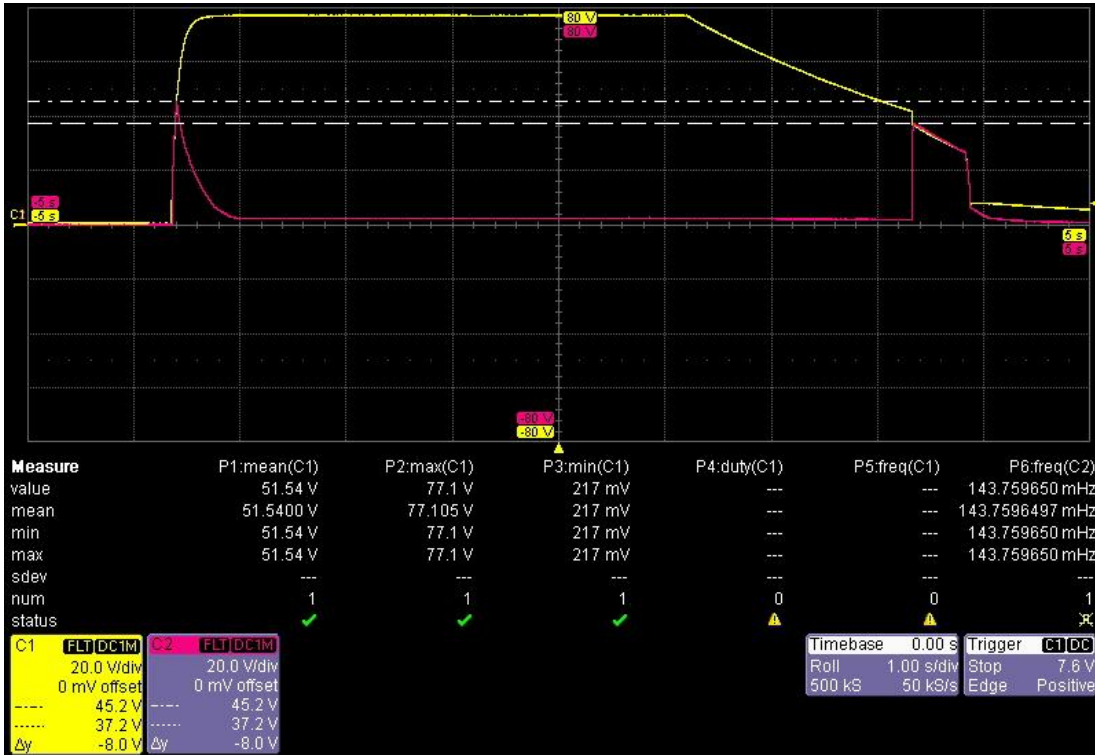
## EXAMPLE OF USE

With input voltage below 7.2 and above 44.5 Spike-D output is disconnected from input.  
 With negative polarity Spike-D output is disconnected from input.

**Oscilloscope:**

Yellow - input  
 Red - output





Device has a filter inside. typical attenuation chart.

**RED** - without Spike-D  
**BLUE** - with Spike-D

