




SPECIFICATION SHEET

SPECIFICATION SHEET NO.	N0626-DBS107S000S10A
DATE	June 26, 2021
REVISION	A0
DESCRIPTION	SMD Single Phase Glass Passivated Bridge Rectifier, DBS series, DB107S Type 4 Pads, Reverse Voltage 1000V Max. Forward Current 1.0A Max. Operating Temp. Range -55°C ~+150°C, Package in Tape/Reel, 1000pcs/Reel RoHS/RoHS III compliant
CUSTOMER	
CUSTOMER PART NUMBER	
CROSS REF. PART NUMBER	
ORIGINAL PART NUMBER	MDD DB107S
PART CODE	DBS107S000S10A

VENDOR APPROVE			
Issued/Checked/Approved			
DATE: June 26, 2021			

CUSTOMER APPROVE
DATE:

SMD BRIDGE RECTIFIER DBS SERIES



MAIN FEATURE

- Reliable low cost construction utilizing molded plastic technique
- Small size simple installation
- High forward surge current capability
- High temperature soldering guaranteed.
- 260 °C/10 seconds, at 5 lbs (2.3kg) tension

APPLICATION

- For printed circuit board

RFQ

[Request For Quotation](#)

PART CODE GUIDE

DBS	107S000	S	10A
1	2	3	4

- 1) **DBS**: SMD Single Phase Glass Passivated Bridge Rectifier, 4 Pads, DBS series
- 2) **107S000**: Type code for original part number DB107S
- 3) **S**: Package code, Tape/reel, 1000pcs/reel.
- 4) **10A**: Specification code for Reverse Voltage 1000V Max. Forward Current 1.0A Max.

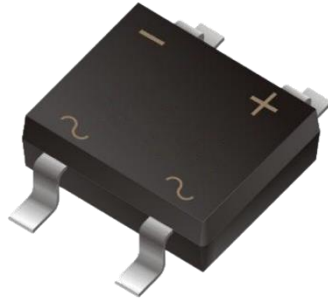
MORE ITEMS AVAILABLE

DBS101S000S105	DBS102S000S110	DBS103S000S120	DBS104S000S140	DBS105S000S160
DBS106S000S180	DBS107S000S10A			
DBS151S0S01505	DBS152S0S01510	DBS153S0S01520	DBS154S0S01540	DBS155S0S01560
DBS156S0S01580	DBS157S0S0150A			
DBS201S000S205	DBS202S000S210	DBS203S000S220	DBS204S000S240	DBS205S000S260
DBS206S000S280	DBS207S000S20A			

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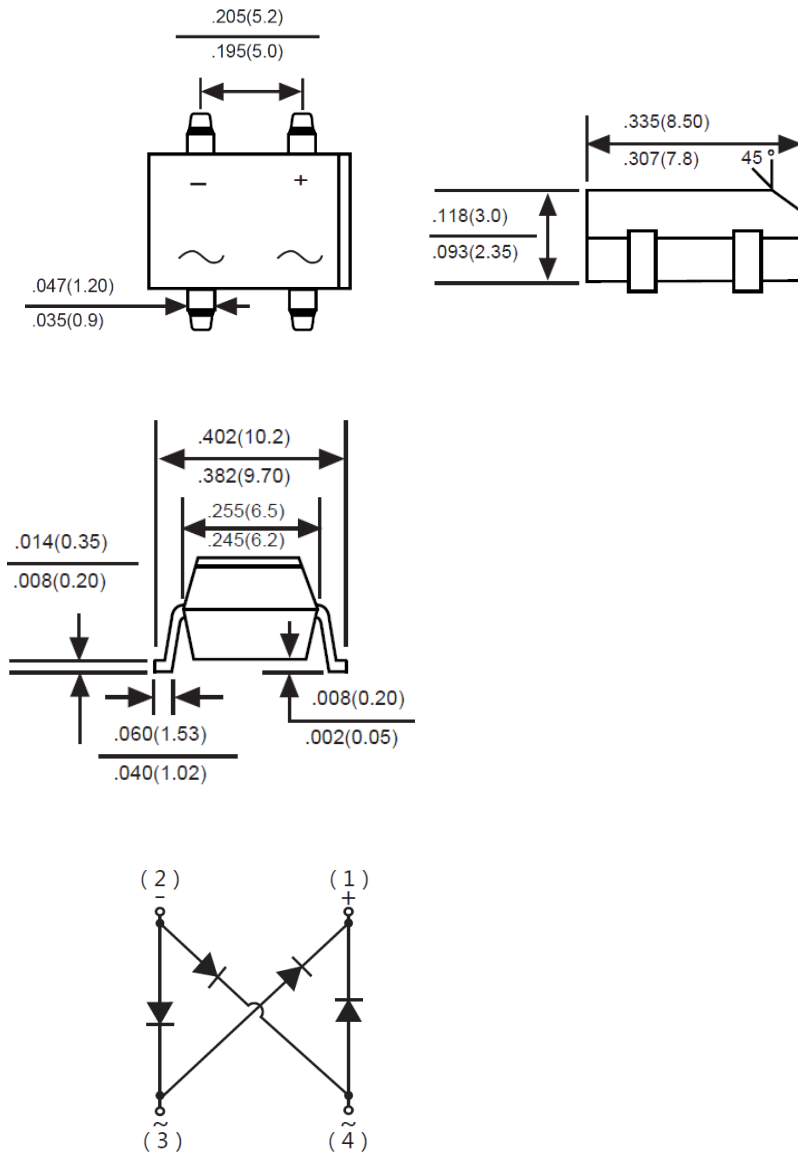
DIMENSION (Unit: Inch/mm)

Image for reference



Marking: DB107S

DBS



SMD BRIDGE RECTIFIER DBS SERIES
MECHANICAL DATA

Case	Terminals	Polarity	Mounting Position	Weight per piece
JEDEC DBS molded plastic body	Solder plated, Solderable per MIL-STD-750, Method 2026	Polarity symbol marking on case	Any	0.020 Ounce, 0.400grams

MAX. RATING & CHARACTERISTICS

Parameter	SYMBOLS	VALUE			UNITS
		Min.	Typical	Max.	
Repetitive peak reverse voltage	V _{RRM}			1000	Volts
RMS voltage	V _{RMS}			700	Volts
DC blocking voltage	V _{DC}			1000	Volts
Average forward output rectified current at T _c = 40°C	I _{AV}			1.0	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I _{FSM}		50		A
Instantaneous forward voltage at 1.0A	V _F			1.1	Volts
DC reverse current at rated DC blocking voltage	I _R			10	μA
				500	μA
Junction capacitance	C _J		-		pF
Thermal resistance	R _{QA}		-		°C/W
Operating junction temperature range	T _J	-55		+150	
Storage temperature range	T _{STG}	-55		+150	°C

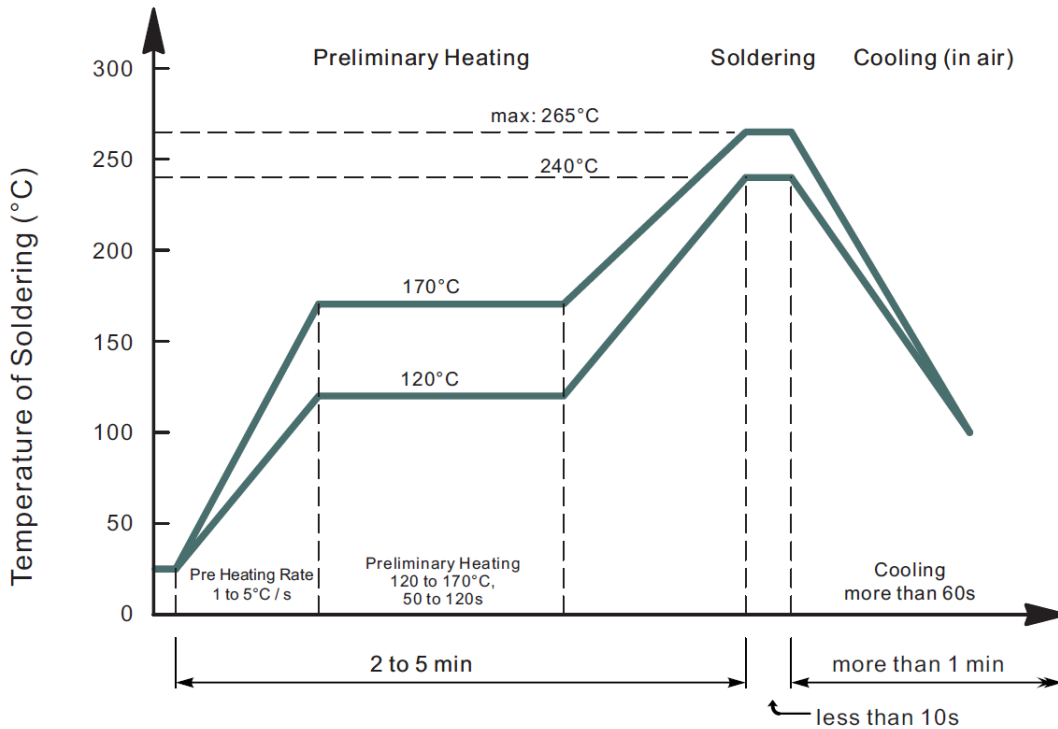
Note

1. Ratings at 25 C ambient temperature unless otherwise specified. Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

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RELIABILITY

Number	Experiment Items	Experiment Method And Conditions	Reference Documents
1	Solder Resistance Test	Test 260°C± 5°C for 10 ± 2 sec. Immerse body into solder 1/16" ± 1/32"	MIL-STD-750D METHOD-2031.2
2	Solderability Test	230°C ±5°C for 5 sec.	MIL-STD-750D METHOD-2026.1 0
3	Pull Test	1 kg in axial lead direction for 10 sec.	MIL-STD-750D METHOD-2036.4
4	Bend Test	0.5Kg Weight Applied To Each Lead, Bending Arcs 90 °C ± 5 °C For 3 Times	MIL-STD-750D METHOD-2036.4
5	High Temperature Reverse Bias Test	TA=100°C for 1000 Hours at VR=80% Rated VR	MIL-STD-750D METHOD-1038.4
6	Forward Operation Life Test	TA=25°C Rated Average Rectified Current	MIL-STD-750D METHOD-1027.3
7	Intermittent Operation Life Test	On state: 5 min with rated IRMS Power Off state: 5 min with Cool Forced Air. On and off for 1000 cycles.	MIL-STD-750D METHOD-1036.3
8	Pressure Cooker Test	15 PSIG, TA=121°C, 4 hours	MIL-S-19500 APPENOIXC
9	Temperature Cycling Test	-55°C~+125°C; 30 Minutes For Dwelled Time 5 minutes for transferred time. Total: 10 cycles.	MIL-STD-750D METHOD-1051.7
10	Thermal Shock Test	0°C for 5 minutes., 100°C for 5minutes, Total: 10 cycles	MIL-STD-750D METHOD-1056.7
11	Forward Surge Test	8.3ms Single Sale Sine-wave One Surge.	MIL-STD-750D METHOD-4066.4
12	Humidity Test	TA=65°C, RH=98% for 1000 hours.	MIL-STD-750D METHOD-1021.3
13	High Temperature Storage life Test	150°C for 1000 Hours	MIL-STD-750D METHOD-1031.5

SUGGESTED REFLOW PROFILE (For Reference Only)



- Recommended peak temperature is over 245°C, If peak temperature is below 245 °C, you may adjust the following parameters; time length of peak temperature (longer), time length of soldering (longer), thickness of solder paste (thicker)
- Welding shall not exceed 2 times
- Remark: lead free solder paste (96.5 sn/3.0 Ag/0.5Cu)

SMD BRIDGE RECTIFIER DBS SERIES

RATINGS AND CHARACTERISTIC CURVES (For Reference Only)

FIG. 1- MAXIMUM DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

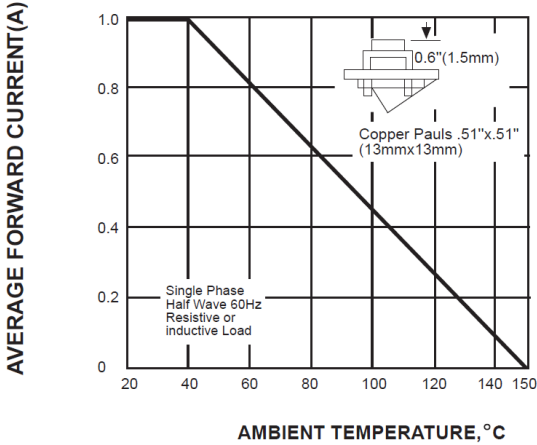


FIG. 2- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

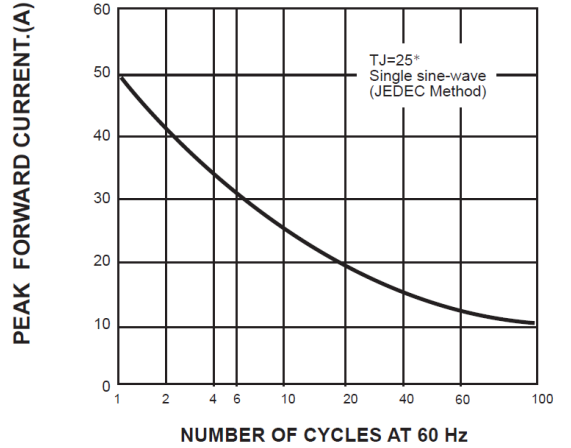


FIG. 3- TYPICAL REVERSE CHARACTERISTICS PER BRIDGE ELEMENT

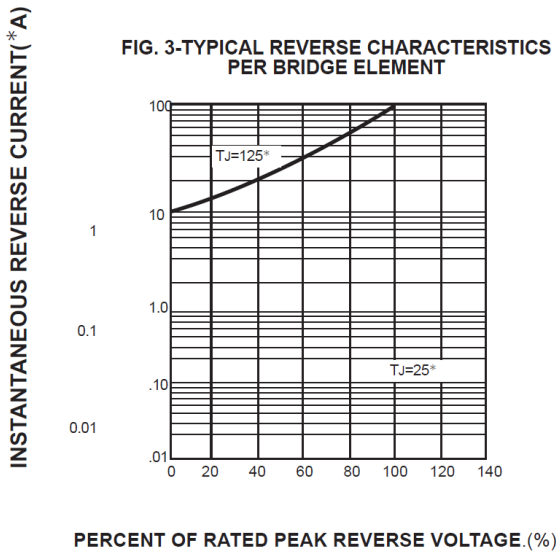


FIG. 4- TYPICAL FORWARD CHARACTERISTICS PER BRIDGE ELEMENT

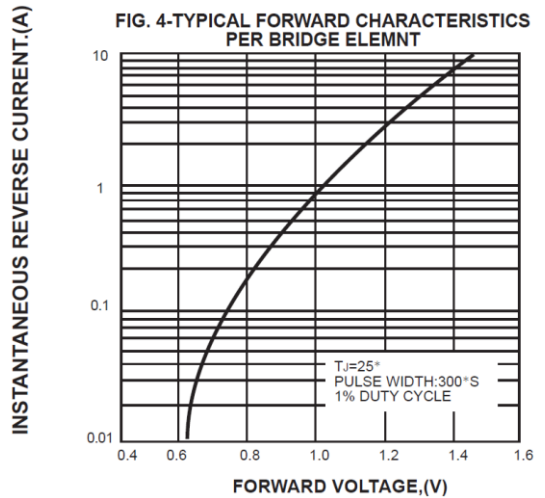
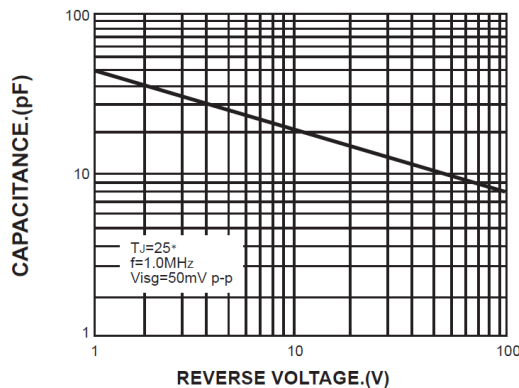
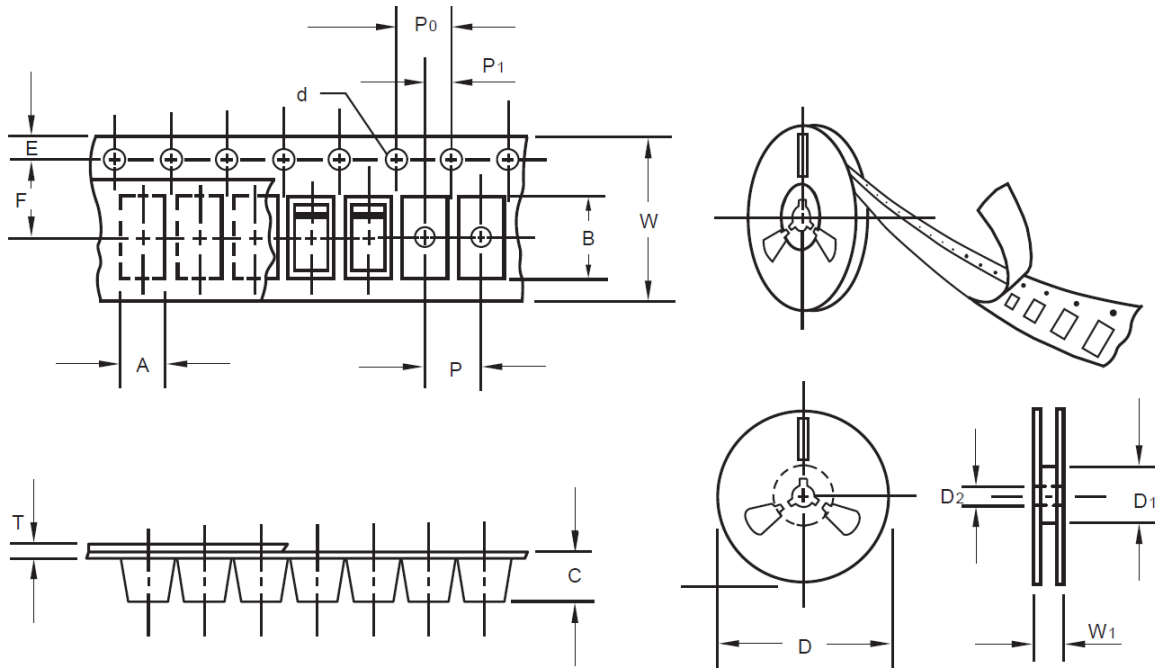


FIG. 5- TYPICAL JUNCTION CAPACITANCE PER BRIDGE ELEMENT



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TAPE/REEL (Unit: mm)

All Devices are packed in accordance with EIA standard RS-481-A and specifications.

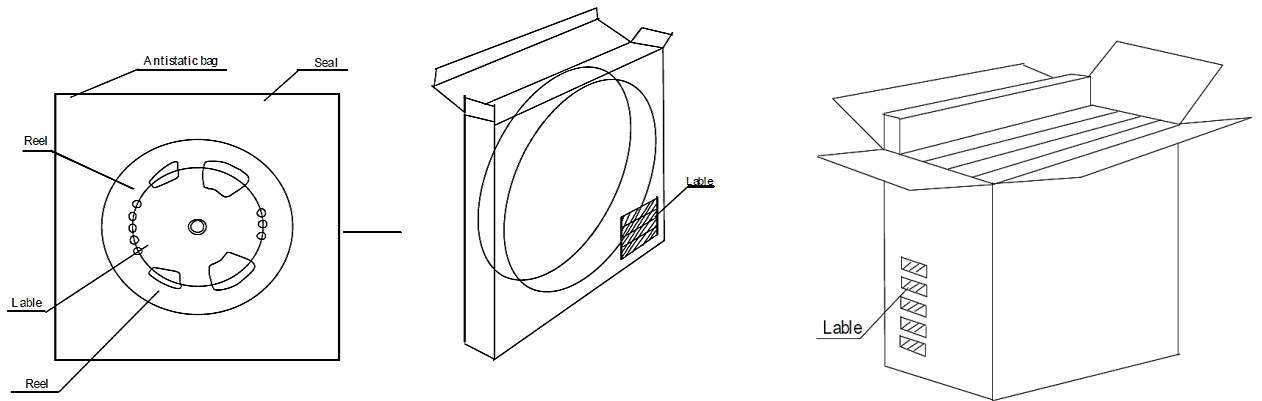


Item	Symbol	Tolerance	DBS
Carrier width	A	0.1	2.8
Carrier Length	B	0.1	5.33
Carrier Depth	C	0.1	2.36
Sprocket hole	d	0.05	1.50
13" Reel outside diameter	D	2.0	330.00
13" Reel inner diameter	D1	Min.	50.00
7" Reel outside diameter	D	-	-
7" Reel inner diameter	D1	-	-
Feed hole diameter	D2	0.5	13.00
Sprocket hole position	E	0.1	1.75
Punch hole position	F	0.1	5.50
Punch hole pitch	P	0.1	4.00
Sprocket hole pitch	P0	0.1	4.00
Embossment center	P1	0.1	2.0
Overall tape thickness	T	0.1	0.28
Tape width	W	0.3	12.00
Reel width	W1	1.0	18.0

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PACKAGE

Case Code	Reel Size	MPQ (pcs)	Component Spacing (mm)	Qty. Per Box (pcs)	Inner Box L*W*H (mm)	Reel Size (mm)	Carton size L*W*H (mm)	Qty. Per Carton (pcs)	G. W (kg)
DBS	13"	1,000		2,000	300*300*45	330	320*320*280	10,000	6.90



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