



**KOCO**  
Group

## 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

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

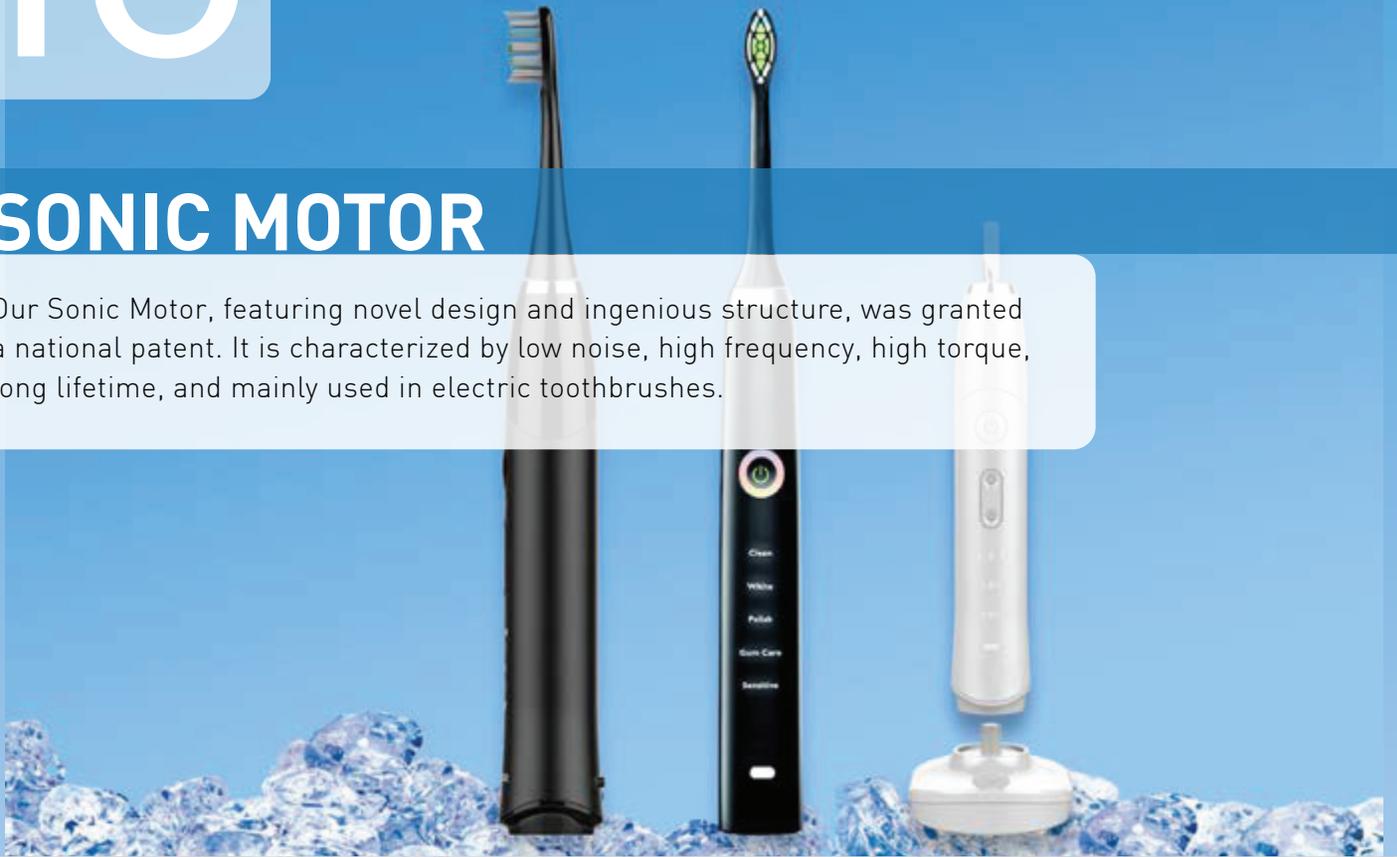
# 10

## Product Introduction



### 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	$\Omega$	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	$\text{gcm}^2$	0.9
12	Weight	g	25
13	Operating temperature range	$^{\circ}\text{C}$	-10 ~ +60

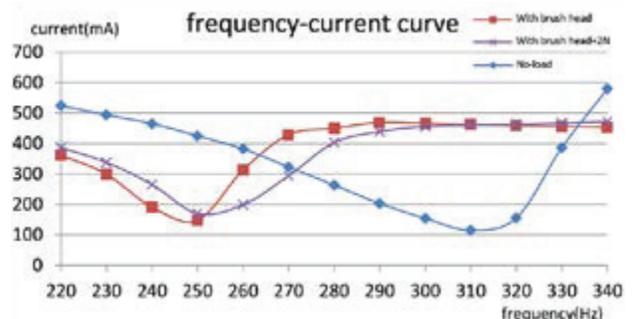
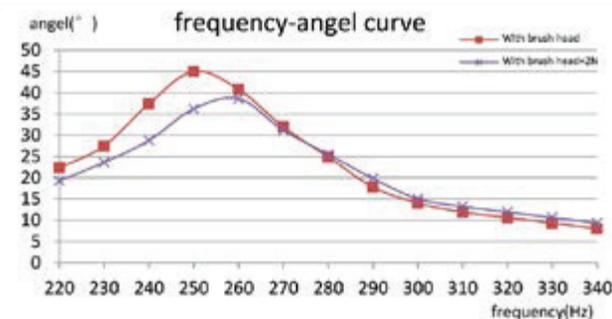
## Applications

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

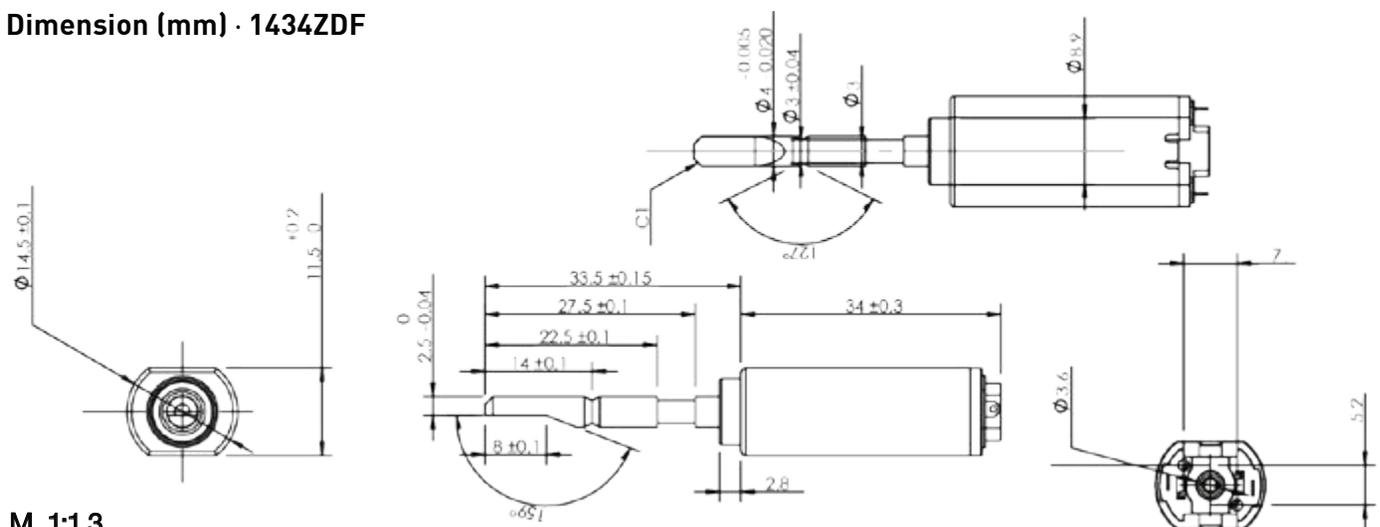
## Options

- Lead wires length
- Shaft length
- Special coils

## Characteristics Curve · 1434ZDF



## Dimension (mm) · 1434ZDF



M 1:1.3

# Sonic Motor · 1640ZDF

Motor Characteristics			-1-L2-3.7	-T-1A-L36-3.7
1	Voltage	V	3.7	3.7
2	Resistance	$\Omega$	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	$\text{gcm}^2$	1.2	1.2
12	Weight	g	25	25
13	Operating temperature range	$^{\circ}\text{C}$	-10 ~ +60	-10 ~ +60

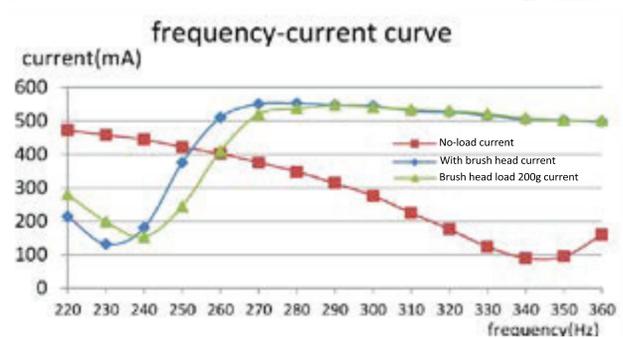
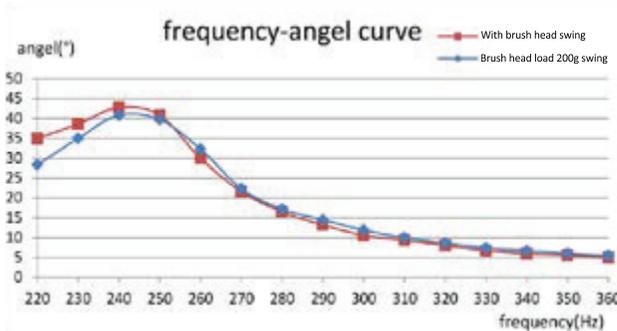
## Applications

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

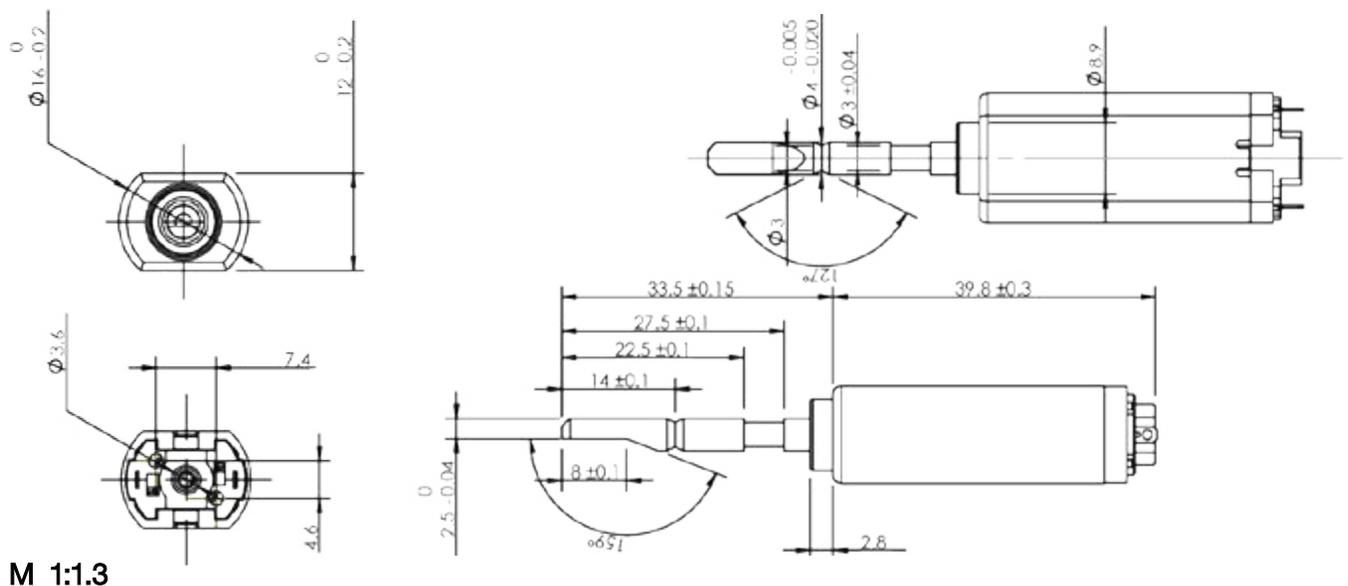
## Options

Lead wires length  
Shaft length  
Special coils

## Characteristics Curve · 1640ZDF



## Dimension (mm) · 1640ZDF



M 1:1.3

# Sonic Motor · 1839ZDF

Motor Characteristics		-1-L5-3.7	-1A-L23-40-3.7
1	Voltage	V	3.7
2	Resistance	$\Omega$	3.6
3	Operating frequency range	Hz	240~350
4	No-load vibration frequency	Times/minute	40000
5	No-load current	mA	90
6	Starting torque	mNm	18
7	Starting current	A	1.03
8	Rated load (brush head)	g	3.8
9	Load vibration frequency	Times/minute	33600
10	Load-current	mA	400
11	Rotor inertia	$gcm^2$	1.7
12	Weight	g	29
13	Operating temperature range	$^{\circ}C$	-10 ~ +60

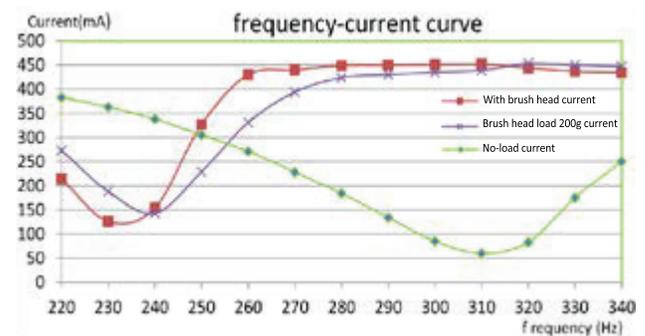
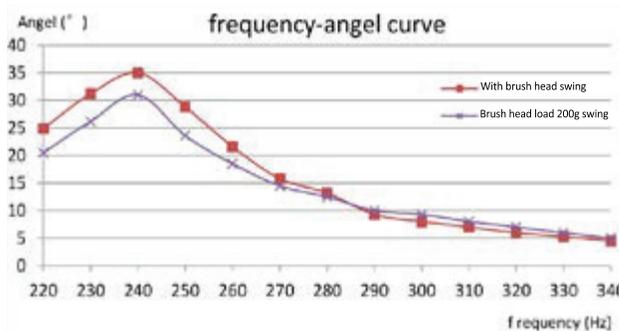
## Applications

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

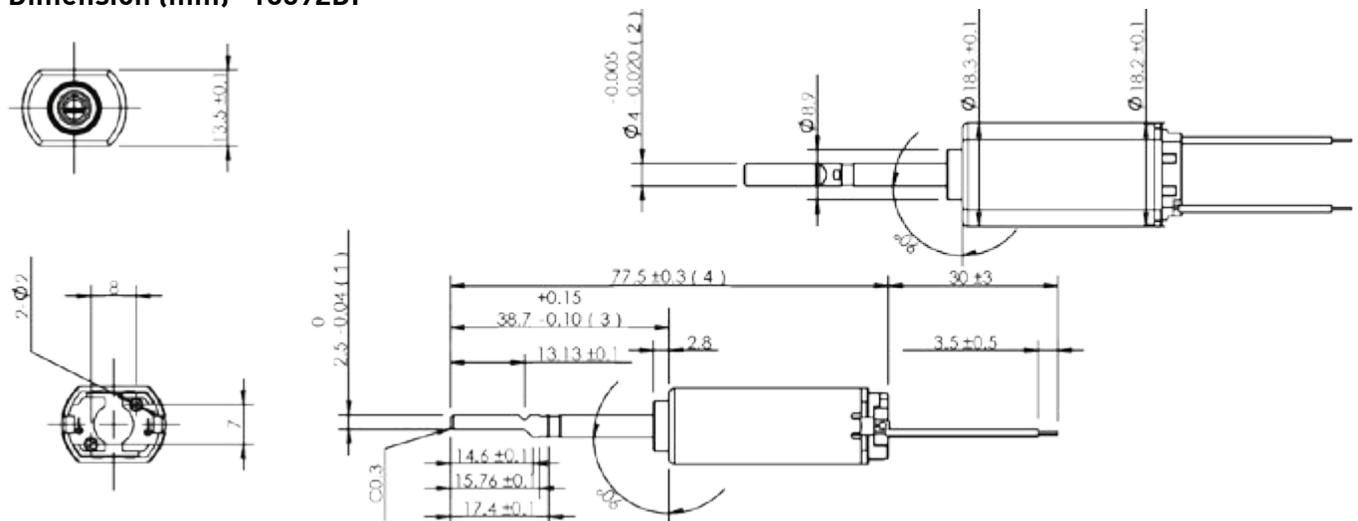
## Options

- Lead wires length
- Shaft length
- Special coils

## Characteristics Curve · 1839ZDF



## Dimension (mm) · 1839ZDF



M 1:1.8



# 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 <sup>2</sup>	1.35
12	Weight	g	76
13	Operating temperature range	°C	-10 ~ +60

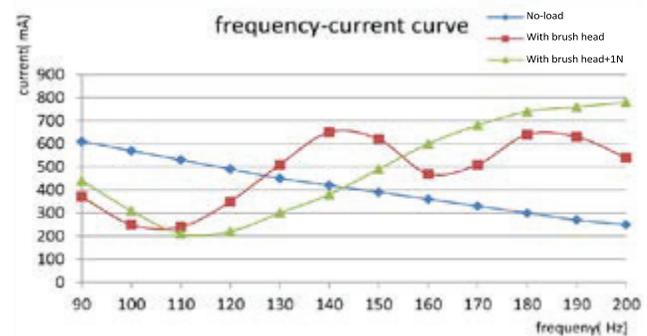
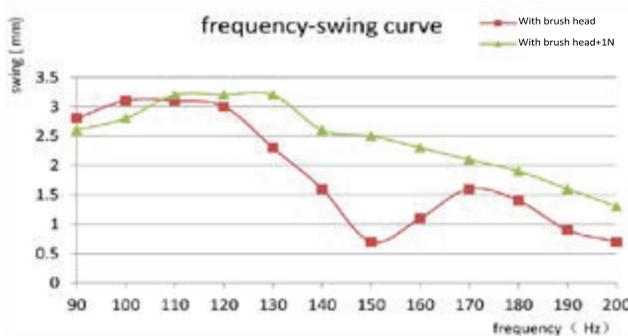
## Applications

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

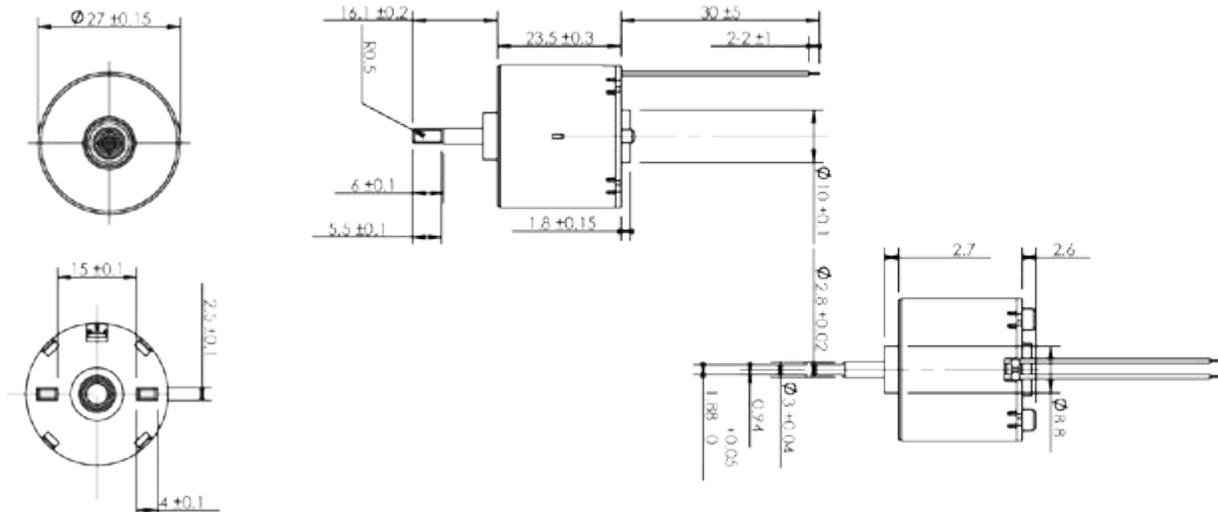
## Options

- Lead wires length
- Shaft length
- Special coils

## Characteristics Curve · 2724ZDR



## Dimension (mm) · 2724ZDR



M 1:1.8

# Sonic Motor · 2734ZDR

Motor Characteristics			-1-L2-30-3.7
1	Voltage	V	3.7
2	Resistance	$\Omega$	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	$\text{gcm}^2$	2.4
12	Weight	g	76
13	Operating temperature range	$^{\circ}\text{C}$	-10 ~ +60

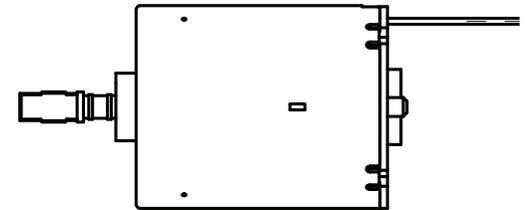
## Applications

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

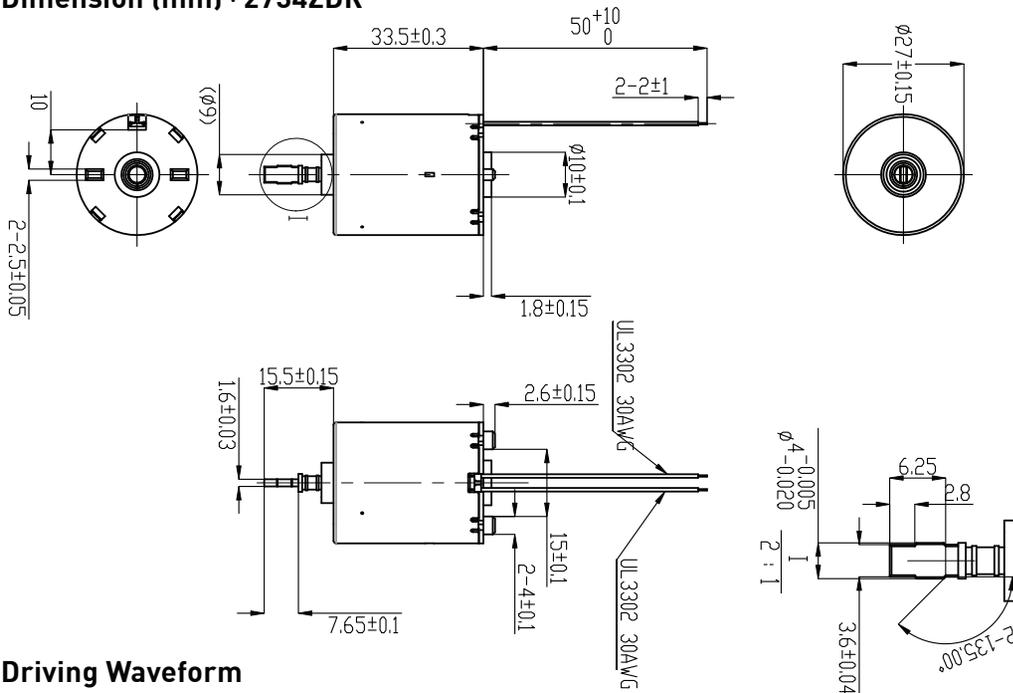
## Options

Lead wire  
Special shaft

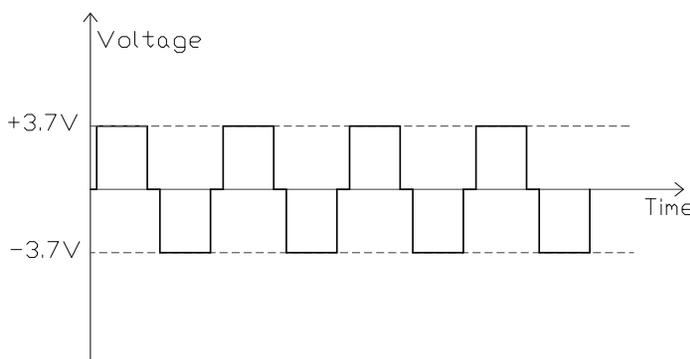
## Approx. actual size



## Dimension (mm) · 2734ZDR



## Driving Waveform



# SALES REPRESENTATIVES



## INDIA

### KOCO MOTION INDIA PVT. LTD.

S. No. 100/5, Ambegaon,  
Pune Satara Highway, Pune 411 046  
India

Phone +91 95119 54544, 77700 26168  
sales@kocomotionindia.com

[www.kocomotionindia.com](http://www.kocomotionindia.com)

## KOCO MOTION GROUP

### KOCO MOTION GmbH

Niedereschacherstr. 54  
78083 Dauchingen  
Germany  
Phone +49 7720 995858-0  
info@kocomotion.de  
[www.kocomotion.de](http://www.kocomotion.de)

### KOCO automotive GmbH

Niedereschacherstr. 52  
78083 Dauchingen  
Germany  
Phone +49 7720 995164-0  
info@kocoautomotive.de  
[www.kocoautomotive.de](http://www.kocoautomotive.de)

### KOCO DC-MOTION, Inc

20676 Carrey Rd.  
Walnut, CA 91789  
USA  
Phone (+1) 909-468-9877  
sales@kocodcmotion.com  
[www.kocodcmotion.com](http://www.kocodcmotion.com)