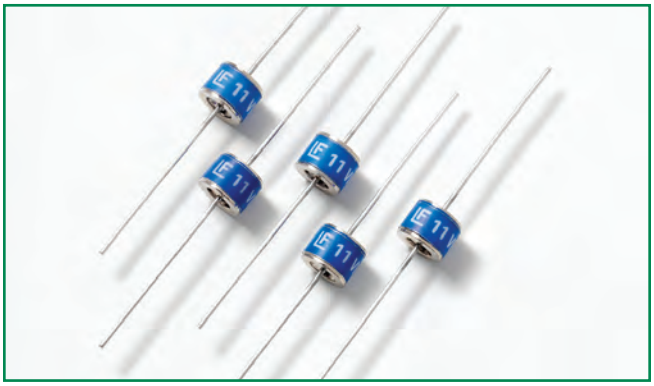
RoHS VIS Series



Schematic Symbol

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 acheived. High di/dt allows for optimum performance of ignition transformers.
- Tape and reel to EIA 481-1

Device Series Ratings:

Max Load Current	50 mA
Max Switching Frequency	25Hz - VIS 230 200Hz - VIS 400 to VIS 800
Operating Temperature T_{OP}	-20°C to +125°C
Storage Temperature T_{STG}	-40°C to +90°C
Insulation Resistance	100 MΩ
Capacitance	1.5 pF

Applications

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

Device Specifications

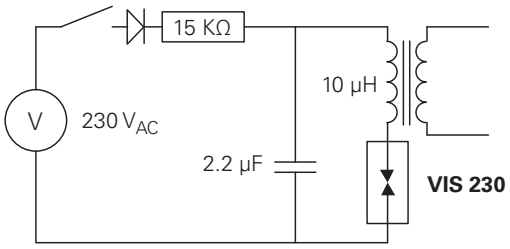
Part Number	Discharge Peak Current	Switching Operations[1] (Electrical Life)	Initial Break Down Voltage[2]	Initial Voltage, First Ignition Value[2]	Electrical Life Breakdown Voltage Values	Electrical Life First Ignition Values[3]
	Amps	# of cycles typ	Volts	Volts	Volts	Volts
VIS 230	300	2,000,000	200-255	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.

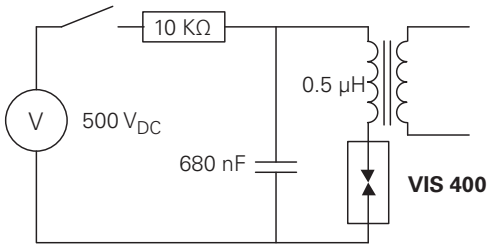
Electrical Life Time - Test Circuits

VIS 230 Life Test Circuit



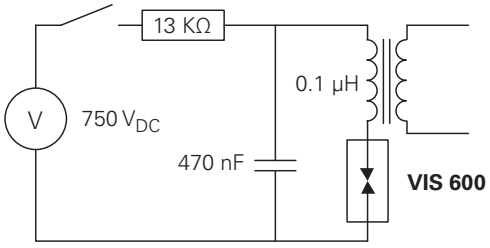
2,000,000 operations
10 - 25Hz
Testing Temperature 25ºC

VIS 400 Life Test Circuit



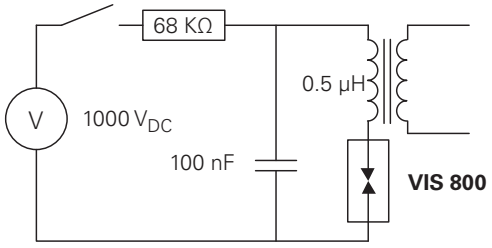
100,000 operations
1 sec. on, 10 sec. off
Testing Temperature 25ºC

VIS 600 Life Test Circuit



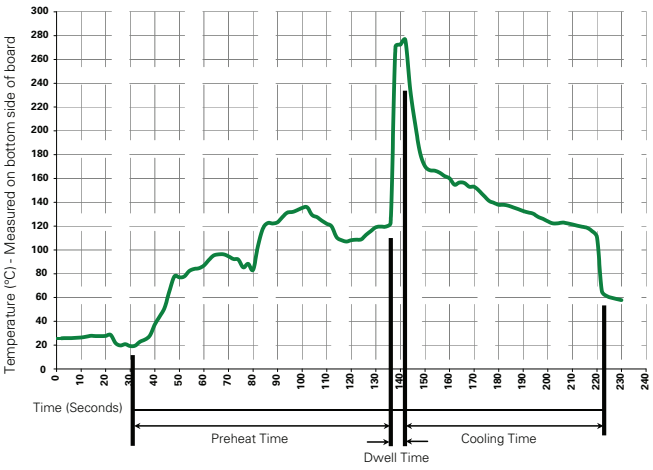
30,000 operations
1 sec. on, 10 sec. off
Testing Temperature 25ºC

VIS 800 Life Test Circuit



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

Soldering Parameters - Wave Soldering (Thru-Hole Devices)



Recommended Process Parameters:

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

Soldering Parameters - Hand Soldering

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