

### RoHS VIS Series



#### Schematic Symbol



#### Device Series Ratings:

<b>Max Load Current</b>	50 mA
<b>Max Switching Frequency</b>	25Hz - VIS 230 200Hz - VIS 400 to VIS 800
<b>Operating Temperature T<sub>OP</sub></b>	-20°C to +125°C
<b>Storage Temperature T<sub>STG</sub></b>	-40°C to +90°C
<b>Insulation Resistance</b>	100 MΩ
<b>Capacitance</b>	1.5 pF

#### Description

The VIS series is a two-terminal, bi-directional, voltage triggered switch, specifically for ignition circuits used in high pressure HID lighting. The gas plasma trigger technology offers very fast switch speeds with improved di/dt values compared to similar function silicon based devices. Switching voltages are fixed depending on the part number selected.

#### Features

- RoHS compliant
- Ceramic chamber for ultimate reliability.
- Very high switch speed when switch voltage achieved. High di/dt
- allows for optimum performance of ignition transformers.
- Tape and reel to EIA 481-1

#### Applications

- Switching stored electrical energy (such as capacitive discharge) at predetermined voltages.
- In gas/fuel ignition systems and similar circuits

#### Device Specifications

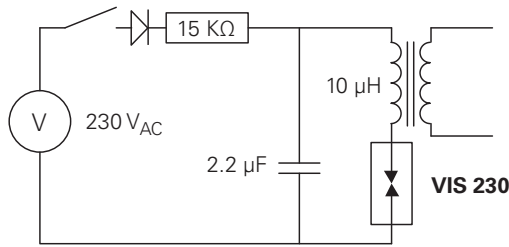
Part Number	Discharge Peak Current	Switching Operations <sup>1</sup> (Electrical Life)	Initial Break Down Voltage <sup>2</sup>	Initial Voltage, First Ignition Value <sup>2</sup>	Electrical Life Breakdown Voltage Values	Electrical Life First Ignition Values <sup>3</sup>
	Amps	# of cycles typ	Volts	Volts	Volts	Volts
VIS 230	300	2,000,000	200-255	280	200-280	280
VIS 400	500	100,000	350-460	460	340-460	500
VIS 600	1000	30,000	528-627	720	510-690	750
VIS 800	400	200,000	704-896	950	680-920	1000

#### Notes:

1. Number of switching operations depends on peak surge current, operating frequency and ambient temperature. Refer to "Electrical Life Time - Test Circuits" section of this data sheet for additional details.
2. Measured at 100 volts per second.
3. Measured after 24 hours of darkness.

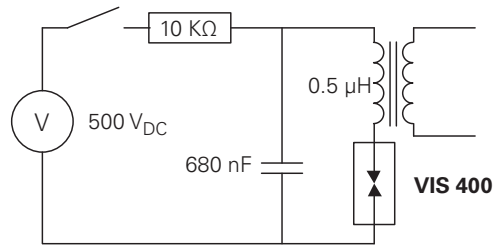
## Electrical Life Time - Test Circuits

**VIS 230 Life Test Circuit**



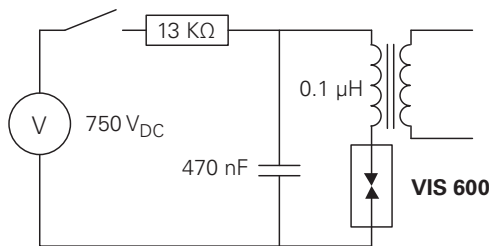
2,000,000 operations  
10 - 25Hz  
Testing Temperature 25°C

**VIS 400 Life Test Circuit**



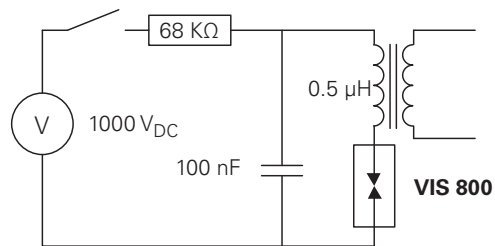
100,000 operations  
1 sec. on, 10 sec. off  
Testing Temperature 25°C

**VIS 600 Life Test Circuit**



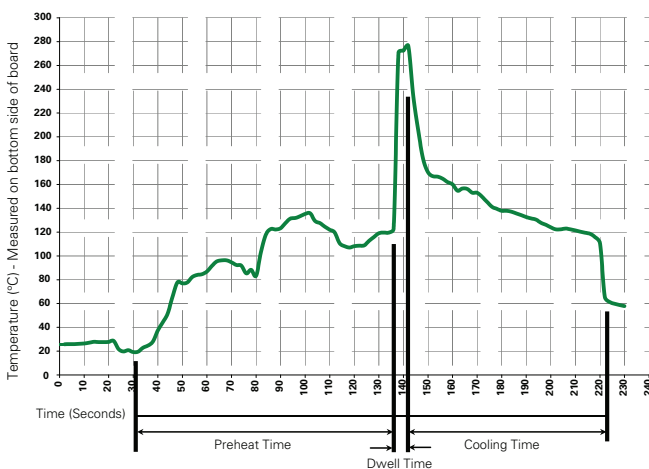
30,000 operations  
1 sec. on, 10 sec. off  
Testing Temperature 25°C

**VIS 800 Life Test Circuit**



200,000 operations  
1 sec. on, 10 sec. off  
Testing Temperature 25°C

## Soldering Parameters - Wave Soldering (Thru-Hole Devices)



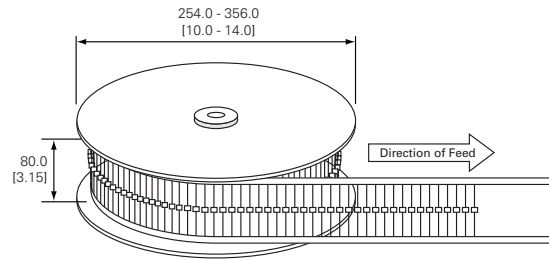
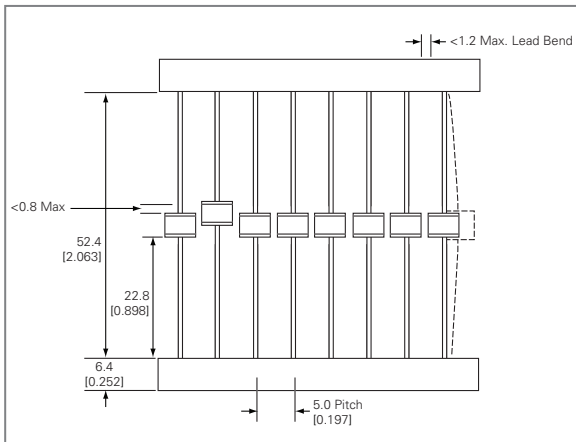
## Recommended Process Parameters:

Wave Parameter	Lead-Free Recommendation
<b>Preheat:</b> (Depends on Flux Activation Temperature)	(Typical Industry Recommendation)
Temperature Minimum:	100° C
Temperature Maximum:	150° C
Preheat Time:	60-180 seconds
<b>Solder Pot Temperature:</b>	280° C Maximum
<b>Solder Dwell Time:</b>	2-5 seconds

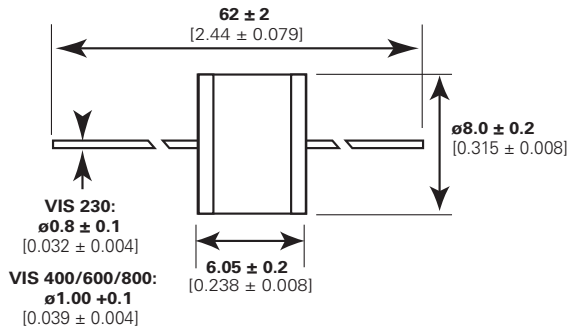
## Soldering Parameters - Hand Soldering

Solder Iron Temperature: 350° C +/- 5°C  
Heating Time: 5 seconds max.

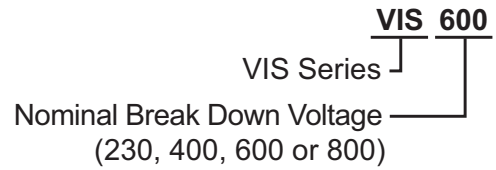
### Packaging Dimensions



### Dimensions in mm (inch)



### Part Numbering System



### Mechanical Specifications:

<b>Material and Plating</b>	Device Body: Ceramic Insulator Construction Device Plating: Nickel @ 2-5 microns Wire Plating: Tin @ 17.5 +/- 12.5 microns
<b>Device Marking</b>	Littelfuse 'LF' marking, voltage and date code; Blue ink with negative print

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