



DATA SHEET

WPSPG Spark Gap Protectors – LS Series

Part Numbering System

WPSPG - **20** **LS** **200** **M**
(1) (2) (3) (4) (5)

(1) World Products Spark Gap Protector

(2) DC Spark-over Voltage
Tolerance: (Example: 20=20% tolerance)

(3) Series Type
LS= Low Current Surface Mount Series

(4) DC Spark-over Voltage:
(Example: 200 = 200V)

(5) Nil = Standard Package
M = Mini Melf Package



FEATURES:

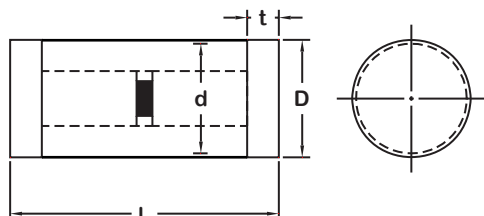
1. RoHS Compliant and Halogen Free
2. UL497B – PENDING
3. Fast Responding
4. Low Capacitance
5. Zero leakage current
6. Stable electrical characteristics over time
7. Can withstand repeated surges
8. Symmetrical



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DIMENSION in mm.



Item	Standard	Mini Melf
L	4.0 ± 0.5	3.4 ± 0.5
D	Φ2.0 ± 0.5	Φ1.4 ± 0.5
d	Φ1.8 ± 0.5	Φ1.3 ± 0.5
t	0.4 ± 0.1	0.4 ± 0.1

ELECTRICAL CHARACTERISTICS

STANDARD Series

Part Number <small>(For "XX" designation see note below in red.)</small>	DC Spark-Over Voltage	Minimum Insulation Resistance		Maximum Capacitance (1KHz-6V _{MAX})	Surge current capacity (8/20μs)
	V _s (V)	Test Voltage(V)	I _{ROHM} (MΩ)	C(pf)	(A)
WPSPG-XXLS140	140	50	100	0.8	500
WPSPG-XXLS200	200	100	100	0.8	500
WPSPG-XXLS220	220	100	100	0.8	500
WPSPG-XXLS300	300	100	100	0.8	500
WPSPG-XXLS400	400	250	100	0.8	500
WPSPG-XXLS500	500	250	100	0.8	500
WPSPG-XXLS600	600	250	100	0.8	500
WPSPG-XXLS700	700	250	100	0.8	500
WPSPG-XXLS1000	1000	500	100	0.8	500

Note: V_s±XX% (DC Spark-over Voltage Tolerance 30% and 20%),140V device is only available in 30% tolerance.
EXAMPLE: XX = 20 for 20% and XX = 30 for 30%.

MINI MELF Series

Part Number <small>(For "XX" designation see note below in red.)</small>	DC Spark-Over Voltage	Minimum Insulation Resistance		Maximum Capacitance (1KHz-6V _{MAX})	Surge current capacity (8/20μs)
	V _s (V)	Test Voltage(V)	I _{ROHM} (MΩ)	C(pf)	(A)
WPSPG-XXLS140M	140	50	100	0.8	300
WPSPG-XXLS200M	200	100	100	0.8	300
WPSPG-XXLS300M	300	100	100	0.8	300

Note: V_s±XX% (DC Spark-over Voltage Tolerance 30% and 20%),140V device is only available in 30% tolerance.
EXAMPLE: XX = 20 for 20% and XX = 30 for 30%.

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TEST METHODS AND RESULTS

ITEM	TEST METHOD	STANDARD
Static Life	10KV with 1500pf condenser is discharged through 2KΩ resistor. 200 times at an interval of 10sec.	Rate-of-change, within $\pm 30\%$ insulation resistance & capacitance, conformed to rated spec.
Cold Resistance	Measurement after $-40^{\circ}\text{C}/1000$ HRS & normal temperature/2 HRS.	Features are conformed to rated spec.
Heat Resistance	Measurement after $125^{\circ}\text{C}/1000$ HRS & normal temperature/2 HRS.	
Humidity Resistance	Measurement after humidity 90~95%(45°C) /1000 HRS & normal temperature/2 HRS.	
Temperature Cycle	10 times repetition of cycle $-40^{\circ}\text{C}/30\text{min}$ → normal,temp/2 min → $125^{\circ}\text{C}/30\text{min}$, measurement after normal temp/2 HRS.	
Solder Ability	Apply flux and immerse in molten solder $230 \pm 5^{\circ}\text{C}$ for 3sec up to the point of 1.5mm From body. Check for solder adhesion.	Lead wire is evenly covered by solder.
Solder Heat	Measurement after lead wire is dipped up to the point of 1.5mm from body into $260 \pm 5^{\circ}\text{C}$ solder for 10sec.	Conformed to rated spec.