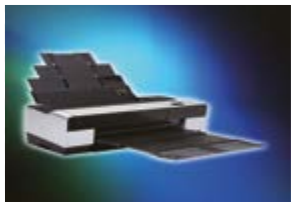

KOCO DC-MOTION

A VARIETY OF APPLICATIONS

PRECISION DC CORELESS MOTOR 1

BRUSHLESS DC MOTOR 2

ELECTRONIC SPEED CONTROLLER 3

PRECISION GEARMOTOR 4

PRECISION SERVO MOTOR 5

DC CORELESS MOTOR 6

FLAT DC MOTOR 7

DC CORE MOTOR 8

MINI STEP MOTOR 9

SONIC MOTOR 10

Overview of the SONIC MOTORS

	Motor No.	Dia x Length (max)	Max. Load Frequency Times/minute	Page
1	**1434ZDF**	11.50 x 14.50 x 39.80 mm	39600	4
2	**1640ZDF**	12.00 x 16.00 x 39.80 mm	42000	5
3	**1839ZDF**	13.50 x 18.30 x 38.80 mm	33600	6
4	**2038ZDF**	15.50 x 20.30 x 40.00 mm	31000	7
5	**2724ZDR**	27.00 x 23.50 mm	20400	8
6	**2734ZDR**	27.00 x 33.50 mm	20400	9

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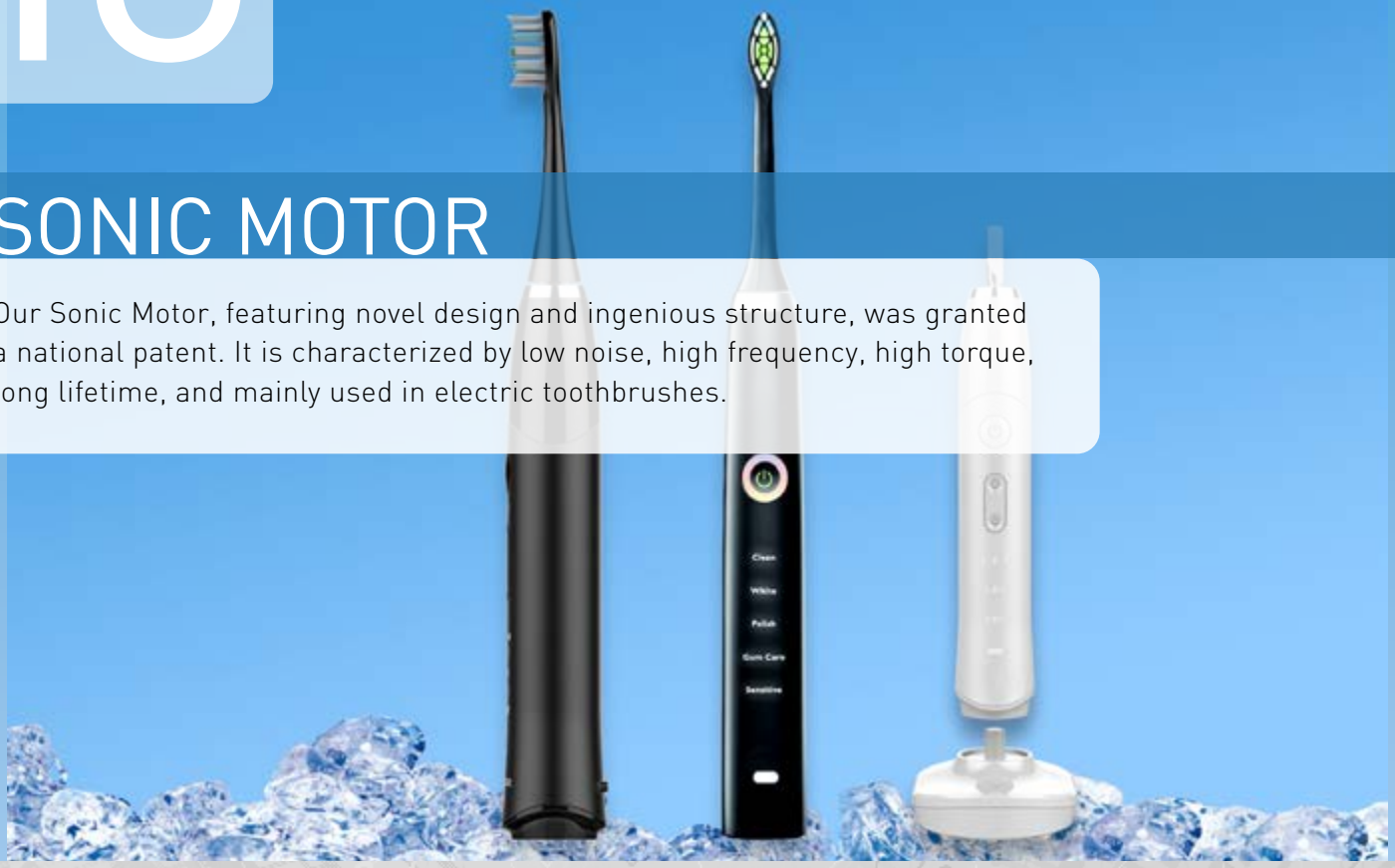


SONIC MOTOR

Our Sonic Motor, featuring novel design and ingenious structure, was granted a national patent. It is characterized by low noise, high frequency, high torque, long lifetime, and mainly used in electric toothbrushes.

Sonic Motor · **1434ZDF**

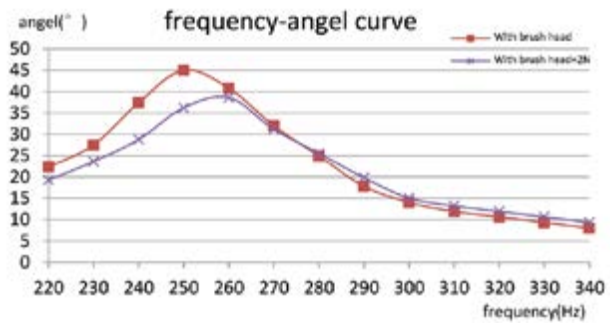
Motor Characteristics			-1-L1-3.7
1	Voltage	V	3.7
2	Resistance	Ω	3.8
3	Operating frequency range	Hz	220 ~ 360
4	No-load vibration frequency	Times/minute	39600
5	No-load current	mA	90
6	Starting torque	mNm	12
7	Starting current	A	1.0
8	Rated load (brush head)	g	3.8
9	Load vibration frequency	Times/minute	31200
10	Load-current	mA	400
11	Rotor inertia	gcm^2	0.9
12	Weight	g	25
13	Operating temperature range	°C	-10 ~ +60

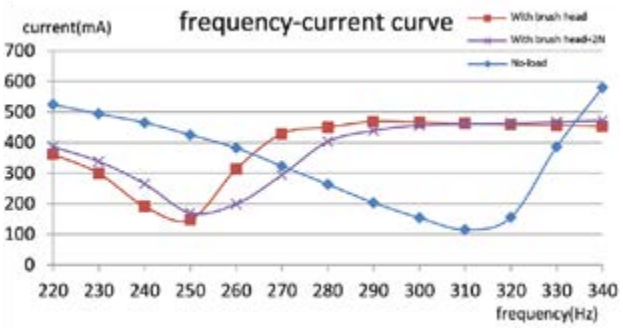
Applications

Electric toothbrush, health care equipment, cleaning equipment, etc.

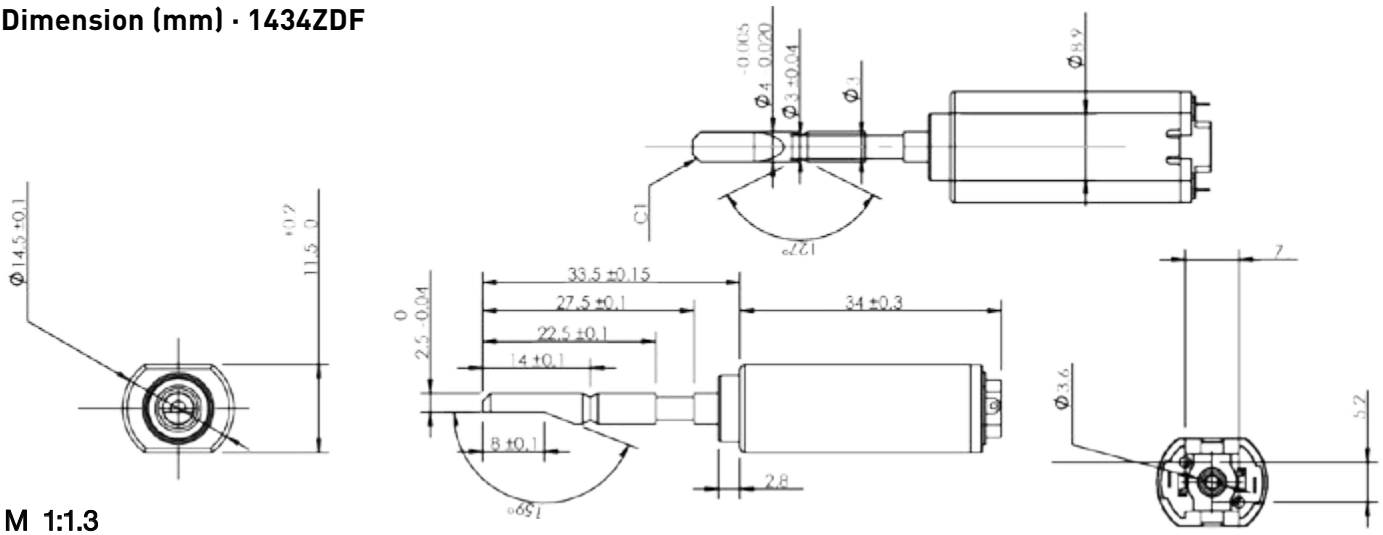
Options
Lead wires length
Shaft length
Special coils

Characteristics Curve · 1434ZDF





Dimension (mm) · 1434ZDF



M 1:1.3

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Sonic Motor · **1640ZDF**

Motor Characteristics			-1-L2-3.7	-T-1A-L36-3.7
1	Voltage	V	3.7	3.7
2	Resistance	Ω	3.7	3.7
3	Operating frequency range	Hz	220 ~ 360	220 ~ 360
4	No-load vibration frequency	Times/minute	40800	42000
5	No-load current	mA	90	90
6	Starting torque	mNm	15	15
7	Starting current	A	1.0	1.0
8	Rated load (brush head)	g	3.6	4.0
9	Load vibration frequency	Times/minute	36000	36000
10	Load-current	mA	350	370
11	Rotor inertia	gcm^2	1.2	1.2
12	Weight	g	25	25
13	Operating temperature range	°C	-10 ~ +60	-10 ~ +60

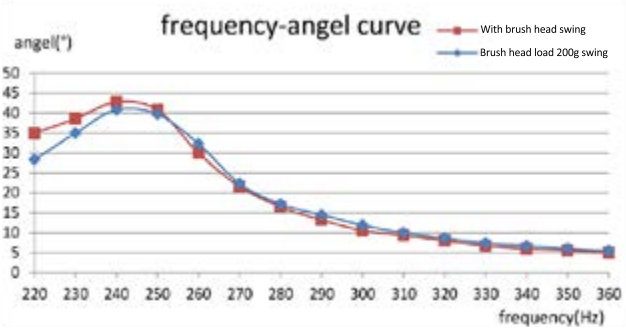
Applications

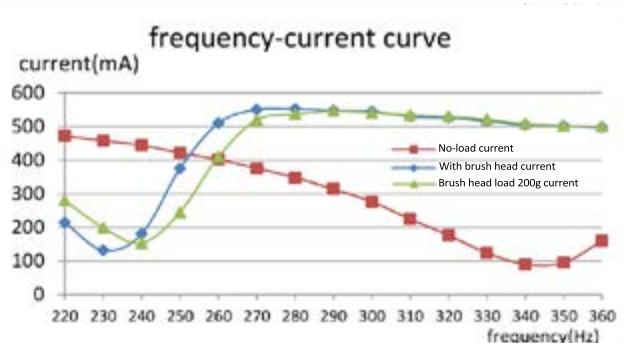
Electric toothbrush, health care equipment, cleaning equipment, etc.

Options

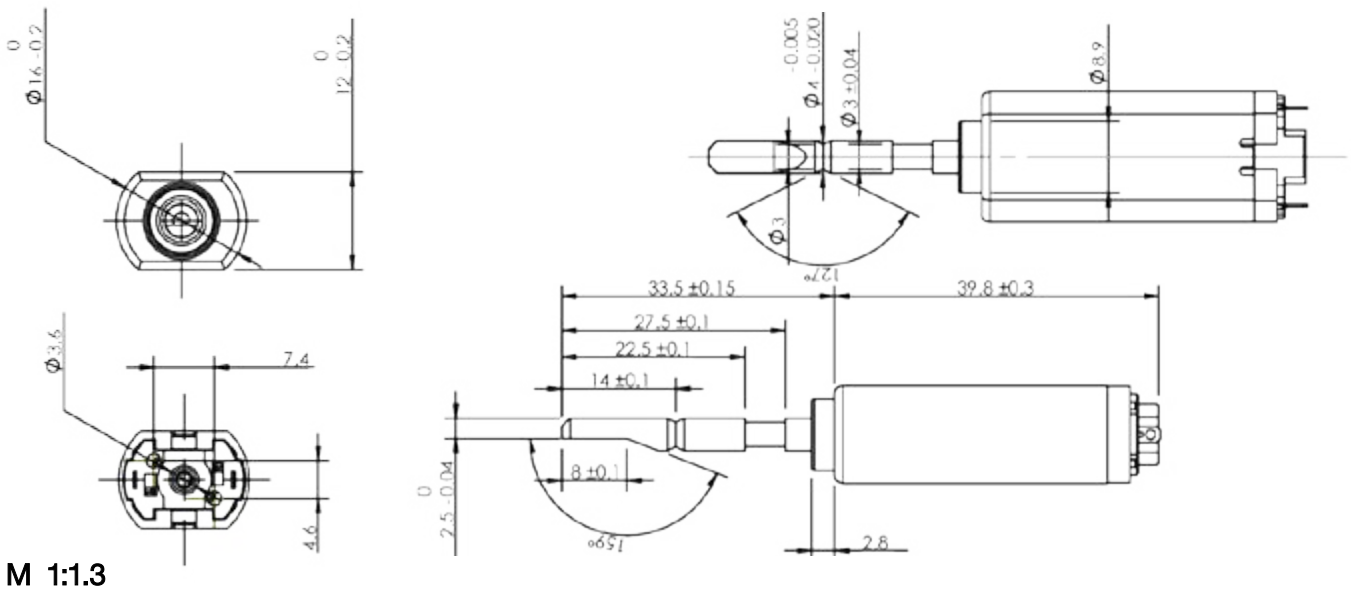
- Lead wires length
- Shaft length
- Special coils

Characteristics Curve · 1640ZDF





Dimension (mm) · 1640ZDF



M 1:1.3

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Sonic Motor · **1839ZDF**

Motor Characteristics			-1-L5-3.7	-1A-L23-40-3.7
1	Voltage	V	3.7	3.7
2	Resistance	Ω	3.6	3.2
3	Operating frequency range	Hz	240~350	220~340
4	No-load vibration frequency	Times/minute	40000	34800
5	No-load current	mA	90	90
6	Starting torque	mNm	18	23
7	Starting current	A	1.03	1.2
8	Rated load (brush head)	g	3.8	3.9
9	Load vibration frequency	Times/minute	33600	31200
10	Load-current	mA	400	460
11	Rotor inertia	gcm^2	1.7	1.8
12	Weight	g	29	30
13	Operating temperature range	°C	-10 ~ +60	-10 ~ +60

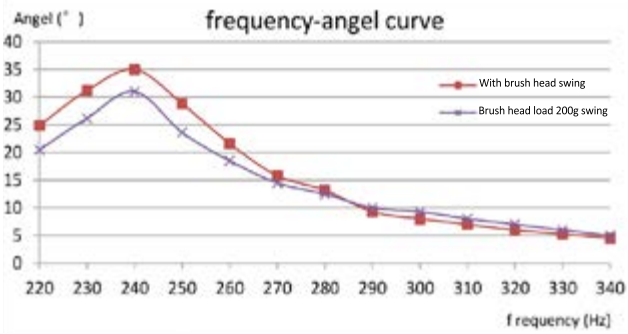
Applications

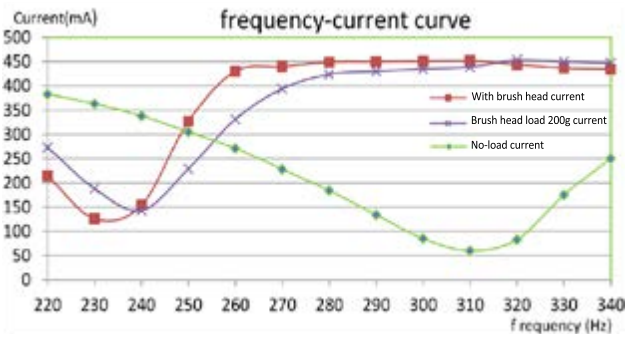
Electric toothbrush, health care equipment, cleaning equipment, etc.

Options

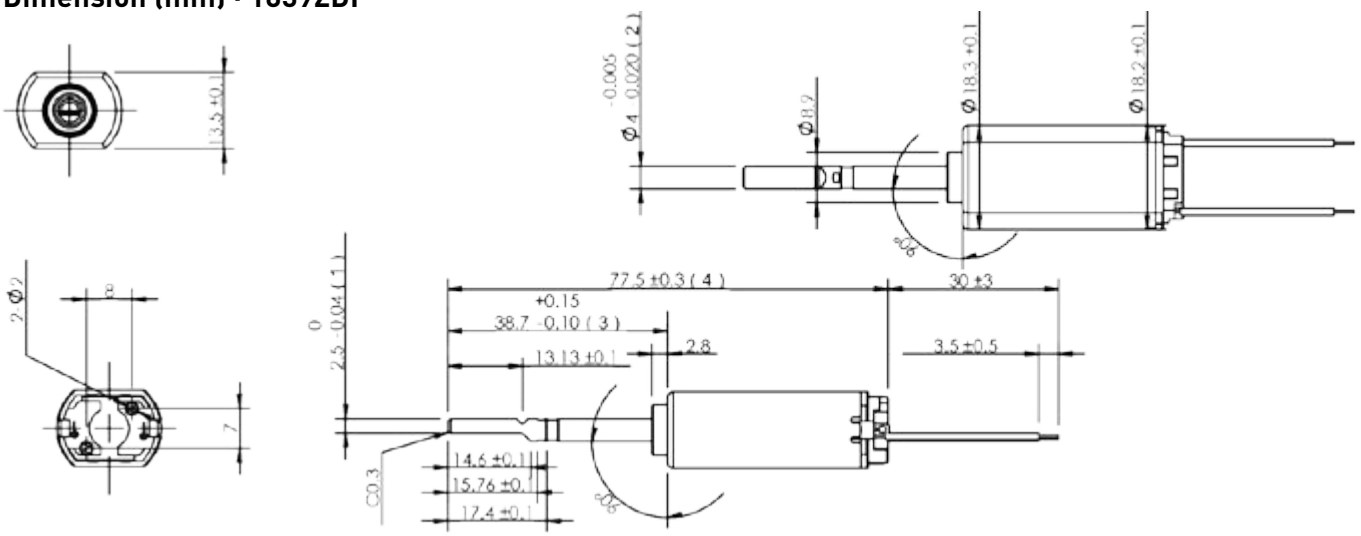
- Lead wires length
- Shaft length
- Special coils

Characteristics Curve · 1839ZDF





Dimension (mm) · 1839ZDF



M 1:1.8

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Sonic Motor · **2038ZDF**

Motor Characteristics			2038ZDF -3-L4-3.7	2040ZDF -3-L1-3.7
1	Voltage	V	3.7	3.7
2	Resistance	Ω	3.2	3.2
3	Operating frequency range	Hz	230~330	230~330
4	No-load vibration frequency	Times/minute	34800	34800
5	No-load current	mA	90	90
6	Starting torque	mNm	22	23
7	Starting current	A	1.15	1.15
8	Rated load (brush head)	g	4.4	4.4
9	Load vibration frequency	Times/minute	31000	31000
10	Load-current	mA	400	570
11	Rotor inertia	gcm^2	2.4	2.4
12	Weight	g	31	31
13	Operating temperature range	°C	-10 ~ +60	-10 ~ +60

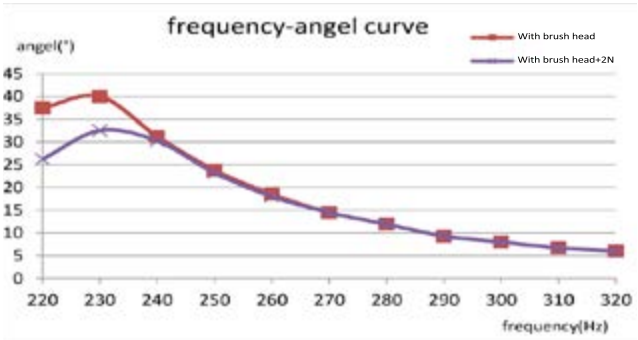
Applications

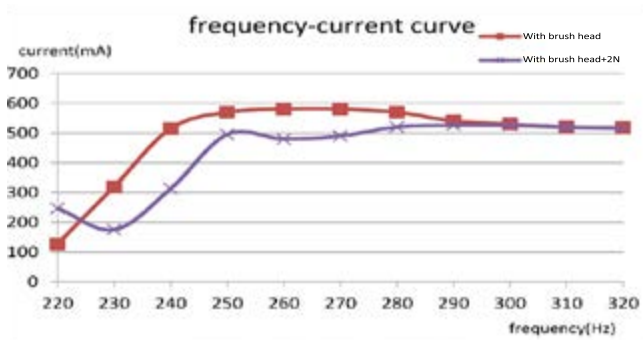
Electric toothbrush, health care equipment, cleaning equipment, etc.

Options

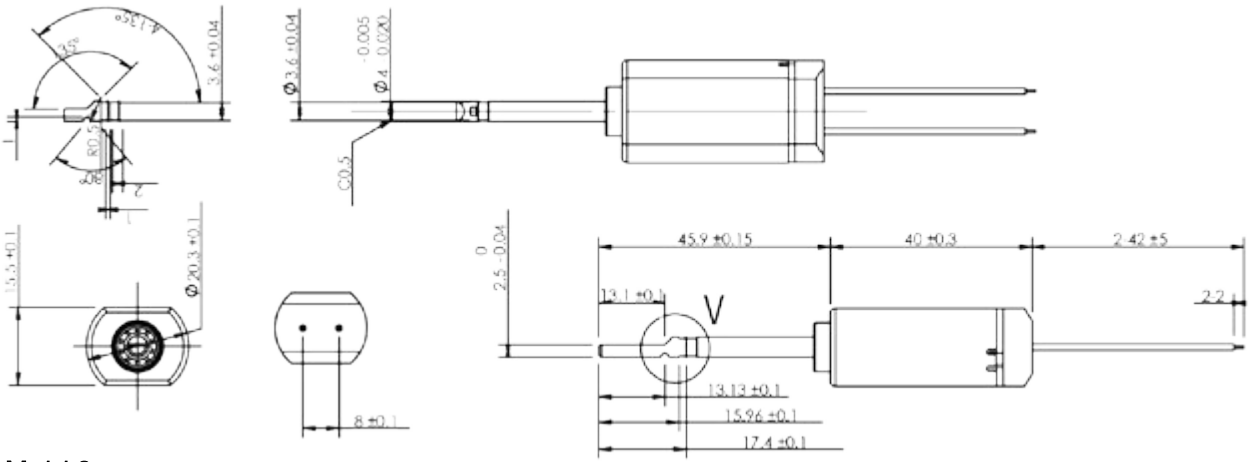
- Lead wires length
- Shaft length
- Special coils

Characteristics Curve · 2038ZDF





Dimension (mm) · 2038ZDF



M 1:1.8

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Sonic Motor · **2724ZDR**

Motor Characteristics			-1-L7-30-3.7
1	Voltage	V	3.7
2	Resistance	Ω	2.1
3	Operating frequency range	Hz	100~220
4	No-load vibration frequency	Times/minute	26400
5	No-load current	mA	150
6	Starting torque	mNm	40
7	Starting current	A	1.8
8	Rated load (brush head)	g/mm	10/31
9	Load vibration frequency	Times/minute	20400
10	Load-current	mA	450
11	Rotor inertia	gcm^2	1.35
12	Weight	g	76
13	Operating temperature range	°C	-10 ~ +60

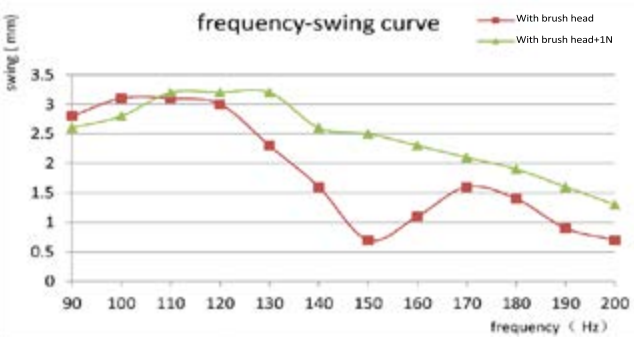
Applications

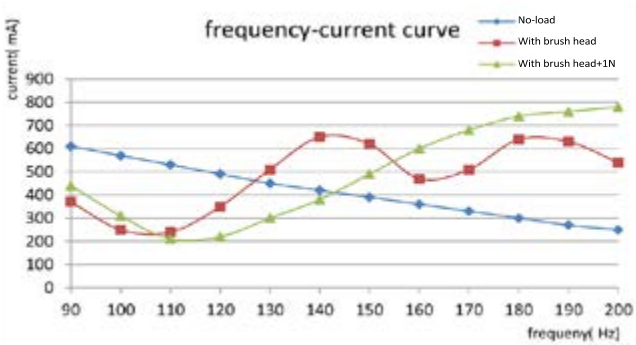
Electric toothbrush, health care equipment, cleaning equipment, etc.

Options

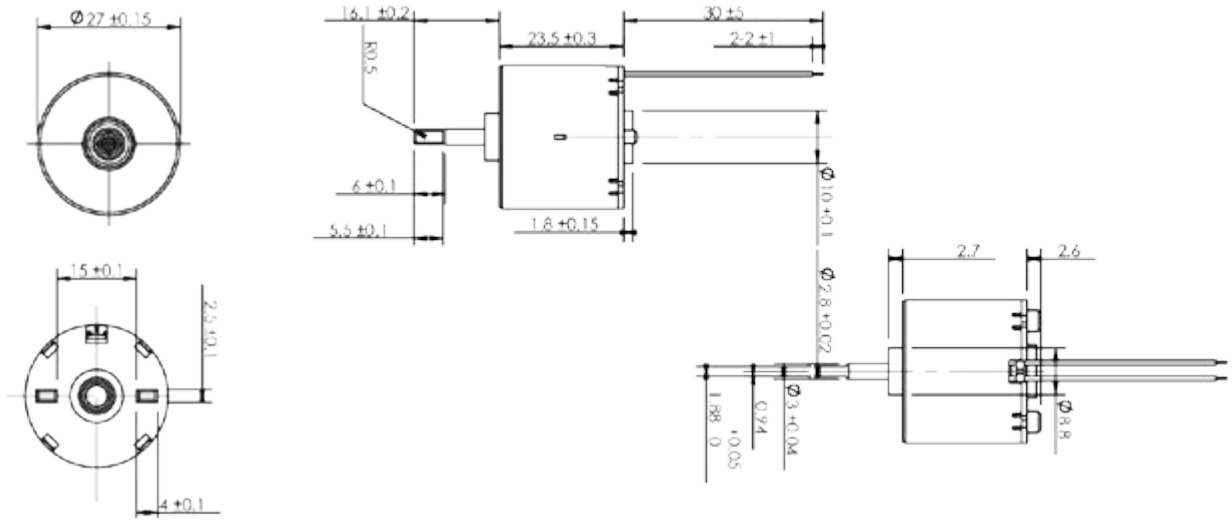
- Lead wires length
- Shaft length
- Special coils

Characteristics Curve · 2724ZDR





Dimension (mm) · 2724ZDR



M 1:1.8

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Sonic Motor · **2734ZDR**

Motor Characteristics			-1-L2-30-3.7
1	Voltage	V	3.7
2	Resistance	Ω	3
3	Operating frequency range	Hz	100~350
4	No-load vibration frequency	Times/minute	30000
5	No-load current	mA	120
6	Starting torque	mNm	56
7	Starting current	A	1.23
8	Rated load (brush head)	g	10
9	Load vibration frequency	Times/minute	20400
10	Load-current	mA	600
11	Rotor inertia	gcm^2	2.4
12	Weight	g	76
13	Operating temperature range	°C	-10 ~ +60

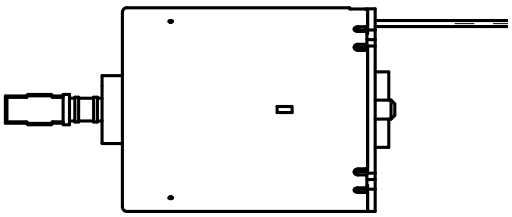
Applications

Washing brush,
facial massager,
health care equipment,
cleaning equipment, etc.

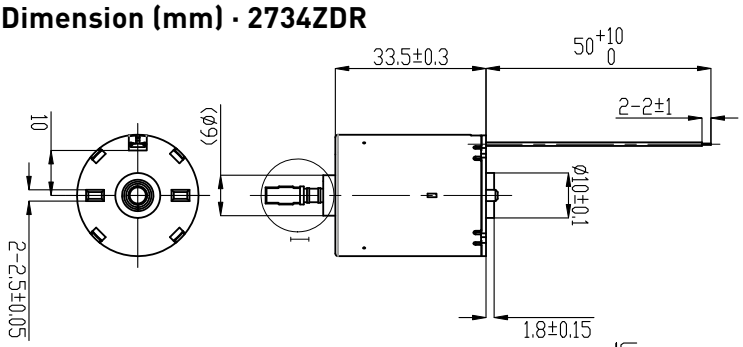
Options

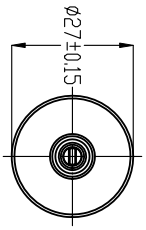
- Lead wire
- Special shaft

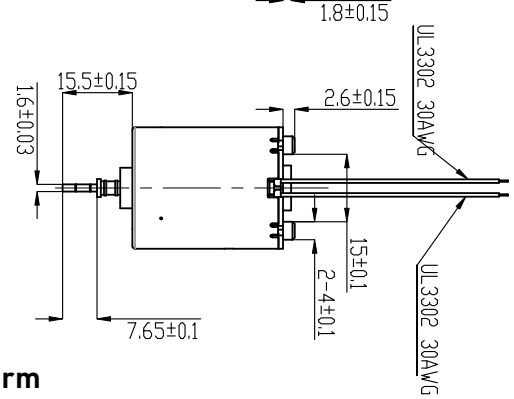
Approx. actual size

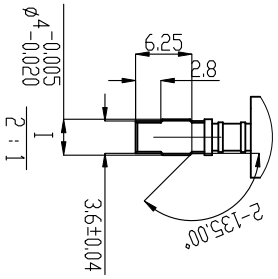


Dimension (mm) · 2734ZDR

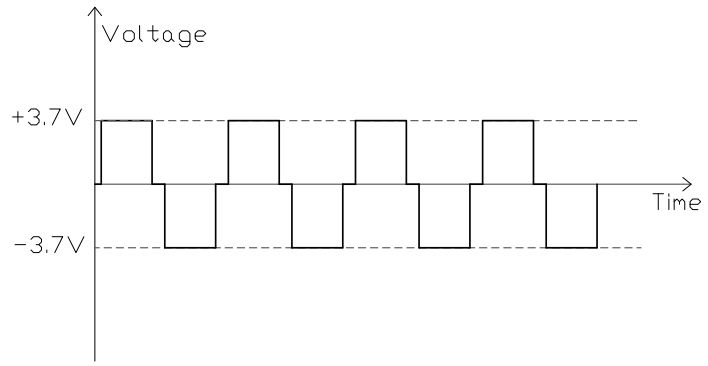








Driving Waveform



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