TOSHIBA

2020-2-27 Rev.2.0

RD Number: RD111

RD Title: TB67S508FTG Evaluation circuit BOM

Item No.	Designator	Quantity	Value	Part Number	Manufacturer	Description	Package	Not Mount
1	C_VDD	0	10μF 10V	_	_	Electrolytic capacitor		✓
2	C_VM1	1	100μF 50V	_	_	Electrolytic capacitor		
3	C_VM2	0	Not mount	_	_	Ceramic capacitor		✓
4	C_VM3	1	0.1μF 50V	_	_	Ceramic capacitor		
5	C_VCC	1	0.1μF 6V	-	_	Ceramic capacitor		
6	C_VAD	1	0Ω 2Α	_	_	Chip resistor		
7	C_OSCM	1	0Ω 2Α	_	_	Chip resistor		
8	C_VREFA	1	0.1μF 50V	_	_	Ceramic capacitor		
9	C_VREFB	1	0.1μF 50V	_	_	Ceramic capacitor		
10	C_OBP	0	Not mount	_	_	Ceramic capacitor		✓
11	C_OBM	0	Not mount	_	_	Ceramic capacitor		✓
12	C_OAP	0	Not mount	_	_	Ceramic capacitor		✓
13	C_OAM	0	Not mount	_	_	Ceramic capacitor		✓
14	C_S1	0	Not mount	_	_	Ceramic capacitor		✓
15	C_S2	0	Not mount	_	_	Ceramic capacitor		✓
16	C_S3	0	Not mount	_	_	Ceramic capacitor		✓
17	C_S4	0	Not mount	_	_	Ceramic capacitor		✓
18	C_S5	0	Not mount	-	_	Ceramic capacitor		✓
19	C_S6	0	Not mount	_	_	Ceramic capacitor		✓
20	C_S7	0	Not mount	_	_	Ceramic capacitor		✓
21	C_S8	0	Not mount	_	_	Ceramic capacitor		✓
22	R_OSCM	0	Not mount	_	_	Chip resistor		✓
23		0	Not mount	_	_	Leaded resistor		✓
24	R_VREFA1	0	Not mount	_	_	Chip resistor		✓
25		0	Not mount	_	_	Leaded resistor		✓
26	R_VREFA2	0	Not mount	-	_	Chip resistor		√

27		0	Not mount	_	_	Leaded resistor	✓
28	R_VREFB1	0	Not mount	-	_	Chip resistor	✓
29		0	Not mount	-	_	Leaded resistor	✓
30	R_VREFB2	0	Not mount	-	_	Chip resistor	✓
31		0	Not mount	-	_	Leaded resistor	✓
32	R_ERR	0	Not mount	-	_	Chip resistor	✓
33		1	10kΩ 0.25W	-	_	Leaded resistor	
34	R_MO	0	Not mount	-	_	Chip resistor	✓
35		1	10kΩ 0.25W	-	_	Leaded resistor	
36	R_OSCM	2	Socket pin	-	_	Socket pin	
37	R_VREFA1	2	Socket pin	-	_	Socket pin	
38	R_VREFA2	2	Socket pin	_	_	Socket pin	
39	R_VREFB1	2	Socket pin	_	_	Socket pin	
40	R_VREFB2	2	Socket pin	_	_	Socket pin	
41	R_ERR	2	Socket pin	_	_	Socket pin	
42	R_MO	2	Socket pin	_	_	Socket pin	
43	GND1	1	Check terminal	_	_	Check pin	
44	GND2	1	Check terminal	_	_	Check pin	
45	GND3	1	Check terminal	_	_	Check pin	
46	GND4	1	Check terminal	_	_	Check pin	
47	GND5	1	Check terminal	_	_	Check pin	
48	GND6	1	Check terminal	_	_	Check pin	
49	GND7	1	Check terminal	_	_	Check pin	
50	GND8	1	Check terminal	_	_	Check pin	
51	VM	1	Check terminal	_	_	Check pin	
52	VDD	1	Check terminal	_	_	Check pin	
53	OSCM	1	Check terminal	-	_	Check pin	
54	CC	1	Check terminal	_	_	Check pin	
55	VREF_A	1	Check terminal	-	_	Check pin	
56	VREF_B	1	Check terminal	-	_	Check pin	
57	ISEL/ERR	1	Check terminal	-	_	Check pin	
58	VAD	0	Check terminal	_	_	Check pin	✓
59	IN_A1/CW_CCW	1	Check terminal	_	_	Check pin	
60	IN_A2/MO	1	Check terminal	_	_	Check pin	

61	IN_B1/DMODE1	1	Check terminal	_	-	Check pin	
62	IN_B2/DMODE2	1	Check terminal	-	-	Check pin	
63	STANDBY/CLK	1	Check terminal	-	_	Check pin	
64	PHASE_A/ENABLE	1	Check terminal	-	_	Check pin	
65	PHASE_B/RESET	1	Check terminal	-	_	Check pin	
66	OUT_B+	1	Check terminal	-	_	Check pin	
67	OUT_B-	1	Check terminal	-	_	Check pin	
68	OUT_A+	1	Check terminal	_	_	Check pin	
69	OUT_A-	1	Check terminal	-	_	Check pin	
70	SW1	1	Pin header 3P	-	_	Jumper	
71		1	Jumper socket	-	_	Jumper Short	
72	SW2	1	Pin header 3P	_	_	Jumper	
73		1	Jumper socket	_	_	Jumper Short	
74	SW3	1	Pin header 3P	_	_	Jumper	
75		1	Jumper socket	_	_	Jumper Short	
76	SW4	1	Pin header 3P	_	_	Jumper	
77		1	Jumper socket	_	_	Jumper Short	
78	SW5	1	Pin header 3P	_	_	Jumper	
79		1	Jumper socket	_	_	Jumper Short	
80	SW6	1	Pin header 3P	_	_	Jumper	
81		1	Jumper socket	_	_	Jumper Short	
82	SW7	1	Pin header 3P	_	_	Jumper	
83		1	Jumper socket	_	_	Jumper Short	
84	SW8	1	Pin header 3P	_	_	Jumper	
85		1	Jumper socket	_	_	Jumper Short	
86	SW9	0	Pin header 3P	_	_	Jumper	✓
87		0	Jumper socket	_	_	Jumper Short	✓
88	JP1	1	Pin header 2P	_	_	Jumper	
89		1	Jumper socket	_	_	Jumper Short	
90	JP2	1	Pin header 2P	_	_	Jumper	
91		1	Jumper socket	_	_	Jumper Short	
92	JP3	1	Pin header 2P	_	_	Jumper	
93		1	Jumper socket	_	_	Jumper Short	
94	JP4	1	Pin header 2P	_	_	Jumper	

95		1	Jumper socket	_	_	Jumper Short		
96	CON1	1	Connector 4P	_	_	Connector 4P-2.5		
97	IC1	1	TB67S508FTG	TB67S508FTG	TOSHIBA	Motor driver IC	QFN36	
98								
99								
100								

Terms of Use

This terms of use is made between Toshiba Electronic Devices and Storage Corporation ("We") and customers who use documents and data that are consulted to design electronics applications on which our semiconductor devices are mounted ("this Reference Design"). Customers shall comply with this terms of use. Please note that it is assumed that customers agree to any and all this terms of use if customers download this Reference Design. We may, at its sole and exclusive discretion, change, alter, modify, add, and/or remove any part of this terms of use at any time without any prior notice. We may terminate this terms of use at any time and for any reason. Upon termination of this terms of use, customers shall destroy this Reference Design. In the event of any breach thereof by customers, customers shall destroy this Reference Design, and furnish us a written confirmation to prove such destruction.

1. Restrictions on usage

- 1. This Reference Design is provided solely as reference data for designing electronics applications. Customers shall not use this Reference Design for any other purpose, including without limitation, verification of reliability.
- 2. This Reference Design is for customer's own use and not for sale, lease or other transfer.
- 3. Customers shall not use this Reference Design for evaluation in high or low temperature, high humidity, or high electromagnetic environments.
- 4. This Reference Design shall not be used for or incorporated into any products or systems whose manufacture, use, or sale is prohibited under any applicable laws or regulations.

2. Limitations

- 1. We reserve the right to make changes to this Reference Design without notice.
- 2. This Reference Design should be treated as a reference only. We are not responsible for any incorrect or incomplete data and information.
- 3. Semiconductor devices can malfunction or fail. When designing electronics applications by referring to this Reference Design, customers are responsible for complying with safety standards and for providing adequate designs and safeguards for their hardware, software and systems which minimize risk and avoid situations in which a malfunction or failure of semiconductor devices could cause loss of human life, bodily injury or damage to property, including data loss or corruption. Customers must also

- refer to and comply with the latest versions of all relevant our information, including without limitation, specifications, data sheets and application notes for semiconductor devices, as well as the precautions and conditions set forth in the "Semiconductor Reliability Handbook".
- 4. When designing electronics applications by referring to this Reference Design, customers must evaluate the whole system adequately. Customers are solely responsible for all aspects of their own product design or applications. WE ASSUME NO LIABILITY FOR CUSTOMERS' PRODUCT DESIGN OR APPLICATIONS.
- 5. No responsibility is assumed by us for any infringement of patents or any other intellectual property rights of third parties that may result from the use of this Reference Design. No license to any intellectual property right is granted by this terms of use, whether express or implied, by estoppel or otherwise.
- 6. THIS REFERENCE DESIGN IS PROVIDED "AS IS". WE (a) ASSUME NO LIABILITY WHATSOEVER, INCLUDING WITHOUT LIMITATION, INDIRECT, CONSEQUENTIAL, SPECIAL, OR INCIDENTAL DAMAGES OR LOSS, INCLUDING WITHOUT LIMITATION, LOSS OF PROFITS, LOSS OF OPPORTUNITIES, BUSINESS INTERRUPTION AND LOSS OF DATA, AND (b) DISCLAIM ANY AND ALL EXPRESS OR IMPLIED WARRANTIES AND CONDITIONS RELATED TO THIS REFERENCE DESIGN, INCLUDING WARRANTIES OR CONDITIONS OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, ACCURACY OF INFORMATION, OR NONINFRINGEMENT.

3. Export Control

Customers shall not use or otherwise make available this Reference Design for any military purposes, including without limitation, for the design, development, use, stockpiling or manufacturing of nuclear, chemical, or biological weapons or missile technology products (mass destruction weapons). This Reference Design may be controlled under the applicable export laws and regulations including, without limitation, the Japanese Foreign Exchange and Foreign Trade Law and the U.S. Export Administration Regulations. Export and re-export of this Reference Design are strictly prohibited except in compliance with all applicable export laws and regulations.

4. Governing Laws

This terms of use shall be governed and construed by laws of Japan.