

SPECIFICATIONS

* Model Identifications

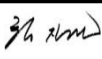
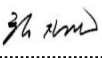
Model Code	Customer P/ N
4AI20-CMXX03	352.00192.005LT

Signed for/on behalf of us. By: R&D manager Mr. ----- Date: . .	Signed for/on behalf of you. By: ----- Date : . .
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This Specifications will be valid after the date of acceptance by both 'Dreamus' and the customer. Without formal request for updating by one of the involved parties, this Specifications will be valid until the end of usage of the relevant products by the customer.



1. REVISION RECORD

Rev. No	DATE	DESCRIPTION	By	Chk.	App.
0	13. APR. 2021	R&D and ECO Release			
1	28. APR. 2021	Change of Case Ass'y Characteristics			
2					
3					
4					
5					
6					
7					
8					

2. RoHS ENVIRONMENTAL STANDARDS

CLASSIFICATIONS	SUBSTANCES	COMPLIANCE	
		YES	NO
RoHS	Lead and its Compounds	☒	☐
	Cadmium and its Compounds	☒	☐
	Mercury and its Compounds	☒	☐
	Hexavalent Chromium and its Compounds	☒	☐
	Polybrominated Biphenyls	☒	☐
	Polybrominated Diphenylethers	☒	☐

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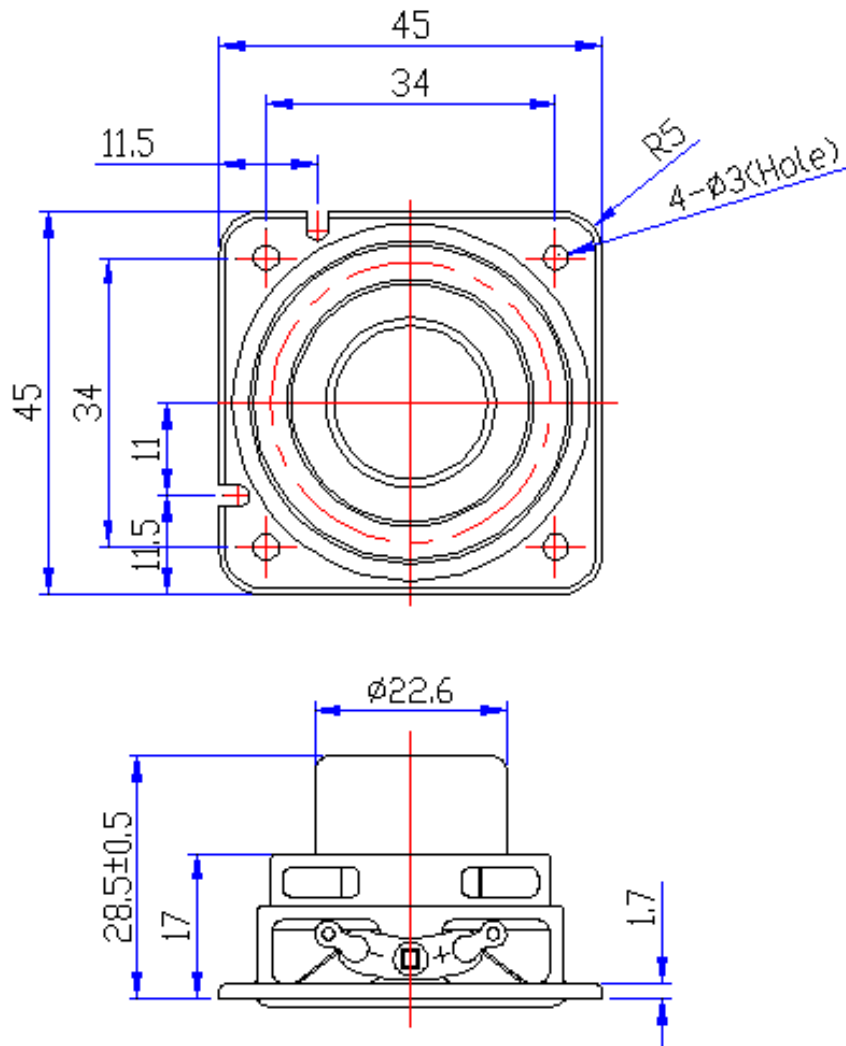
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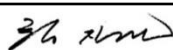
3-1. MECHANICAL CHARACTERISTICS (Unit Only)



UNIT : mm
TOLERANCE : ±1.0

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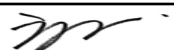
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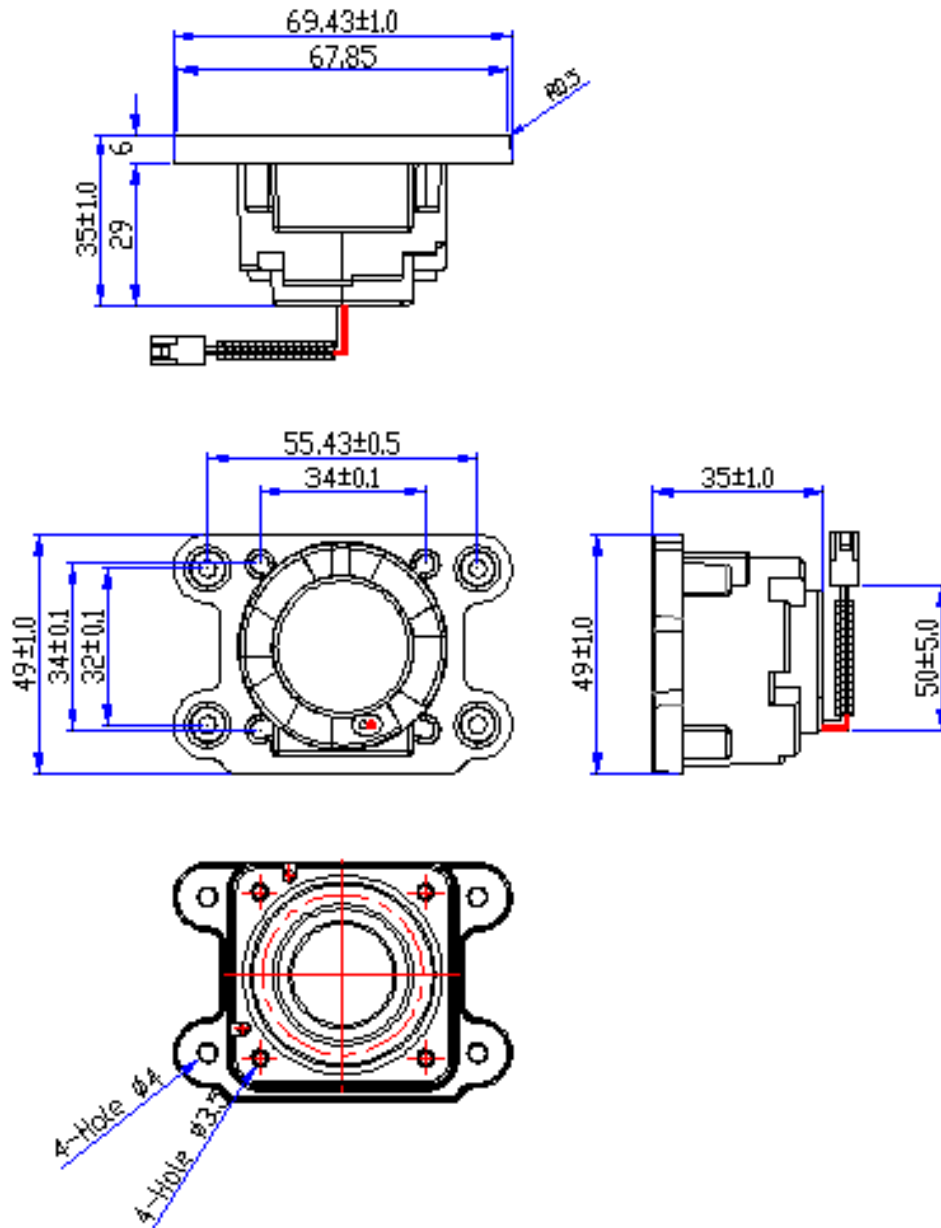
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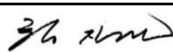
3-2. MECHANICAL CHARACTERISTICS (Case Ass'y)



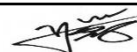
UNIT : mm
TOLERANCE : ± 1.0

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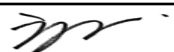
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4. ELECTRICAL CHARACTERISTICS (Case Ass'y)

PARAMETER	SPECIFICATION	UNIT
Impedance AT 700Hz / 1.0Vrms	4 ± 0.6	Ω
Power Rating (Nor / Max)	8 / 15	Watt
Polarity	When a positive DC current is applied to the marked (+), diaphragm shall move forward.	

5. ACOUSTIC CHARACTERISTICS (Case Ass'y)

PARAMETER	SPECIFICATION	UNIT
Sound Pressure Level At 1.0W Input & 1.0m distance ※ R&D Measurement Conditions (Clio.12)	79 ± 3 Avg (0.35, 0.6, 0.8, 1.0) kHz	dB
Sound Pressure Level At 1.0W Input & 1.5cm distance ※ Production Line Measurement Conditions (Bako 2120A)	142 ± 3 Avg (0.35, 0.6, 0.8, 1.0) kHz	dB
Total Harmonic Distortion	Less than 5% at 1KHz, 1W	%
Resonance Frequency (Fo) At 1.0 Vrms	440 ± 88	Hz
Frequency Range	Fo ~ 20	KHz
Buzz and Rattle etc.	Should not be audible at 8W (RMS. 5.65V) sine wave from Fo to 20 KHz.	

6. ENVIRONMENTAL CHARACTERISTICS

PARAMETER	SPECIFICATION	UNIT
Operating Temperature Range	-20 ~ 65	°C
Storage Temperature Range	-25 ~ 70	°C

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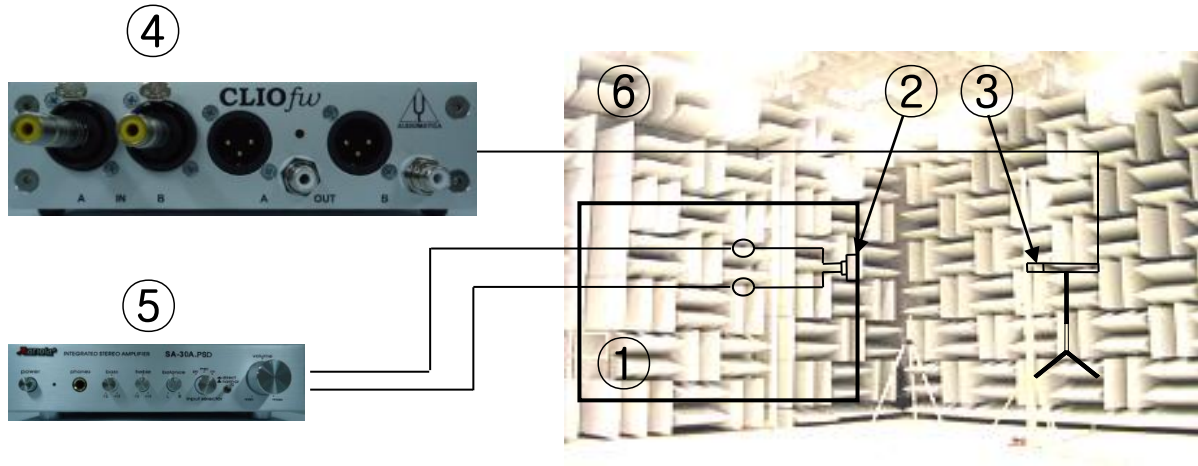

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7. MEASUREMENT STANDARD

7-1 Measurement Environment

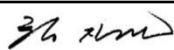


7-2 Measurement Environment

①	Baffle Box	JIS C 5532
②	Speaker Unit	4AI20-CMXX03
③	Microphone	CLIO MIC-02
④	Analyzer	CLIO FW V.12
⑤	Amplifier	MARLOSA SA-30.PSD
⑥	Anechoic room	2.5×2.5×3 (m)
⑦	Input Power	1.0 (W)
⑧	Testing Distance	1.0 (m)

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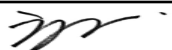
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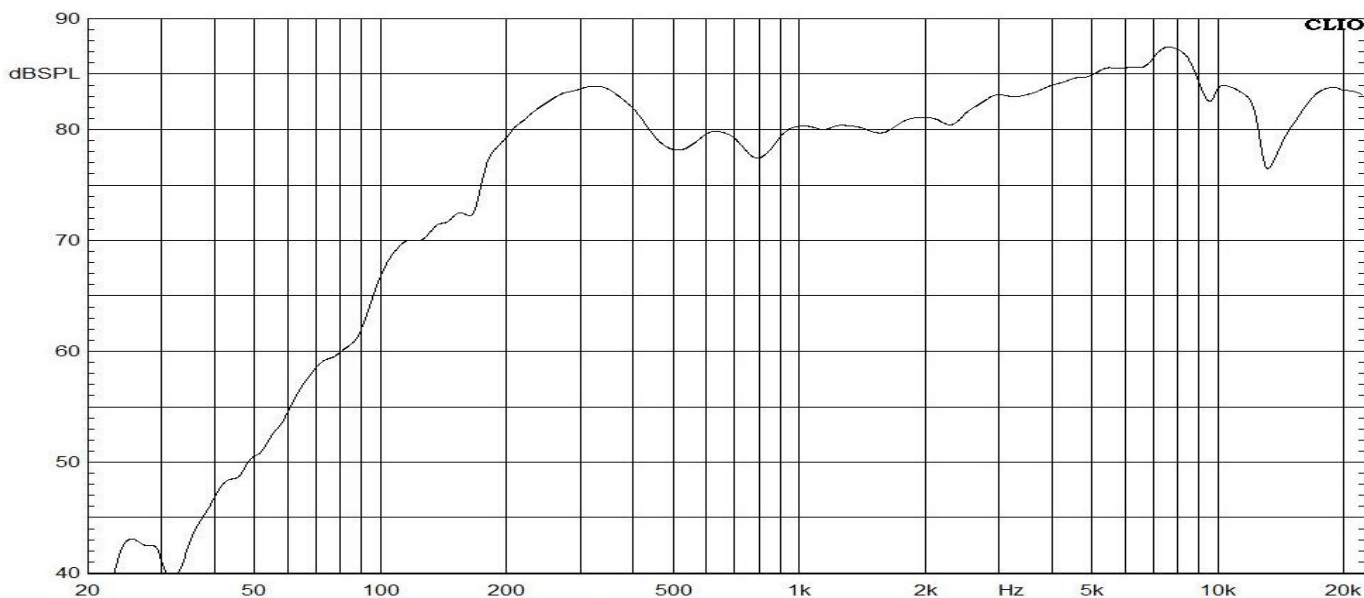


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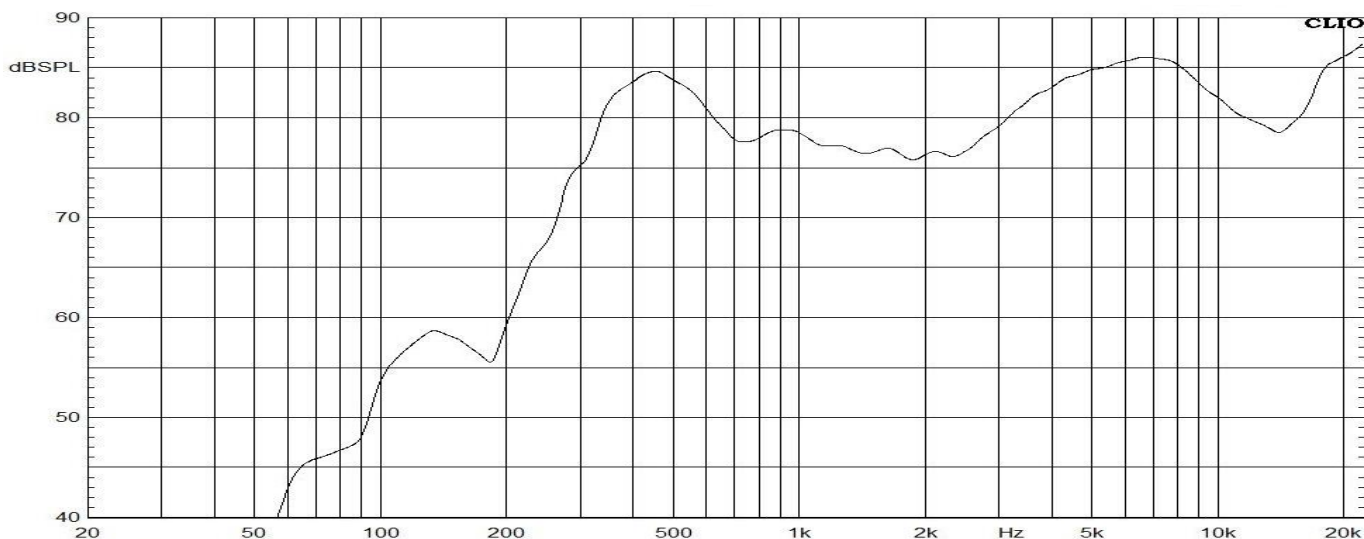
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8-1. TYPICAL FREQUENCY RESPONSE CURVE (Unit Only)



8-2. TYPICAL FREQUENCY RESPONSE CURVE (Case Ass'y)

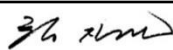


NOTE:

- The frequency response curve is drawn with the "1/3OCT" smoothing Function of CLIO 12.

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9. RELIABLE TEST STANDARDS

No	Test Item	Conditions
9-1	After Test	Sensitivity difference shall be within $\pm 3\text{dB}$ after test.
9-2	High Temperature Test	High temperature.....+ 60°C Duration.....96 hours
9-3	Low Temperature Test	Low temperature..... - 20°C Duration.....96 hours
9-4	Thermal Shock Test	Temperature- 20°C $\leftrightarrow$ + 60°C Duration.....2hours Cycle.....15 cycles
9-5	Humidity Test	Temperature.....+ 40°C Relative humidity.....90% Duration.....96 hours
9-6	Vibration Test	Vibration.....10 - 55Hz / min Amplitude.....1.5mm Duration..... 2 hour in each of 3axes
9-7	Drop Test	Height / Angle... 0.7 M / 70° Cycle.....1 cycle
9-8	Load Test	Subject samples to White Noise for 96 hours at 8W input power
		Subject samples to White Noise for 10 hours at 15W input power → There will be no broken after the test

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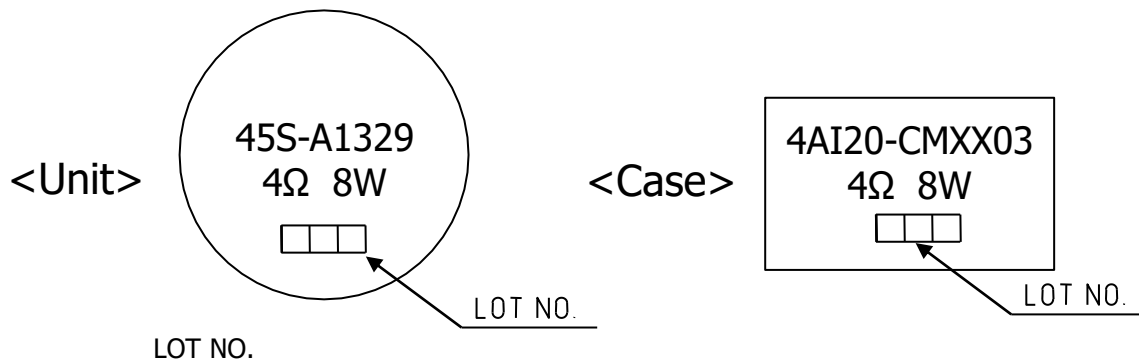


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10. TRACEABILITY STANDARDS



YEAR		MONTH		SECTION	
0	2020	1	1	1	1 WEEK
1	2021	2	2	2	2 WEEK
2	2022	3	3	3	3 WEEK
3	2023	4	4	4	4 WEEK
4	2024	5	5	5	5 WEEK
5	2025	6	6		
6	2026	7	7		
7	2027	8	8		
8	2028	9	9		
9	2029	X	10		
		Y	11		
		Z	12		

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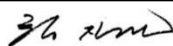
1 → 2021 (YEAR)
4 → APRIL (MONTH)
3 → 3WEEK

11. PACKING LABEL

FXN PN	Description
352.00192.005LT	SPEAKER 4+-0.6ohm 79+-3dB 8~15W GP 4AI20-CMXX03

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