

Series	Model	Diameter (Ømm)	Height (mm)	Rated Voltage (VDC)	Tone Nature	Min. Sound Output (dBA)	Frequency (Hz)	Terminal*	Page No.
WDB	WDB05	12.0	6.5	5.0	Single	85 / 10cm	2300+/-300	P	28
UDB	UDB01	12.0	7.5	1.5	Single	75 / 10cm	2300+/-500	P	27
UDB	UDB01A	12.0	7.5	1.5	Single	75 / 10cm	3100+/-500	P	27
UDB	UDB05	12.0	7.5	5.0	Single	83 / 10cm	2300+/-400	P	27
UDB	UDB05A	12.0	7.5	5.0	Single	83 / 10cm	3100+/-300	P	27
PDB	PDB05	12.0	7.5	5.0	Single	85 / 10cm	2300+/-300	P	27
UDB	UDB12	12.0	7.5	12.0	Single	83 / 10cm	2300+/-400	P	27
UDB	UDB12A	12.0	7.5	12.0	Single	83 / 10cm	3100+/-300	P	27
TDB	TDB01	12.0	9.5	1.5	Single	85 / 10cm	2300+/-300	P	27
TDB	TDB05	12.0	9.5	5.0	Single	75 / 10cm	2300+/-300	P	27
TDB	TDB12	12.0	9.5	12.0	Single	85 / 10cm	2300+/-300	P	27
ADB	ADB01	12.5	8.8	1.5	Single	80 / 10cm	2500+/-250	L	26
HDB	HDB01	16.0	14.0	1.5	Single	75 / 10cm	2300+/-400	P	26
HDB	HDB06	16.0	14.0	6.0	Single	85 / 10cm	2300+/-300	P	26
HDB	HDB12	16.0	14.0	12.0	Single	85 / 10cm	2300+/-300	P	26
DB-E18	1S3060	28.0	14.5	6.0	Single	85 / 30cm	2800+/-200	L & P	25
DB-E18	1S3090	28.0	14.5	9.0	Single	85 / 30cm	2800+/-200	L & P	25
DB-E18	1S3120	28.0	14.5	12.0	Single	90 / 30cm	2800+/-200	L & P	25
DB-E18	1S3415	28.0	14.5	12.0	Single	85 / 30cm	2800+/-200	L & P	25
DB-E18	1S3240	28.0	14.5	24.0	Single	90 / 30cm	2800+/-200	L & P	25
DB-E28	2P3015	28.0	20.0	1.5	Pulse	70 / 30cm	2800+/-200	L & P	25
DB-E28	2S3030	28.0	20.0	3.0	Single	85 / 30cm	2800+/-200	L & P	25
DB-E28	2P3030	28.0	20.0	3.0	Pulse	73 / 30cm	2800+/-200	L & P	25
DB-E28	2S3060	28.0	20.0	6.0	Single	90 / 30cm	2800+/-200	L & P	25
DB-E28	2P3060	28.0	20.0	6.0	Pulse	78 / 30cm	2800+/-200	L & P	25
DB-E28	2D3060	28.0	20.0	6.0	Single/Pulse	85 / 70 / 30cm	2800+/-200	L & P	25
DB-E28	2S3090	28.0	20.0	9.0	Single	90 / 30cm	2800+/-200	L & P	25
DB-E28	2P3090	28.0	20.0	9.0	Pulse	80 / 30cm	2800+/-200	L & P	25
DB-E28	2D3090	28.0	20.0	9.0	Single/Pulse	85 / 75 / 30cm	2800+/-200	L & P	25
DB-E28	2S3120	28.0	20.0	12.0	Single	95 / 30cm	2800+/-200	L & P	25
DB-E28	2S3415	28.0	20.0	12.0	Single	90 / 30cm	2800+/-200	L & P	25
DB-E28	2P3120	28.0	20.0	12.0	Pulse	85 / 30cm	2800+/-200	L & P	25
DB-E28	2D3120	28.0	20.0	12.0	Single/Pulse	90 / 80 / 30cm	2800+/-200	L & P	25
DB-E28	2S3240	28.0	20.0	24.0	Single	95 / 30cm	2800+/-200	L & P	25
DB-E28	2P3240	28.0	20.0	24.0	Pulse	85 / 30cm	2800+/-200	L & P	25
SUDB	SUDB05	12.8 X 12.8	7.0	5.0	Single	88 / 10cm	2400+/-300	M	28
SUDB	SUDB12	12.8 X 12.8	7.0	5.0	Single	88 / 10cm	2400+/-300	M	28
STDB	STDB01	12.8 X 12.8	10.0	1.5	Single	75 / 10cm	2300+/-400	M	26
STDB	STDB05	12.8 X 12.8	10.0	5.0	Single	85 / 10cm	2400+/-400	M	26
STDB	STDB12	12.8 X 12.8	10.0	12.0	Single	85 / 10cm	2300+/-300	M	26

* L - Leadwire, P - PIN, M - SMD

DB-E18



COLOUR	HOUSING	TERMINAL PIN / LEADWIRE
BLACK	ABS	

ELECTRICAL SPECIFICATIONS

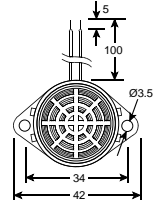
Model No.		1S3060	1S3090	1S3120	1S3240	1S3415
Operating Voltage (VDC)		4-9	6-11	9-15	15-28	4-15
Rated Voltage (VDC)		6	9	12	24	12
* Max. Rated Current (mA.)		35	40	40	20	15
* Min. Sound Output (dBA/30cm)		85	85	90	90	85
* Frequency (Hz.)		2800 ± 200				
Tone Nature		Single				
Operating Temperature (°C)		-20 ~ +60				
Weight (gm.)		17				

* Value applying at rated voltage

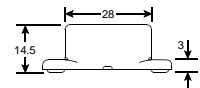
DIMENSION

Leadwire Type

Top View

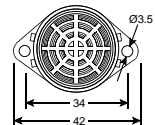


Side View

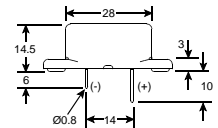


Pin Type

Top View



Side View



all dimensions are in mm

DB-E28



COLOUR	HOUSING	TERMINAL PIN / LEADWIRE
BLACK	ABS	

ELECTRICAL SPECIFICATIONS

Model No.		2P3015	2S3030	2P3030	2S3060	2P3060	2D3060	2S3090
Operating Voltage (VDC)		1-3	2-5	2-5	4-9	4-9	4-9	6-11
Rated Voltage (VDC)		1.5	3	3	6	6	6	9
* Max. Rated Current (mA.)		5	35	8	35	10	35/10	40
* Min. Sound Output (dBA/30cm)		70	85	73	90	78	85/70	90
* Tone Nature		P	S	P	S	P	S/P	S
* Frequency (Hz.)		2800 ± 200						
Operating Temperature (°C)		-20 ~ +60						
Weight (gm.)		10						

ELECTRICAL SPECIFICATIONS

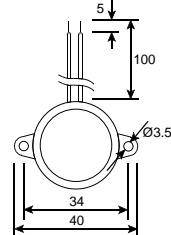
Model No.		2P3090	2D3090	2S3120	2S3415	2P3120	2D3120	2S3240	2P3240
Operating Voltage (VDC)		6-11	6-11	9-15	4-15	8-15	8-15	15-28	15-28
Rated Voltage (VDC)		9	9	12	12	12	12	24	24
* Max. Rated Current (mA.)		10	35/15	40	15	15	40/15	25	20
* Min. Sound Output (dBA/30cm)		80	85/75	95	90	85	90/80	95	85
* Tone Nature		P	S/P	S	S	P	S/P	S	P
* Frequency (Hz.)		2800 ± 200							
Operating Temperature (°C)		-20 ~ +60							
Weight (gm.)		10							

* Value applying at rated voltage
The Pulse Rating is 2-7Hz at Rated Voltage.
S - Single, P - Pulse.

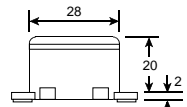
DIMENSION

Leadwire Type

Top View

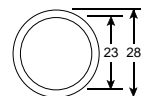


Side View

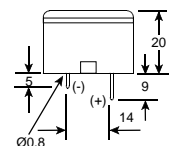


Pin Type

Top View



Side View



all dimensions are in mm

ADB



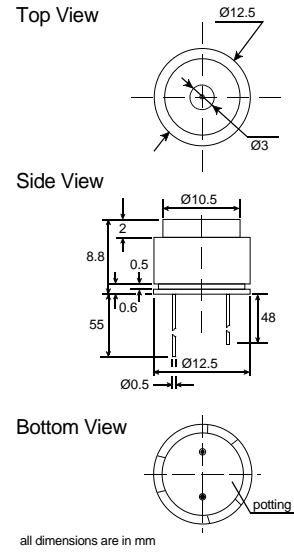
COLOUR	HOUSING	TERMINAL
SILVER	ALUMINUM	LEADWIRE

ELECTRICAL SPECIFICATIONS

Model No.	ADB01	
Operating Voltage (VDC)	1.25 ~ 3.00	
Rated Voltage (VDC)	1.5	
* Max. Rated Current (mA.)	30	
* Min Sound Output (dBA/10cm)	80	
* Frequency (Hz.)	2500±250	
Tone Nature (°C)	single	
Operating Temperature (gm.)	-20 ~ +80	
Weight	3	

* Value applying at rated voltage

DIMENSION



HDB

Washable Type



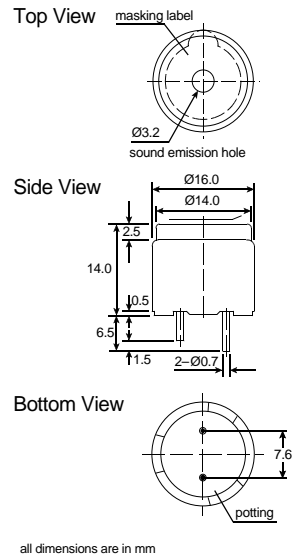
COLOUR	HOUSING	TERMINAL
BLACK	NORYL GFN2	PIN

ELECTRICAL SPECIFICATIONS

Model No.	HDB01	HDB06	HDB12
Operating Voltage (VDC)	1 - 2	4 - 8	8 - 15
Rated Voltage (VDC)	1.5	6	12
* Max. Rated Current (mA.)	20	30	30
* Min Sound Output (dBA/10cm)	75	85	85
* Frequency (Hz.)	2300±400	2300±300	2300±300
Tone Nature (°C)	single	single	single
Operating Temperature (gm.)	-40 ~ +85	-40 ~ +85	-40 ~ +85
Weight	7	7	7

* Value applying at rated voltage

DIMENSION



STDB

SMD Type



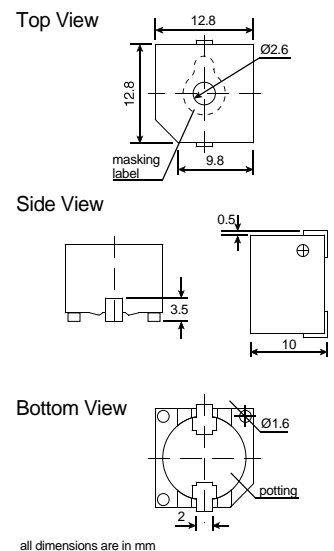
COLOUR	HOUSING	TERMINAL
GREY	PPS	SMD

ELECTRICAL SPECIFICATIONS

Model No.	STDB01	STDB05	STDB12
Operating Voltage (VDC)	1.4 ~ 3	4 ~ 7	8 ~ 15
Rated Voltage (VDC)	1.5	5	12
* Max. Rated Current (mA.)	20	30	30
* Min Sound Output (dBA/10cm)	75	85	85
* Frequency (Hz.)	2400±400	2300±300	2300±300
Tone Nature (°C)	single	single	single
Operating Temperature	-20 ~ +70	-20 ~ +70	-20 ~ +70
Weight (gm.)	2	2	2

* Value applying at rated voltage
Tape & Reel Packing is available on request.

DIMENSION



TDB

Washable Type



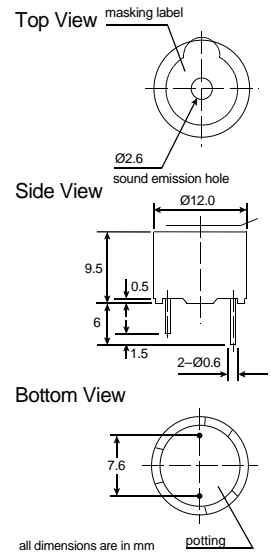
COLOUR	HOUSING	TERMINAL
BLACK	NORYL GFN2	PIN

ELECTRICAL SPECIFICATIONS

Model No.	TDB01	TDB05	TDB12
Operating Voltage (VDC)	1.3 ~ 2	4 ~ 7	8 ~ 15
Rated Voltage (VDC)	1.5	5	12
* Max. Rated Current (mA.)	30	30	30
* Min Sound Output (dBA/10cm)	75	85	85
* Frequency (Hz.)	2300±400	2300±300	2300±300
Tone Nature (°C)	single	single	single
Operating Temperature (gm.)	-10 ~ +50	-40 ~ +85	-40 ~ +85
Weight	2	2	2

▲ Value applying at rated voltage
6.5 mm pin pitch is available on request.wave)

DIMENSION



UDB

Washable Type



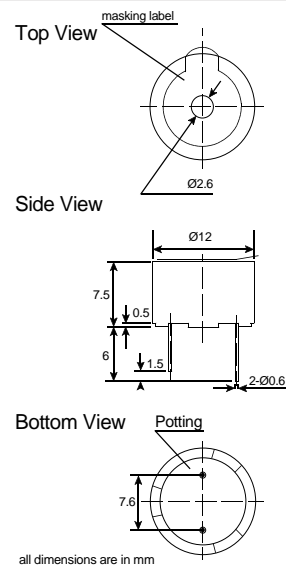
COLOUR	HOUSING	TERMINAL
BLACK	NORYL GFN2	PIN

ELECTRICAL SPECIFICATIONS

Model No.	UDB01	UDB03	UDB05	UDB12	UDB01A	UDB05A	UDB12A
Operating Voltage (VDC)	1.4 ~ 2	2 ~ 5	3 ~ 7	9 ~ 15	1.4 ~ 2	3 ~ 7	9 ~ 15
Rated Voltage (VDC)	1.5	3	5	12	1.5	5	12
* Max. Rated Current (mA.)	25	30	30	30	25	30	30
* Min Sound Output (dBA/10cm)	75	83	83	83	75	83	83
* Frequency (Hz.)	2300±500	2300±400	2300±400	2300±400	3100±500	3100±300	3100±300
Tone Nature (°C)	single	single	single	single	single	single	single
Operating Temperature (gm.)	-20 ~ +70	-20 ~ +70	-20 ~ +70	-20 ~ +70	-20 ~ +70	-20 ~ +70	-20 ~ +70
Weight	2	2	2	2	2	2	2

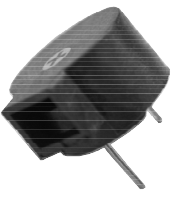
* Value applying at rated voltage

DIMENSION



PDB

Washable Type



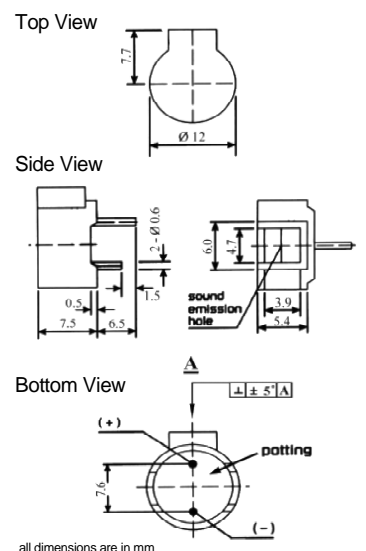
COLOUR	HOUSING	TERMINAL
BLACK	NORYL SE1	PIN

ELECTRICAL SPECIFICATIONS

Model No.	PDB05
Operating Voltage (VDC)	3.5 ~ 7
Rated Voltage (VDC)	5
* Max. Rated Current (mA.)	25
* Min Sound Output (dBA/10cm)	85
* Frequency (Hz.)	2300±300
Tone Nature (°C)	single
Operating Temperature (gm.)	-40 ~ +85
Weight	2

▲ Value applying at rated voltage

DIMENSION



WDB

Washable Type



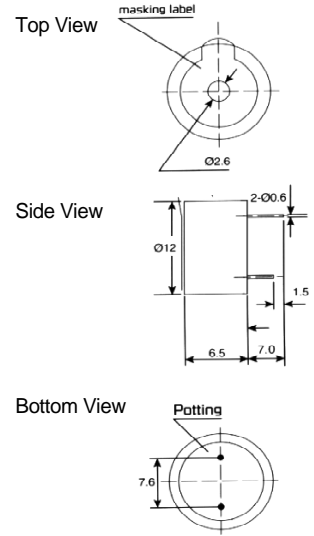
COLOUR	HOUSING	TERMINAL
BLACK	NORYL GFN2	PIN

ELECTRICAL SPECIFICATIONS

Model No.	WDB05	
Operating Voltage (VDC)	4 ~ 7	
Rated Voltage (VDC)	5	
* Max. Rated Current (mA.)	30	
* Min Sound Output (dBA/10cm)	85	
* Frequency (Hz.)	2300±300	
Tone Nature	single	
Operating Temperature (°C)	-20 ~ +70	
Weight (gm.)	2	

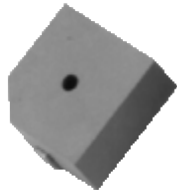
▲ Value applying at rated voltage

DIMENSION



SUDB

SMD Type



COLOUR	HOUSING	TERMINAL
GREY	PPS	SMD

ELECTRICAL SPECIFICATIONS

Model No.	SUDB05	SUDB12
Operating Voltage (VDC)	4 ~ 7	8 ~ 15
Rated Voltage (VDC)	5	5
* Max. Rated Current (mA.)	30	30
* Min Sound Output (dBA/10cm)	88	88
* Frequency (Hz.)	2400±300	2400±300
Tone Nature	single	single
Operating Temperature (°C)	-20 ~ +70	-20 ~ +70
Weight (gm.)	2	2

▲ Value applying at rated voltage

DIMENSION

