

Design Change Notification

December 2nd, 2022To: Sanyo Denki America Cooling Distributors

Product: BLDC FAN MOTOR

Model: San Ace 40L (9L) 40mm sq. x 28mm thick
(Please refer Attached Sheet for a complete part number list.)SANYO DENKI CO.,LTD.
Design Dept., Cooling Systems Div.

Approved	Checked	Designed
		

SANYO DENKI America, Inc.
Cooling Systems Division

No.	Contents	Before Change	After Change	Description
1	Motor drive IC, electronic parts, Motor Windings and PWB	Use motor drive IC manufactured by ON-Semiconductor.	Use motor drive IC manufactured by Rohm or Toshiba.	Change to the motor drive IC due to discontinuation of production by the semiconductor manufacturer. Also change to some electric parts except IC, Motor windings and PWB due to the change of the motor drive IC.
2	Specifications	See the Attached Sheet.	See the Attached Sheet.	
3	Implementation Date			Implementation Date: From May, 2023 production (Estimated). Please note that the changeover schedule to new IC may change according to the number of products in the inventory.

No. A0053385 - Attached Sheet 1

[MODEL LIST]

San Ace 40L (9L) – 40mm x 28mm thick

MODEL	Change contents	MODEL	Change contents
9L0412J301	Attached Sheet 2	9L0412H301	Attached Sheet 3
9L0412J301-C		9L0412H302	
9L0412J302		9L0412H302-3	
9L0412J303		9L0412H303	
9L0412J304		9L0412H307	
9L0412J305		9L0412H312	
9L0412J307		9L0412H313	
9L0412J311		9L0412H314	
9L0412J312		9L0412H316	
9L0412J313		9L0412H321	
9L0412J314		9L0412H323	
9L0412J315		9L0412H324	
9L0412J316		9L0412H326	
9L0412J317		9L0412H327	
9L0412J3D01		9L0412H328	
1022-107485		9L0412H3D01	
9L0412J302-A01		9L0412H3D03	
9L0412J302-A02		9L0412H3D04	
9L0412J302-A03		9L0412H3D05	
	9L0412H3D06		
	9L0412H3D07		
	9L0412H3D08		
	9L0412H3D11		
	9L0412F303-C		
	9L0412M301		
	9L0412M302		
	9L0412M303		
	9L0412M307		
	9L0412M308		
	9L0412M310		
	9L0412M3D01		
	9L0412H301-A03		
	9L0412H306	Attached Sheet 4	
	9L0412H325		
	9L0412H329		
	9L0412H311	Attached Sheet 5	
	9L0412M309	Attached Sheet 6	
	9L0412P3J01	Attached Sheet 7	
	9L0412P3J03		
	9L0412P3J04		
	9L0412P3J05		
	9L0412P3J06		
	9L0412P3J07		
	9L0412P3J08		
	9L0412P3J09		
	9L0412P3J10		

No. A0053385 - Attached Sheet 2

[MODEL]

9L0412J301, 9L0412J301-C, 9L0412J302, 9L0412J303, 9L0412J304, 9L0412J305, 9L0412J307, 9L0412J311,
 9L0412J312, 9L0412J313, 9L0412J314, 9L0412J315, 9L0412J316, 9L0412J317,
 9L0412J3D01,
 1022-107485, 9L0412J302-A01, 9L0412J302-A02, 9L0412J302-A03

[Contents of change]

		Before Change	After Change
Motor drive IC	Pulse sensor Or sensor-less type	LB11660	BD6973
	Lock sensor type		BD6974
	Manufacture	On-semiconductor	Rohm
Operating voltage		No change	
Electrical current		No change	
Speed		No change	
Operating temp.		No change	
Sound pressure level		No change	
Control terminal		Non-applicable	
Air flow – static pressure character		No change	
PWM duty cycle - Speed characteristic		Non-applicable	
Sensor spec.		No change	
Life Expectancy		No change	

No. A0053385 - Attached Sheet 3

[MODEL]

9L0412H301, 9L0412H302, 9L0412H302-3, 9L0412H303, 9L0412H307, 9L0412H312, 9L0412H313,
 9L0412H314, 9L0412H316, 9L0412H321, 9L0412H323, 9L0412H324, 9L0412H326, 9L0412H327,
 9L0412H328,
 9L0412H3D01, 9L0412H3D03, 9L0412H3D04, 9L0412H3D05, 9L0412H3D06, 9L0412H3D07, 9L0412H3D08,
 9L0412H3D11,
 9L0412F303-C,
 9L0412M301, 9L0412M302, 9L0412M303, 9L0412M307, 9L0412M308, 9L0412M310,
 9L0412M3D01,
 9L0412H301-A03

[Contents of change]

		Before Change	After Change
Motor drive IC	Type name	LB11660	TC78B002
	Manufacture	On-semiconductor	Toshiba
Operating voltage		No change	
Electrical current		No change	
Speed		No change	
Operating temp.		No change	
Sound pressure level		No change	
Control terminal		Non-applicable	
Air flow – static pressure character		No change	
PWM duty cycle - Speed characteristic		Non-applicable	
Sensor spec.		No change	
Life Expectancy		No change	

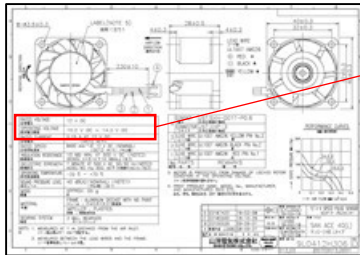
No. A0053385 - Attached Sheet 4

[MODEL]

9L0412H306, 9L0412H325, 9L0412H329

[Contents of change]

		Before Change	After Change
Motor drive IC	Type name	LB11660	TC78B002
	Manufacture	On-semiconductor	Toshiba
Operating voltage		10.2 VDC to 14.3 VDC Refer to FIG.1	10.2 VDC to 13.8 VDC Refer to FIG.1
Electrical current		No change	
Speed		No change	
Operating temp.		No change	
Sound pressure level		No change	
Control terminal		Non-applicable	
Air flow – static pressure character		No change	
PWM duty cycle - Speed characteristic		Non-applicable	
Sensor spec.		Vce: +14.3 [V DC] max.	Vce: +13.8 [V DC] max.
		Ic: 5 [mA] max.	Ic: 5 [mA] max.
		Vce(sat): 0.6 [V DC] max.	Vce(sat): 0.6 [V DC] max.
Life Expectancy		No change	

FIG.1**Before Change**

RATED VOLTAGE 定格電圧	12 V DC
OPERATING VOLTAGE 使用電圧範囲	10.2 V DC ~ 14.3 V DC

**After Change**

RATED VOLTAGE 定格電圧	12 V DC
OPERATING VOLTAGE 使用電圧範囲	10.2 V DC ~ 13.8 V DC

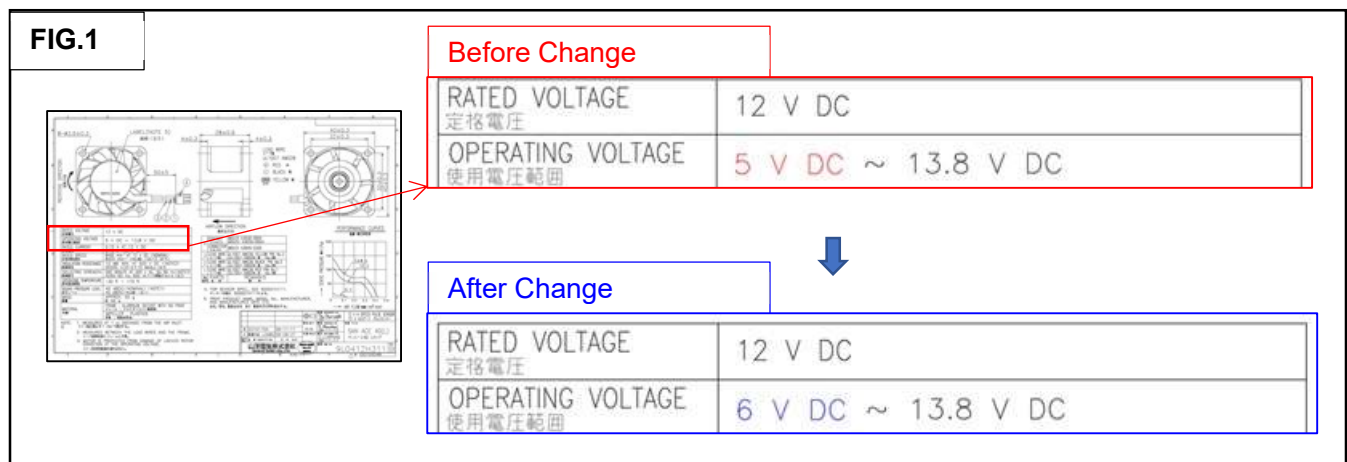
No. A0053385 - Attached Sheet 5

[MODEL]

9L0412H311

[Contents of change]

		Before Change	After Change
Motor drive IC	Type name	LB11660	TC78B002
	Manufacture	On-semiconductor	Toshiba
Operating voltage		5 VDC to 13.8 VDC Refer to FIG.1	6 VDC to 13.8 VDC Refer to FIG.1
Electrical current		No change	
Speed		No change	
Operating temp.		No change	
Sound pressure level		No change	
Control terminal		Non-applicable	
Air flow – static pressure character		No change	
PWM duty cycle - Speed characteristic		Non-applicable	
Sensor spec.		No change	
Life Expectancy		No change	



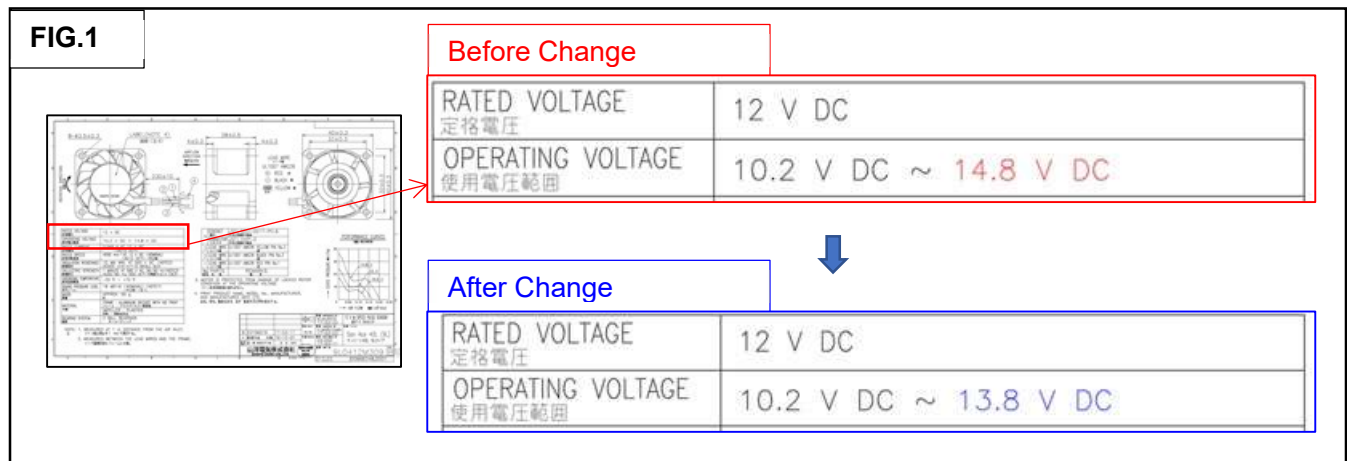
No. A0053385 - Attached Sheet 6

[MODEL]

9L0412M309

[Contents of change]

		Before Change	After Change
Motor drive IC	Type name	LB11660	TC78B002
	Manufacture	On-semiconductor	Toshiba
Operating voltage		10.2 VDC to 14.8 VDC Refer to FIG.1	10.2 VDC to 13.8 VDC Refer to FIG.1
Electrical current		No change	
Speed		No change	
Operating temp.		No change	
Sound pressure level		No change	
Control terminal		Non-applicable	
Air flow – static pressure character		No change	
PWM duty cycle - Speed characteristic		Non-applicable	
Sensor spec.		Vce: +14.8 [V DC] max.	Vce: +13.8 [V DC] max.
		Ic: 5 [mA] max.	Ic: 5 [mA] max.
		Vce(sat): 0.6 [V DC] max.	Vce(sat): 0.6 [V DC] max.
Life Expectancy		No change	



No. A0053385 - Attached Sheet 7

[MODEL]

9L0412P3J01, 9L0412P3J03, 9L0412P3J04, 9L0412P3J05, 9L0412P3J06, 9L0412P3J07, 9L0412P3J08,
9L0412P3J09, 9L0412P3J10

[Contents of change]

		Before Change	After Change
Motor drive IC	Type name	LB11660	BD6973
	Manufacture	On-semiconductor	Rohm
Operating voltage		No change	
Electrical current		No change	
Speed		No change	
Operating temp.		No change	
Sound pressure level		No change	
Control terminal		Non-applicable	
Air flow – static pressure character		No change	
PWM duty cycle - Speed characteristic		Non-applicable	
Sensor spec.		No change	
Life Expectancy		No change	