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(54) **OVERVOLTAGE PROTECTION DEVICE INCLUDING MULTIPLE VARISTOR WAFERS**

(57) An overvoltage protection device (100) includes a first electrode member (122), a piston-shaped second electrode member (124), and a varistor assembly (150). The varistor assembly includes: a plurality of varistor wafers (152, 154, 156) each formed of a varistor material; and at least one electrically conductive interconnect member (160, 162) connecting the varistor wafers in electrical parallel between the first and second electrode members. The varistor wafers are axially stacked between the first and second electrodes. The assembly further comprises a bonding agent (164, 164') bonding at least two of the varistor wafers in the varistor assembly to one another.

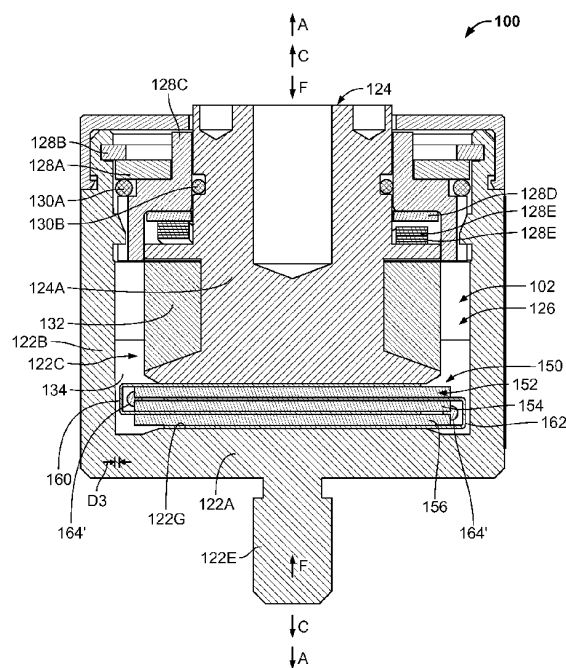


FIG. 5



EUROPEAN SEARCH REPORT

Application Number
EP 18 19 0872

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DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	CA 2 098 365 A1 (COOPER POWER SYST [US]) 31 December 1993 (1993-12-31) * abstract; claims 1,3,8,11,12,15; figures 6,7 * * page 8, lines 11-16,23 - page 9, lines 6,12-16 * * pages 10,16,18, lines 18-24,4-14,19 - page 19, line 1 * * page 21, line 19 - page 22, line 2 * * page 28, line 19 - page 30, line end * * the whole document *	1-6,15	INV. H01C7/102 H01C7/12
Y	US 5 130 884 A (ALLINA EDWARD F [US]) 14 July 1992 (1992-07-14) * the whole document *	7	
A	* column 1, line 46 - column 2, line 12 *	1-6,15	
X	EP 1 798 742 A1 (RAYCAP CORP [GR]) 20 June 2007 (2007-06-20) * paragraphs [0003], [0008] - [0014], [0050], [0064] - paragraph [0066]; claims 1-23; figures 1-5,7-9 * * the whole document *	8-14	
Y		7	TECHNICAL FIELDS SEARCHED (IPC)
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The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 12 June 2019	Examiner Dessaux, Christophe
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	

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DOCUMENTS CONSIDERED TO BE RELEVANT			
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The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 12 June 2019	Examiner Dessaux, Christophe
CATEGORY OF CITED DOCUMENTS			
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	

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Application Number

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CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing claims for which payment was due.

☐ Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due and for those claims for which claims fees have been paid, namely claim(s):

☐ No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due.

LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

see sheet B

☒ All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.

☐ As all searchable claims could be searched without effort justifying an additional fee, the Search Division did not invite payment of any additional fee.

☐ Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:

☐ None of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims, namely claims:

☐ The present supplementary European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims (Rule 164 (1) EPC).

**LACK OF UNITY OF INVENTION
SHEET B**

Application Number

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The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

1. claims: 1-6, 15

A varistor assembly based on a plurality of stacked varistor wafers, at least one electrically conductive interconnect member connecting the varistor electrically in parallel. A bonding agent bonding at least two of the varistor wafers in the varistor assembly.

2. claims: 7-14

An overvoltage protection device comprising the varistor assembly of three capacitor wafer connected in parallel: a first electrode member (122); and a second electrode member (124); an housing electrode, including an and wall (122A) and an integral sidewall (122B) collectively defining a cavity (122C). Further, it comprises a biasing device (128E) applying an axially compressive load on the varistor assembly.

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

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This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
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EPO FORM P0459

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82