

**Design Change Notification**December 29<sup>th</sup>, 2021To: Sanyo Denki America Cooling Distributors

Product: BLDC FAN MOTOR \_\_\_\_\_

Model: San Ace 60 (9GA) 60mm sq. x 15mm thick  
(Please refer Attached Sheet for a complete part number list.)SANYO DENKI CO., LTD.  
Design Dept., Cooling Systems Div.

Approved	Checked	Designed
渡辺 '21.12.27 道德	中村 '21.12.27 俊之	高桑 '21.12.27 宗仙

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 or New-Japan-Radio.	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 December, 2022 production (Estimated). Please note that the changeover schedule to new IC may change according to the number of products in the inventory.

**No. A0052667 - Attached Sheet 1 – 1/2**

[MODEL LIST]

San Ace 60 (9GA) – 60mm x 15mm thick

MODEL	Change contents
9GA0612G701	Attached Sheet 2
9GA0612G702	
9GA0612G703	
9GA0612G704	
9GA0612G705	
9GA0612G706	
9GA0612G707	
9GA0612H701	
9GA0612H702	
9GA0612H703	
9GA0612H704	
9GA0612H705	
9GA0612H706	
9GA0612H707	
9GA0612H709	
9GA0612H710	
9GA0612H7-3	
9GA0612M701	Attached Sheet 3
9GA0612M702	
9GA0612M703	
9GA0612L701	
9GA0612L702	
9GA0612L703	
9GA0612L704	
9GA0612L706	
9GA0612L7067	
9GA0612L707	
9GA0612L7D01	

MODEL	Change contents
9GA0612P7G01	Attached Sheet 4
9GA0612P7G03	
9GA0612P7G04	
9GA0612P7G05	
9GA0612P7G07	
9GA0612P7G08	
9GA0612P7G09	
9GA0612P7G12	
9GA0612P7G13	
9GA0612P7G14	
9GA0612P7G15	
9GA0612P7G16	
9GA0612P7G17	
9GA0612P7G18	
9GA0612P7G19	
9GA0612P7G20	
9GA0612P7G22	
9GA0612P7G23	
9GA0612P7H01	
9GA0612P7H07	
9GA0612P7H08	
9GA0612P7H09	
9GA0612P7H11	
9GA0612P7H12	
9GA0612P7H13	
9GA0612P7H14	
9GA0612P7H15	

**No. A0052667 - Attached Sheet 1 – 2/2**

[MODEL LIST]

San Ace 60 (9GA) – 60mm x 15mm thick

MODEL	Change contents
9GA0624G702 9GA0624G703 9GA0624G7D03 9GA0624M701 9GA0624M702	Attached Sheet 5
9GA0624P7G01 9GA0624P7G01-C 9GA0624P7G03 9GA0624P7G04 9GA0624P7G06	Attached Sheet 6

**No. A0052667 - Attached Sheet 2**

[MODEL]

9GA0612G701, 9GA0612G702, 9GA0612G703, 9GA0612G704, 9GA0612G705, 9GA0612G706,  
 9GA0612G707,  
 9GA0612H701, 9GA0612H702, 9GA0612H703, 9GA0612H704, 9GA0612H705, 9GA0612H706,  
 9GA0612H707, 9GA0612H709, 9GA0612H710, 9GA0612H7-3

[Contents of change]

	Before Change	After Change
Motor drive IC	LB11970 By On-semiconductor	TC78B002 By 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	

**No. A0052667 - Attached Sheet 3**

[MODEL]

9GA0612M701, 9GA0612M702, 9GA0612M703,

9GA0612L701, 9GA0612L702, 9GA0612L703, 9GA0612L704, 9GA0612L706, 9GA0612L7067, 9GA0612L707,

9GA0612L7D01

[Contents of change]

	Before Change	After Change
Motor drive IC	LA6583 By On-semiconductor	TC78B002 By 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	

**No. A0052667 - Attached Sheet 4**

## [MODEL]

9GA0612P7G01, 9GA0612P7G03, 9GA0612P7G04 9GA0612P7G05, 9GA0612P7G07, 9GA0612P7G08,  
 9GA0612P7G09, 9GA0612P7G12, 9GA0612P7G13, 9GA0612P7G14, 9GA0612P7G15, 9GA0612P7G16,  
 9GA0612P7G17, 9GA0612P7G18, 9GA0612P7G19, 9GA0612P7G20, 9GA0612P7G22, 9GA0612P7G23,  
 9GA0612P7H01, 9GA0612P7H07, 9GA0612P7H08, 9GA0612P7H09, 9GA0612P7H11, 9GA0612P7H12,  
 9GA0612P7H13, 9GA0612P7H14, 9GA0612P7H15

## [Contents of change]

	Before Change	After Change
Motor drive IC	LB11970 By On-semiconductor	TC78B002 By Toshiba
Operating voltage	No change	
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. A0052667 - Attached Sheet 5**

[MODEL]

9GA0624G702, 9GA0624G703, 9GA0624G7D03,

9GA0624M701, 9GA0624M702

[Contents of change]

	Before Change	After Change
Motor drive IC	LV8860 By On-semiconductor	NJW4320 By New-Japan-Radio
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	

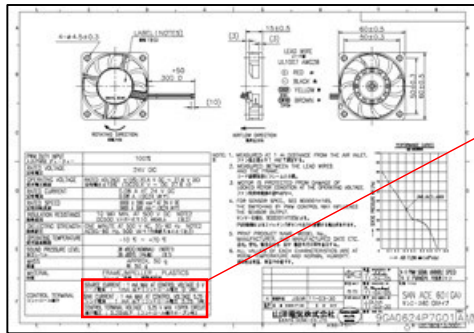
**No. A0052667 - Attached Sheet 6**

[MODEL]

9GA0624P7G01, 9GA0624P7G01-C, 9GA0624P7G03, 9GA0624P7G04, 9GA0624P7G06

[Contents of change]

	Before Change	After Change
Motor drive IC	LV8860 By On-semiconductor	NJW4320 By New-Japan-Radio
Operating voltage	No change	
Electrical current	No change	
Speed	No change	
Operating temp.	No change	
Sound pressure level	No change	
Control terminal	Source current: <b>1 mA MAX.</b> Refer to below drawing	Source current: <b>2 mA MAX.</b> Refer to below drawing
Air flow – static pressure character	No change	
PWM duty cycle - Speed characteristic	No change	
Sensor spec.	No change	



Before Change

SOURCE CURRENT : <b>1 mA MAX.</b> AT CONTROL VOLTAGE 0 V ソース電流 : 以下 (コントロール電圧 0 V時)
SINK CURRENT : 1 mA MAX. AT CONTROL VOLTAGE 5.25 V シンク電流 : 以下 (コントロール電圧 5.25 V時)
CONTROL TERMINAL VOLTAGE : 5.25 V MAX. (OPEN CIRCUIT) 端子電圧 : 以下 (コントロール端子オープン時)

After Change

SOURCE CURRENT : <b>2 mA MAX.</b> AT CONTROL VOLTAGE 0 V ソース電流 : 以下 (コントロール電圧 0 V時)
SINK CURRENT : 1 mA MAX. AT CONTROL VOLTAGE 5.25 V シンク電流 : 以下 (コントロール電圧 5.25 V時)
CONTROL TERMINAL VOLTAGE : 5.25 V MAX. (OPEN CIRCUIT) 端子電圧 : 以下 (コントロール端子オープン時)