

Design Change Notification

June 13th, 2022

To: Sanyo Denki America Cooling Distributors

Product: BLDC FAN MOTOR

Model: San Ace 80 (9S) 80mm sq. x 25mm 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 Toshiba, Rohm or Nisshinbo-Micro-Devices.	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 February, 2023 production (Estimated). Please note that the changeover schedule to new IC may change according to the number of products in the inventory.

No. A0053141 - Attached Sheet 1 – 1/2

[MODEL LIST]

San Ace 80(9S) – 80mm x 25mm thick

MODEL	Change contents
9S0812H401 9S0812H4011 9S0812H402 9S0812H4021 9S0812H404 9S0812H405 9S0812H4051 9S0812H4061 9S0812H407 9S0812H408 9S0812H409 9S0812H4D01 9S0812H4D011	Attached Sheet 2
9S0812H4031	Attached Sheet 3
9S0812F401 9S0812F4011 9S0812F402 9S0812F4021 9S0812F4031 9S0812F404 9S0812F405 9S0812F406 9S0812F408 9S0812F409 9S0812F410 9S0812F4D01 9S0812F4D011	Attached Sheet 4
9S0812M401 9S0812M4011 9S0812M402 9S0812M4021 9S0812M404 9S0812M405 9S0812M408 9S0812M409 9S0812M4D01 9S0812M4D011	Attached Sheet 5

MODEL	Change contents
9S0812L401 9S0812L4011 9S0812L402 9S0812L4021 9S0812L403 9S0812L4041 9S0812L4051 9S0812L4061 9S0812L4071 9S0812L411 9S0812L412 9S0812L413 9S0812L414 9S0812L415 9S0812L416 9S0812L418 9S0812L419 9S0812L421 9S0812L4D01 9S0812L4D011 9S0812L401-A01 9S0812L401-A02 9S0812L401-A03 1022-107428	Attached Sheet 6
9S0812C4031 9S0812C4041 9S0812C4051 9S0812B4011 9S0812B4031	Attached Sheet 7

No. A0053141 - Attached Sheet 1 – 2/2

[MODEL LIST]

San Ace 80(9S) – 80mm x 25mm thick

MODEL	Change contents
9S0812P4F01 9S0812P4F011 9S0812P4F051 9S0812P4F06 9S0812P4F061 9S0812P4F07 9S0812P4F071 9S0812P4F081 9S0812P4F01-A01	Attached Sheet 8
9S0812P4M01 9S0812P4M011 9S0812P4M031	Attached Sheet 9
9S0824F4D03 9S0824F4D04	Attached Sheet 10
9S0824M401 9S0824M4011 9S0824M402 9S0824M4021 9S0824M4D01 9S0824M4D011 9S0824M402-A01	Attached Sheet 11
9S0824L401 9S0824L4011 9S0824L402 9S0824L4021 9S0824L405 9S0824L406 9S0824L408 9S0824L4D01 9S0824L4D011 9S0824L4D03 9S0824L4D04 9S0824L4D05 9S0824L4D06 9S0824L4D07	Attached Sheet 12

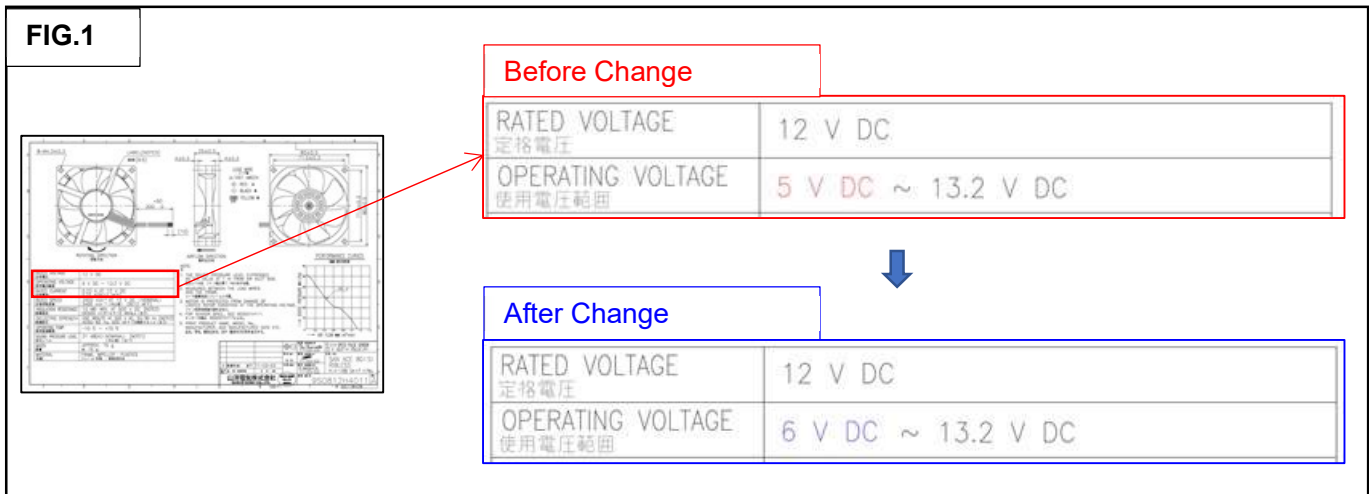
No. A0053141 - Attached Sheet 2

[MODEL]

9S0812H401, 9S0812H4011, 9S0812H402, 9S0812H4021, 9S0812H404, 9S0812H405, 9S0812H4051,
 9S0812H4061, 9S0812H407, 9S0812H408, 9S0812H409,
 9S0812H4D01, 9S0812H4D011

[Contents of change]

		Before Change	After Change
Motor drive IC	Type name	LA6584JA	TC78B002FNG
	Manufacture	On-semiconductor	Toshiba
Operating voltage		5 VDC to 13.2 VDC Refer to FIG.1	6 VDC to 13.2 VDC Refer to FIG.1
Rated 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	

FIG.1

No. A0053141 - Attached Sheet 3

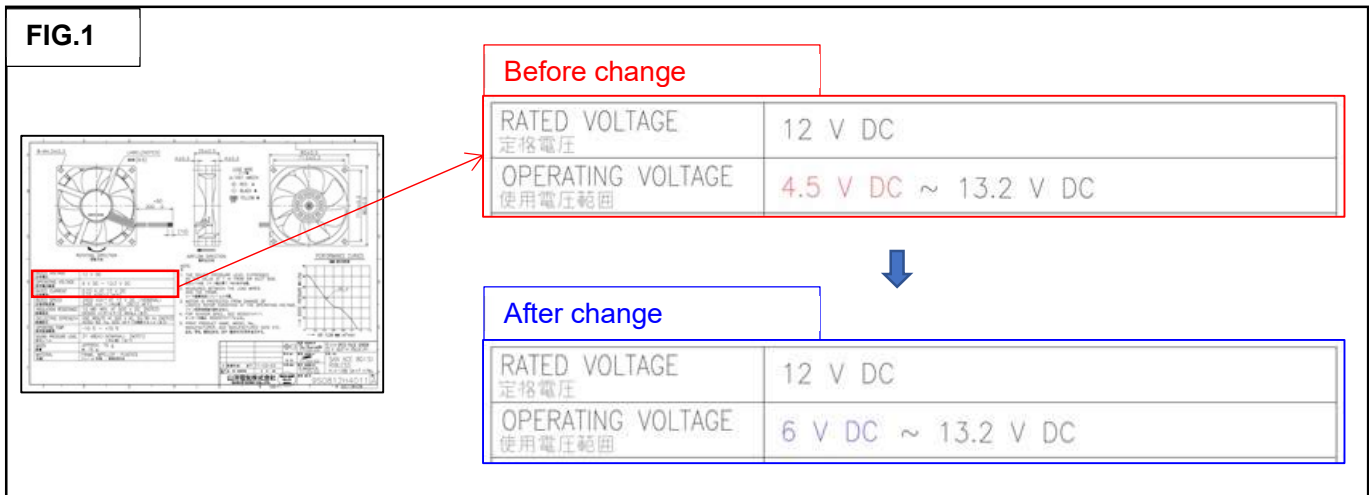
[MODEL]

9S0812H4031

[Contents of change]

		Before Change	After Change
Motor drive IC	Type name	LA6584JA	TC78B002FNG
	Manufacture	On-semiconductor	Toshiba
Operating voltage		4.5 VDC to 13.2 VDC Refer to FIG.1	6 VDC to 13.2 VDC Refer to FIG.1
Rated 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	

FIG.1



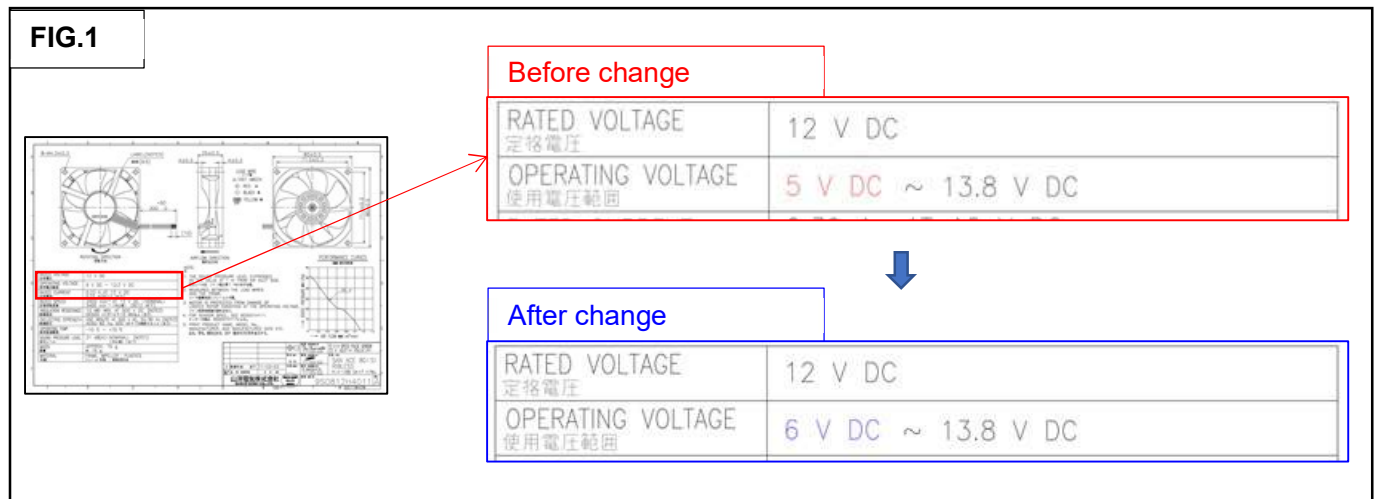
No. A0053141 - Attached Sheet 4

[MODEL]

9S0812F401, 9S0812F4011, 9S0812F402, 9S0812F4021, 9S0812F4031, 9S0812F404, 9S0812F405,
 9S0812F406, 9S0812F408, 9S0812F409, 9S0812F410,
 9S0812F4D01, 9S0812F4D011

[Contents of change]

		Before Change	After Change
Motor drive IC	Type name	LA6584JA	TC78B002FNG
	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
Rated 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	



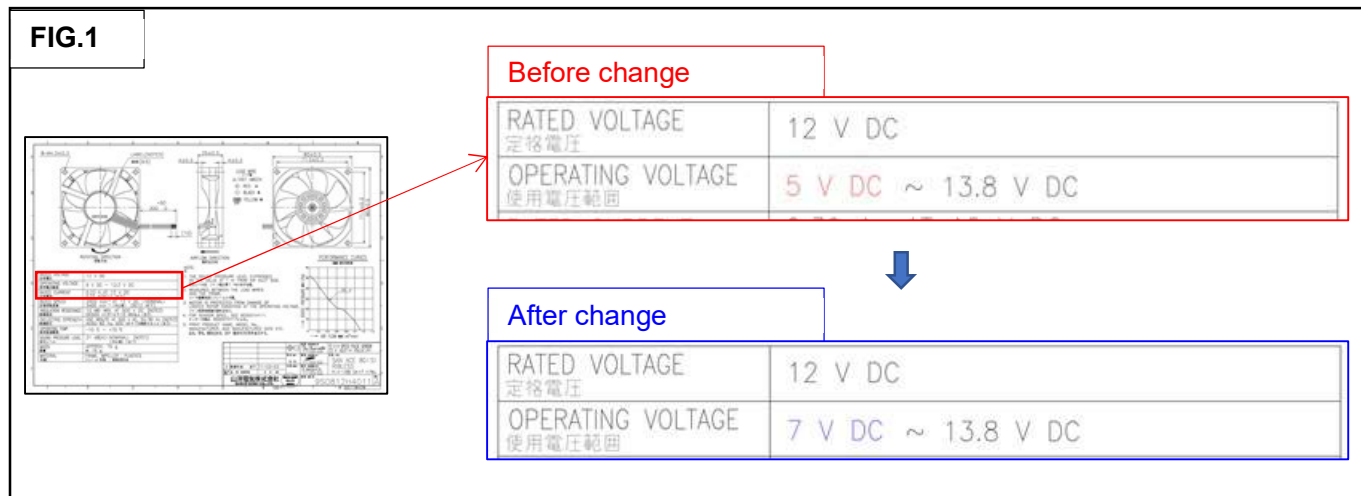
No. A0053141 - Attached Sheet 5

[MODEL]

9S0812M401, 9S0812M4011, 9S0812M402, 9S0812M4021, 9S0812M404, 9S0812M405, 9S0812M408,
 9S0812M409,
 9S0812M4D01, 9S0812M4D011

[Contents of change]

		Before Change	After Change
Motor drive IC	Type name	LA6584JA	TC78B002FNG
	Manufacture	On-semiconductor	Toshiba
Operating voltage		5 VDC to 13.8 VDC Refer to FIG.1	7 VDC to 13.8 VDC Refer to FIG.1
Rated 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	

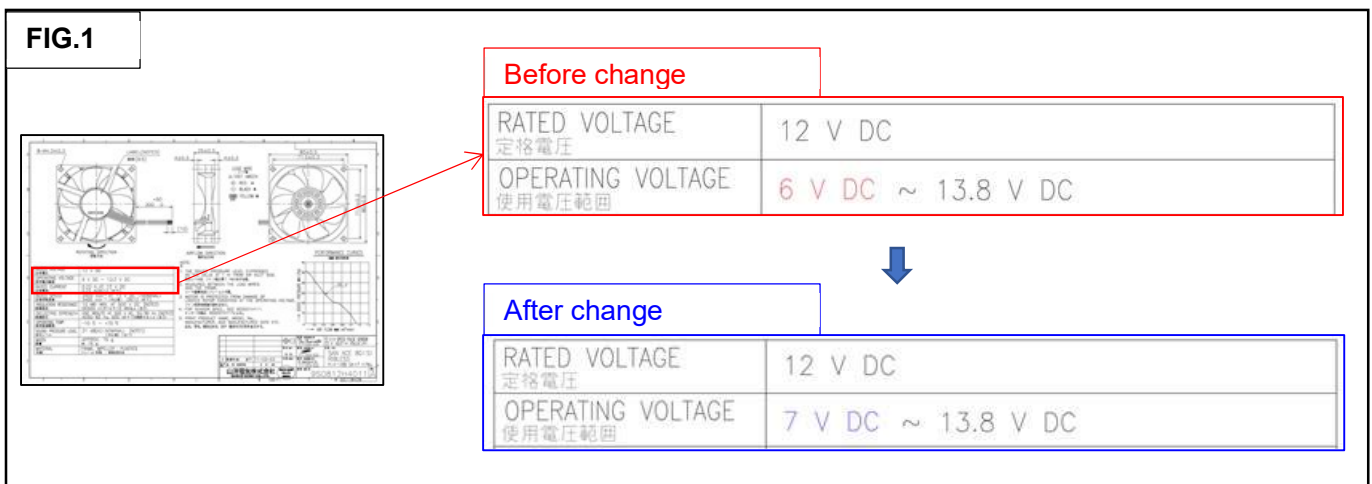


No. A0053141 - Attached Sheet 6**[MODEL]**

9S0812L401, 9S0812L4011, 9S0812L402, 9S0812L4021, 9S0812L403, 9S0812L4041, 9S0812L4051,
 9S0812L4061, 9S0812L4071, 9S0812L411, 9S0812L412, 9S0812L413, 9S0812L414, 9S0812L415,
 9S0812L416, 9S0812L418, 9S0812L419, 9S0812L421,
 9S0812L4D01, 9S0812L4D011,
 9S0812L401-A01, 9S0812L401-A02, 9S0812L401-A03, 1022-107428

[Contents of change]

		Before Change	After Change
Motor drive IC	Pulse sensor Or sensor-less type	LA6584JA	BD6962
	Lock sensor type		BD6964
	Manufacture	On-semiconductor	Rohm
Operating voltage		6 VDC to 13.8 VDC Refer to FIG.1	7 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	

FIG.1

No. A0053141 - Attached Sheet 7

[MODEL]

9S0812C4031, 9S0812C4041, 9S0812C4051,
9S0812B4011, 9S0812B4031

[Contents of change]

		Before Change	After Change
Motor drive IC	Type name	LA6584JA	BD6962
	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	

No. A0053141 - Attached Sheet 8

[MODEL]

9S0812P4F01, 9S0812P4F011, 9S0812P4F051, 9S0812P4F06, 9S0812P4F061, 9S0812P4F07,
 9S0812P4F071, 9S0812P4F081,
 9S0812P4F01-A01

[Contents of change]

		Before Change	After Change
Motor drive IC	Type name	LB11970FV	TC78B002FNG
	Manufacture	On-semiconductor	Toshiba
Operating voltage		No change	
Rated electrical current		No change	
Speed		No change	
Operating temp.		No change	
Sound pressure level		No change	
Control terminal		No change	
Air flow – static pressure character		No change	
PWM duty cycle - Speed characteristic		No change	
Sensor spec.		No change	

No. A0053141 - Attached Sheet 9

[MODEL]

9S0812P4M01, 9S0812P4M011, 9S0812P4M031

[Contents of change]

		Before Change	After Change
Motor drive IC	Type name	LB11970FV	TC78B002FNG
	Manufacture	On-semiconductor	Toshiba
Operating voltage		No change	
Rated electrical current		No change	
Speed		No change	
Operating temp.		No change	
Sound pressure level		No change	
Control terminal		No change	
Air flow – static pressure character		No change	
PWM duty cycle - Speed characteristic		No change	
Sensor spec.		No change	

No. A0053141 - Attached Sheet 10

[MODEL]

9S0824F4D03, 9S0824F4D04

[Contents of change]

		Before Change	After Change
Motor drive IC	Type name	LA6588	NJW4320
	Manufacture	On-semiconductor	Nisshinbo-Micro-Devices
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	

No. A0053141 - Attached Sheet 11

[MODEL]

9S0824M401, 9S0824M4011, 9S0824M402, 9S0824M4021,
 9S0824M4D01, 9S0824M4D011,
 9S0824M402-A01

[Contents of change]

		Before Change	After Change
Motor drive IC	Type name	LA6588	NJW4320
	Manufacture	On-semiconductor	Nisshinbo-Micro-Devices
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	

No. A0053141 - Attached Sheet 12

[MODEL]

9S0824L401, 9S0824L4011, 9S0824L402, 9S0824L4021, 9S0824L405, 9S0824L406, 9S0824L408,
 9S0824L4D01, 9S0824L4D011, 9S0824L4D03, 9S0824L4D04, 9S0824L4D05, 9S0824L4D06, 9S0824L4D07

[Contents of change]

		Before Change	After Change
Motor drive IC	Type name	LA6588	NJW4320
	Manufacture	On-semiconductor	Nisshinbo-Micro-Devices
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	