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(54) **MEMORY MODULE**

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(52) **U.S. Cl.**
USPC **D14/435**; D14/436

(58) **Field of Classification Search**
USPC D14/435, 356, 242, 436, 433, 474, 240, D14/496, 385, 358, 480.1–480.7; 360/97.01, 685, 686, 752, 737, 732, 360/784, 803; 439/135, 144, 139–141, 147, 439/136, 638, 518, 131; 365/51, 63, 131; 710/52, 300, 313; 711/115, 103, 154, 711/161–162; 70/58; 323/210; 713/186, 1; 382/124; 235/492; D13/147
CPC G06K 19/06196; G06K 19/072; G06K 19/0721–19/0728; G06K 19/073; G06K 19/07309; G06K 19/077; G06K 19/07701; G06K 19/07715; G06K 19/0772; G06K 19/07724; G06K 19/07726; G06K 19/07728; G06K 7/0021; G06F 21/85–21/88; G06F 21/77–21/80; G06F 21/00; G06Q 20/3229; G06Q 20/34; G06Q 20/341; G06Q 20/346; G06Q 20/349; G06Q 20/3563; G06Q 20/3567; G06Q 20/357; G06Q 20/3576; H05K 5/026; H05K 5/0256; H05K 5/0265; H05K 5/0269; H05K 5/0273; H05K 5/0278; H05K 5/0282; H05K 5/0286; H05K 5/0291; H05K 5/0295; H05K 5/03; H05K 5/04; H05K 5/06; H05K 5/061–5/069; H05K 7/00; H05K 7/005; H05K 7/02; H05K 7/023; H05K 7/026; H05K 7/04; H05K 7/10; H05K 7/1418; H05K 7/142; H05K 7/1405; H05K 7/1424; H05K 7/1427–7/1439; H05K 7/1461; H05K 7/1464–7/1474; H05K 7/1485–7/1488; H05K 2201/09745; H05K 2201/09754; H05K 2201/09763; H05K 2201/09772; H05K 2201/098; H05K 2201/09818; H05K 2201/10; H05K 2201/10007; H04N 2201/216; H01R 13/62933; H01R 13/62905; H01R 13/6275; H01R 13/6395; H01R 13/62938; H01R 13/64; H01R 13/645; H01R 13/6456; H01R 13/635; H01R 13/633; H01R 23/7005; H01R 23/682; H01R 23/684; H01R 23/70; H01R 23/7068; H01R 23/7026; H01R 31/065; H01R 27/02; H01R 2103/00
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

3,634,816	A	*	1/1972	Zell	439/633
D261,644	S	*	11/1981	McKinsey et al.	D14/435
4,386,388	A	*	5/1983	Beun	361/752
4,898,540	A	*	2/1990	Saito	439/153

(Continued)

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(57) **CLAIM**

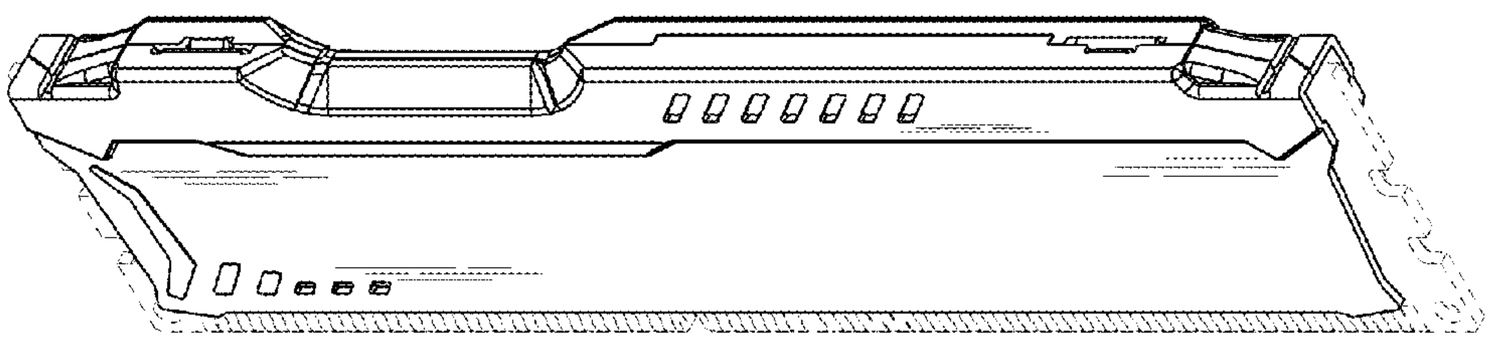
We claim the ornamental design for a memory module, as shown and described.

DESCRIPTION

FIG. **1** is a perspective view of a memory module showing the claimed design;
FIG. **2** is a front elevational view thereof;
FIG. **3** is a rear elevational view thereof;
FIG. **4** is a left side elevational view thereof;
FIG. **5** is a right side elevational view thereof;
FIG. **6** is a top plan view thereof; and,
FIG. **7** is a bottom plan view thereof.

Broken lines and entirely unshaded portions contained within broken lines are not claimed.

1 Claim, 4 Drawing Sheets



(56) **References Cited**

U.S. PATENT DOCUMENTS

D306,576	S	*	3/1990	Hiatt et al.	D13/182
5,010,444	A	*	4/1991	Storrow et al.	361/719
5,074,800	A	*	12/1991	Sasao et al.	439/157
5,364,282	A	*	11/1994	Tondreault	439/157
5,389,000	A	*	2/1995	DiViesti et al.	439/157
5,470,240	A	*	11/1995	Suzuki	439/157
5,634,803	A	*	6/1997	Cheng et al.	439/157
5,647,755	A	*	7/1997	Hida et al.	439/328
5,649,831	A	*	7/1997	Townsend	439/157
5,660,552	A	*	8/1997	Suzuki et al.	439/159
5,676,555	A	*	10/1997	Yu et al.	439/157
6,045,385	A	*	4/2000	Kane	439/327
6,049,975	A	*	4/2000	Clayton	29/832
D427,159	S	*	6/2000	Oba	D13/182
6,123,558	A	*	9/2000	Shibata	439/157
D432,096	S	*	10/2000	Jeon et al.	D13/182
6,126,472	A	*	10/2000	Choy	439/328
6,152,749	A	*	11/2000	Tseng et al.	439/160
6,200,149	B1	*	3/2001	Chi-Chung	439/160
6,227,887	B1	*	5/2001	Choy	439/160
6,250,938	B1	*	6/2001	Tung	439/160
6,276,950	B1	*	8/2001	Yodogawa	439/160
6,290,519	B1	*	9/2001	Lee	439/157
6,304,456	B1	*	10/2001	Wortman	361/796
6,319,027	B1	*	11/2001	Pickles et al.	439/157
6,347,039	B1	*	2/2002	Lee	361/760
6,368,126	B1	*	4/2002	Lee	439/160
6,390,837	B1	*	5/2002	Lee	439/160
6,449,163	B1	*	9/2002	Stark et al.	361/752
6,768,651	B2	*	7/2004	Takahashi et al.	361/801
6,802,732	B1	*	10/2004	Bu et al.	439/328
6,824,413	B1	*	11/2004	Shipe et al.	439/326
6,863,572	B1	*	3/2005	Yi et al.	439/637
6,881,089	B1	*	4/2005	Yang	439/377
7,004,773	B1	*	2/2006	Poh et al.	439/160
D520,015	S	*	5/2006	Peddle	D14/435
7,059,913	B1	*	6/2006	Chen	439/638
7,252,537	B2	*	8/2007	Simon et al.	439/489
7,269,765	B1	*	9/2007	Charlton et al.	714/710
7,341,467	B2	*	3/2008	Guan et al.	439/160
7,445,482	B2	*	11/2008	Ho	439/326
7,470,136	B2	*	12/2008	Yahiro et al.	439/326
7,547,213	B2	*	6/2009	Pax	439/60
7,661,974	B1	*	2/2010	Sun	439/328
7,685,392	B2	*	3/2010	Coteus et al.	711/167
7,713,079	B2	*	5/2010	Fu	439/328
7,791,892	B2	*	9/2010	Domitrovits et al.	361/737
7,922,506	B1	*	4/2011	Harlan et al.	439/160
7,938,658	B1	*	5/2011	Zeng et al.	439/160
7,980,878	B2	*	7/2011	Lee et al.	439/326
8,023,304	B2	*	9/2011	Choi	365/64
8,075,330	B1	*	12/2011	Deng et al.	439/328
8,087,950	B1	*	1/2012	Deng et al.	439/328
8,092,239	B2	*	1/2012	Nishiyama	439/157
8,092,257	B2	*	1/2012	Hubert et al.	439/638
8,140,942	B2	*	3/2012	Dell et al.	714/769
8,328,567	B1	*	12/2012	Yang	439/157
8,337,230	B1	*	12/2012	Kurachi	439/328
D673,921	S	*	1/2013	Ozawa	D13/182
8,399,301	B2	*	3/2013	Park et al.	438/122
8,550,836	B2	*	10/2013	Ma et al.	439/328
8,576,569	B2	*	11/2013	Malek et al.	361/730
D698,792	S	*	2/2014	Lin et al.	D14/435
D702,689	S	*	4/2014	Lin et al.	D14/435
D702,690	S	*	4/2014	Lin et al.	D14/435
8,734,176	B2	*	5/2014	Ishimaru	439/328
8,747,133	B2	*	6/2014	Shen et al.	439/160
8,753,138	B2	*	6/2014	Foster et al.	439/326
8,804,343	B2	*	8/2014	Fan et al.	361/737
8,834,188	B2	*	9/2014	Wang et al.	439/157
D717,251	S	*	11/2014	Mueller et al.	D13/179
8,968,019	B2	*	3/2015	Hack et al.	439/326
2001/0001085	A1	*	5/2001	Hassanzadeh et al.	439/633
2002/0015290	A1	*	2/2002	Reniers	361/736
2003/0073332	A1	*	4/2003	Bu	439/159
2005/0112927	A1	*	5/2005	Wang	439/326
2006/0018086	A1	*	1/2006	Liu	361/679
2006/0035493	A1	*	2/2006	Jiang	439/157
2007/0032117	A1	*	2/2007	Huang et al.	439/327
2007/0053170	A1	*	3/2007	Yu	361/737
2007/0066105	A1	*	3/2007	Kato et al.	439/159
2007/0161275	A1	*	7/2007	McBroom et al.	439/160
2007/0212920	A1	*	9/2007	Clayton et al.	439/326
2007/0238323	A1	*	10/2007	Mathews et al.	439/65
2008/0013290	A1	*	1/2008	Creasy et al.	361/737
2008/0032537	A1	*	2/2008	Leidy	439/326
2008/0096412	A1	*	4/2008	Poh et al.	439/326
2008/0157389	A1	*	7/2008	Park et al.	257/773
2008/0176432	A1	*	7/2008	Scherer et al.	439/159
2008/0179731	A1	*	7/2008	Fan	257/690
2008/0186685	A1	*	8/2008	Cho et al.	361/737
2008/0220642	A1	*	9/2008	Guan et al.	439/325
2008/0261433	A1	*	10/2008	Pipho	439/326
2008/0318448	A1	*	12/2008	Ringler et al.	439/78
2009/0006682	A1	*	1/2009	Hubert et al.	710/100
2009/0006698	A1	*	1/2009	Hubert et al.	710/301
2009/0017666	A1	*	1/2009	Lim et al.	439/328
2009/0023308	A1	*	1/2009	Guan et al.	439/62
2009/0026599	A1	*	1/2009	Fan	257/685
2009/0035979	A1	*	2/2009	Kerrigan et al.	439/328
2009/0077293	A1	*	3/2009	Kerrigan et al.	710/301
2009/0093146	A1	*	4/2009	Ju	439/159
2009/0124110	A1	*	5/2009	Wu et al.	439/345
2009/0168356	A1	*	7/2009	Chen et al.	361/709
2009/0186502	A1	*	7/2009	Chen et al.	439/157
2009/0221172	A1	*	9/2009	Li	439/328
2010/0022114	A1	*	1/2010	Chiu	439/328
2010/0038269	A1	*	2/2010	Picard	206/307.1
2010/0062647	A1	*	3/2010	Yang	439/630
2010/0128447	A1	*	5/2010	MacDougall et al.	361/737
2010/0254096	A1	*	10/2010	Kim et al.	361/737
2010/0323544	A1	*	12/2010	Kudo	439/159
2011/0045681	A1	*	2/2011	Tsai	439/328
2011/0069464	A1	*	3/2011	Joe et al.	361/783
2011/0076868	A1	*	3/2011	Yao et al.	439/153
2011/0081797	A1	*	4/2011	Chang	439/327
2011/0097913	A1	*	4/2011	Fu et al.	439/153
2011/0104952	A1	*	5/2011	Teh	439/633
2011/0117768	A1	*	5/2011	Li et al.	439/345
2011/0124214	A1	*	5/2011	McKee et al.	439/159
2011/0151702	A1	*	6/2011	Zhu	439/328
2011/0159718	A1	*	6/2011	McKee	439/326
2011/0201234	A1	*	8/2011	Long	439/630
2012/0103674	A1	*	5/2012	Yu	174/261
2012/0108092	A1	*	5/2012	Li et al.	439/159
2012/0164859	A1	*	6/2012	Li et al.	439/153
2012/0178274	A1	*	7/2012	Manickam	439/157
2012/0329301	A1	*	12/2012	Li et al.	439/157
2013/0040476	A1	*	2/2013	Li et al.	439/147
2013/0059458	A1	*	3/2013	Chang	439/328
2013/0070412	A1	*	3/2013	Ge et al.	361/679.32
2013/0084723	A1	*	4/2013	Shen et al.	439/159
2013/0095679	A1	*	4/2013	Li et al.	439/157
2013/0100627	A1	*	4/2013	Cong et al.	361/785
2013/0109208	A1	*	5/2013	Shen et al.	439/159
2013/0109216	A1	*	5/2013	Chien	439/345
2013/0114200	A1	*	5/2013	Wu et al.	361/679.31
2013/0130526	A1	*	5/2013	Mo et al.	439/157
2013/0223001	A1	*	8/2013	Ryu et al.	361/679.32
2013/0250537	A1	*	9/2013	He et al.	361/803
2013/0288502	A1	*	10/2013	Bridges et al.	439/325
2013/0288504	A1	*	10/2013	Sass et al.	439/328
2014/0160664	A1	*	6/2014	Yang	361/679.32
2014/0170875	A1	*	6/2014	Shen et al.	439/159
2014/0179169	A1	*	6/2014	Wu et al.	439/630
2014/0233192	A1	*	8/2014	Hsu	361/737
2014/0273647	A1	*	9/2014	Ma	439/630
2014/0310954	A1	*	10/2014	Huang et al.	29/764
2014/0377972	A1	*	12/2014	Tang et al.	439/157
2015/0019784	A1	*	1/2015	He et al.	710/301
2015/0038018	A1	*	2/2015	Matsuzawa	439/638

* cited by examiner

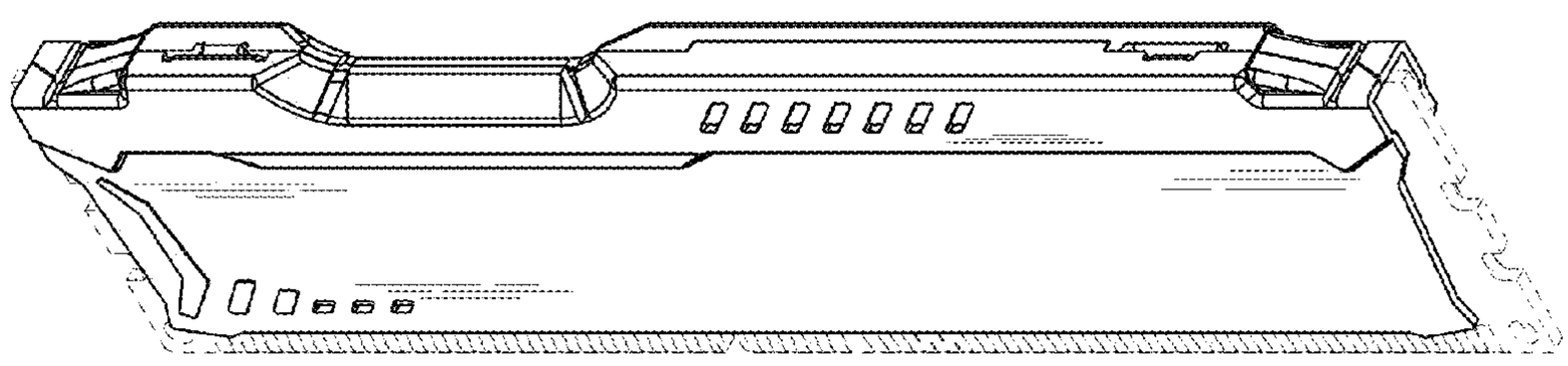


FIG.1

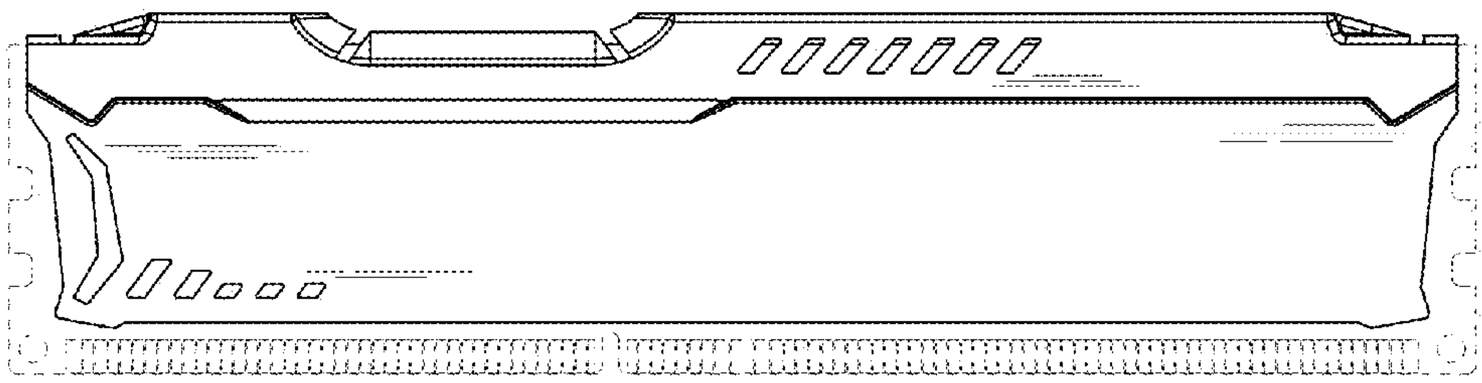


FIG. 2

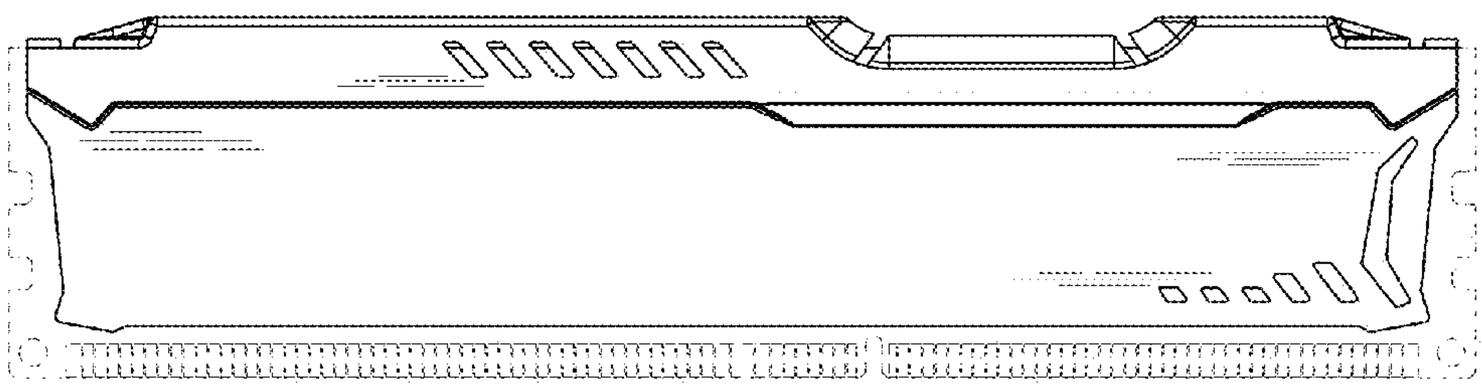
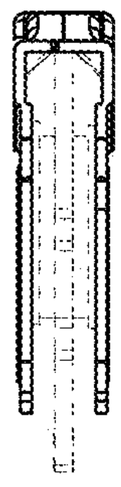


FIG. 3



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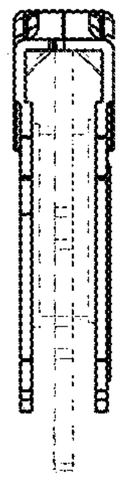

FIG. 5

FIG. 6

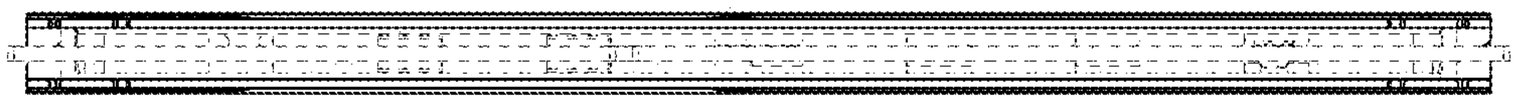

FIG. 7