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(12) United States Design Patent

Abe et al.

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(54) **COIL COMPONENT**

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(**) Term: **15 Years**

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Related U.S. Application Data

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(51) **LOC (13) Cl.** **13-02**

(52) **U.S. Cl.**
USPC **D13/110**

(58) **Field of Classification Search**
USPC D13/101, 117, 118, 133, 179, 183, 199; D15/199
CPC H01F 27/04; H01F 27/24; H01F 27/26; H01F 27/28; H01F 27/29; H01F 27/30; H01F 27/34; H01F 27/006; H01F 27/292; H01F 27/325; H01F 38/08; H01F 17/04; H01F 17/045; H01F 37/00; H01F 5/02; H02M 3/28; H03H 7/427
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

9,978,501	B2	5/2018	Jeong
10,256,037	B2	4/2019	Sasaki et al.
10,388,453	B2	8/2019	Igarashi et al.
10,454,235	B2	10/2019	Murakami et al.
10,546,692	B2	1/2020	Sawada et al.
10,559,413	B2	2/2020	Yoon et al.
10,580,567	B2	3/2020	Lee et al.
10,607,765	B2	3/2020	Yoon et al.
10,607,769	B2	3/2020	Jeong
10,614,947	B2	4/2020	Nakano et al.
10,629,365	B2	4/2020	Sim et al.
10,636,562	B2	4/2020	Kim et al.
10,770,219	B2	9/2020	Kawasaki et al.
10,777,342	B2	9/2020	Arai et al.

(Continued)

FOREIGN PATENT DOCUMENTS

JP	D1527921	S	7/2015
JP	D1527922	S	7/2015

(Continued)

OTHER PUBLICATIONS

Coil Components. (Design—© Questel) orbit.com. [Online PDF compilation of references] 56 pgs. Print Dates Range Jun. 19, 2021-Aug. 12, 1998 [Retrieved Jan. 6, 2022].*

(Continued)

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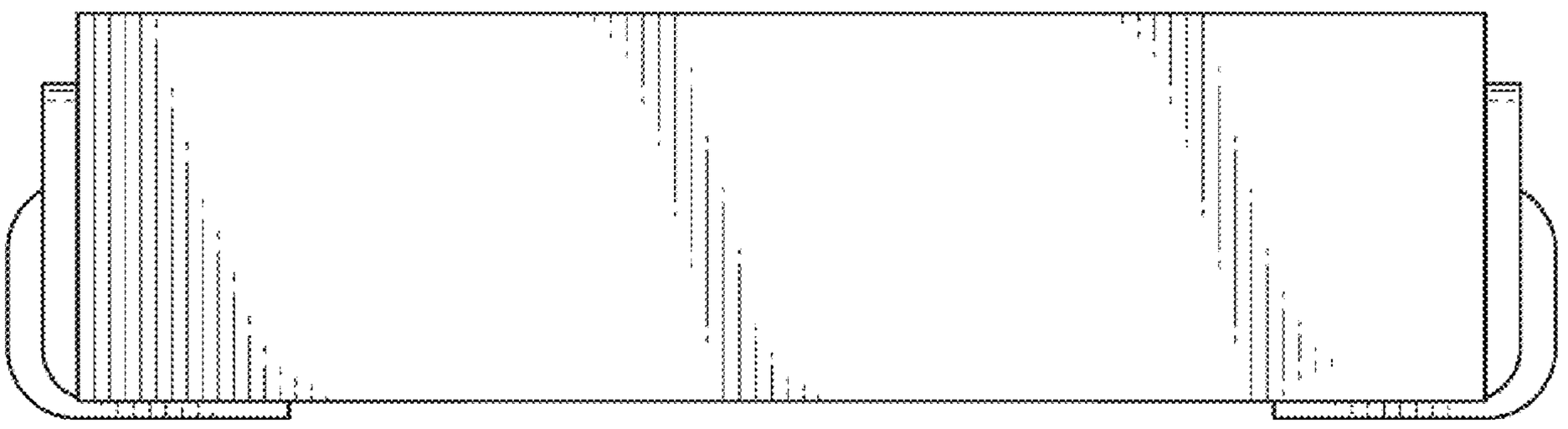
(57) **CLAIM**

The ornamental design for a coil component, as shown and described.

DESCRIPTION

FIG. **1** is a front elevational view of a coil component, showing the new design, the rear elevational view (not provided) being a mirror image thereof;
FIG. **2** is a left-side elevational view thereof;
FIG. **3** is a right-side elevational view thereof;
FIG. **4** is a top plan view thereof; and,
FIG. **5** is a bottom plan view thereof.

1 Claim, 3 Drawing Sheets



(56) **References Cited**

U.S. PATENT DOCUMENTS

10,811,183	B2		10/2020	Araki	
D901,384	S		11/2020	Yasuda et al.	
10,832,855	B2		11/2020	Okura et al.	
10,840,010	B2		11/2020	Fujii et al.	
10,848,119	B2		11/2020	Oide et al.	
10,861,638	B2		12/2020	Igarashi	
10,872,718	B2		12/2020	Hamano et al.	
D910,561	S		2/2021	Yasuda et al.	
D913,227	S	*	3/2021	Chen	D13/110
D913,922	S	*	3/2021	You	D13/110
D913,923	S	*	3/2021	You	D13/110
D914,593	S	*	3/2021	Frerichs	D13/110
D919,572	S	*	5/2021	Lei	D13/110
D923,567	S	*	6/2021	Lee	D13/110
D924,135	S	*	7/2021	England	D13/110
D926,130	S	*	7/2021	Huang	D13/110
D929,327	S	*	8/2021	Wang	D13/110
D934,171	S	*	10/2021	Yuan	D13/110
D934,186	S	*	10/2021	Omote	D13/162
D934,798	S	*	11/2021	Beer	D13/110
D938,910	S	*	12/2021	Abe	D13/110

FOREIGN PATENT DOCUMENTS

JP	D1531133	S	8/2015
JP	D1531610	S	8/2015

OTHER PUBLICATIONS

Peterson, ZM. DC DC Converter Inductor Selection Guidelines for High Power Systems. Oct. 7, 2020. NWES Blog. https://www.nwengineeringllc.com/article/dc-dc-converter-inductor-selection-guidelines-for-high-power-systems.php.*

How to Choose the Right Inductor for DC-DC Buck Applications. Dec. 30, 2021. Passive Components Blog. https://passive-components.eu/how-to-choose-the-right-inductor-for-dc-dc-buck-applications/.*

Selecting the Best Inductor for Your DC-DC Converter. May 21, 2021. Electronic Design. https://www.electronicdesign.com/resources/white-paper/whitepaper/21164731/selecting-the-best-inductor-for-your-dcdc-converter.*

Jun. 4, 2021 Office Action issued in U.S. Appl. No. 29/668,819.

Aug. 26, 2021 Notice of Allowance issued in U.S. Appl. No. 29/668,819.

Coil Component. (Design—© Questel) orbit.com [Online PDF compilation of references] 32 pgs. Print Dates Range Mar. 6, 2020-Jun. 26, 2000. [Retrieved May 21, 2021].

"Inductors: 3D Transponder Coils for 22 kHz With High Sensitivity." Mar. 8, 2018. TDK Electronics. https://www.tdk-electronics.tdk.com/en/373388/company/press-center/press-releases/press-releases/inductors-3d-transponder-coils-for-22-khz-with-high-sensitivity/2197712.

"TDK Inductors: 3D Transponder Coils for 22 kHz with High Sensitivity." Sep. 3, 2018. Passive Components. https://passive-components.eu/tdk-inductors-3d-transponder-coils-for-22-khz-with-high-sensitivity/.

* cited by examiner

Fig. 1

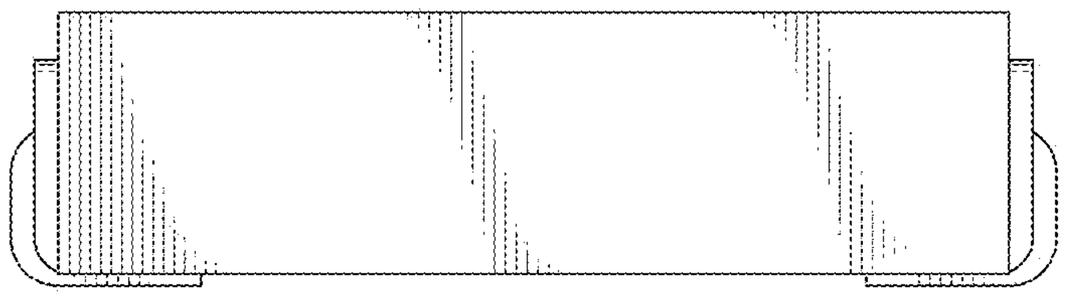


Fig. 2

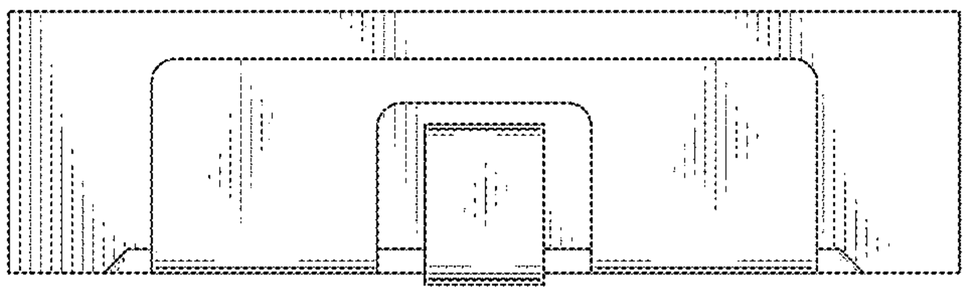


Fig. 3

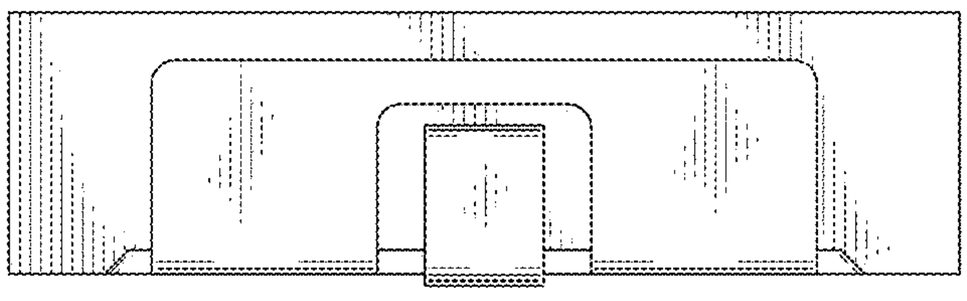


Fig. 4

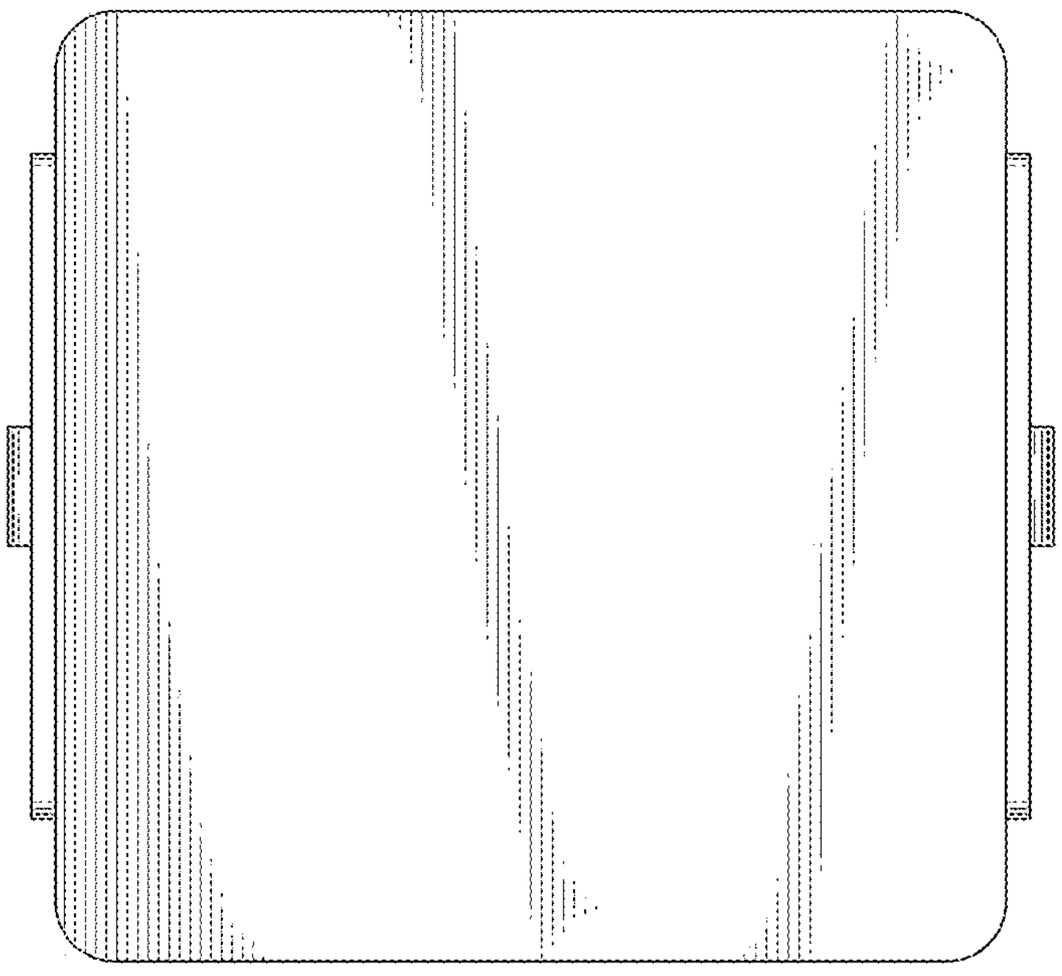


Fig. 5