

# NEW! MALLORY Sonalert® Audible Signal Devices

MALLORY SONALERT PRODUCTS, INC.

Dimensions in mm

**Features:** • Low Power Consumption • Low Cost • Compact Profile • Piezo Tone Quality • Extra Loud Sound Output • PCB Mount

**Applications:** • Fire Alarm • Crime Prevention Alarm • Call Buzzer • Automotive • Clocks • P.O.S. Equipment • Medical Instruments • Electrical Instruments • Industrial and Safety Equipment

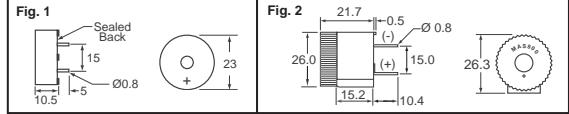


Fig.	Frequency ±400 (Hz)	Min. Sound Pressure dB (A) @ Two Feet		Operating Voltage DC (V)	Max. Operating Current (mA)		Pulse Rate Per Second	Digi-Key Part No.	Price Each			Mallory Part No.	
		@ Min. V	@ Max. V		@ Min. V	@ Max. V			1	10	25		50
1	3850	75	86	5-16	3	14	Continuous	458-1006-ND	5.18	4.80	4.30	3.89	MSR516N
	3900	75	86	5-16	3	12	.5 - 2 (Slow)	458-1007-ND	5.70	5.28	4.74	4.28	MSR516NJ
	3900	75	86	5-16	3	12	2 - 10 (Fast)	458-1008-ND	5.40	5.00	4.49	4.05	MSR516NP
	3800 Avg.	75	86	5-16	3	12	2 - 4 (Siren)	458-1010-ND	9.24	8.55	7.67	6.93	MSR516X
	3700 Avg.	75	86	5-16	3	12	5 - 7 (Whooping)	458-1009-ND	9.26	8.57	7.69	6.95	MSR516W
	3400	75 @ 12V	—	—	3-20	3	16	Continuous	458-1005-ND	3.26	3.02	2.71	2.45
2	2800 ± 500 (Hz)	80	93	9-12	—	50	Continuous	458-1004-ND	6.32	5.85	5.25	4.74	MAS800

## Panasonic® Piezoelectric Ceramic Buzzer Units

**Applications:** Smoke detectors, alarms, detectors, home appliances, radio beepers, electronic games, keyboard signalers, cameras, and telephone ringers.

**P9948 and P9928 Features:**

• Drive oscillator circuitry — will run directly from commonly used voltage source such as dry batteries • High sound level and low input voltage

• Low power consumption. Wide operating range of supply voltage: 3 to 20VDC.

**Features For All Others:**

• Low power consumption • Long life and no noise due to non-contact • Thin thickness buzzer element • External drive circuitry • Wide frequency range • No magnetic field is generated • High sound pressure level

**Example Driving Circuit (For Self Drive Type)**

P9912 P9915 P9923

P9913 P9920

P9914 P9921

Q: ZTX451 or equivalent

D: 1N4148 or equivalent

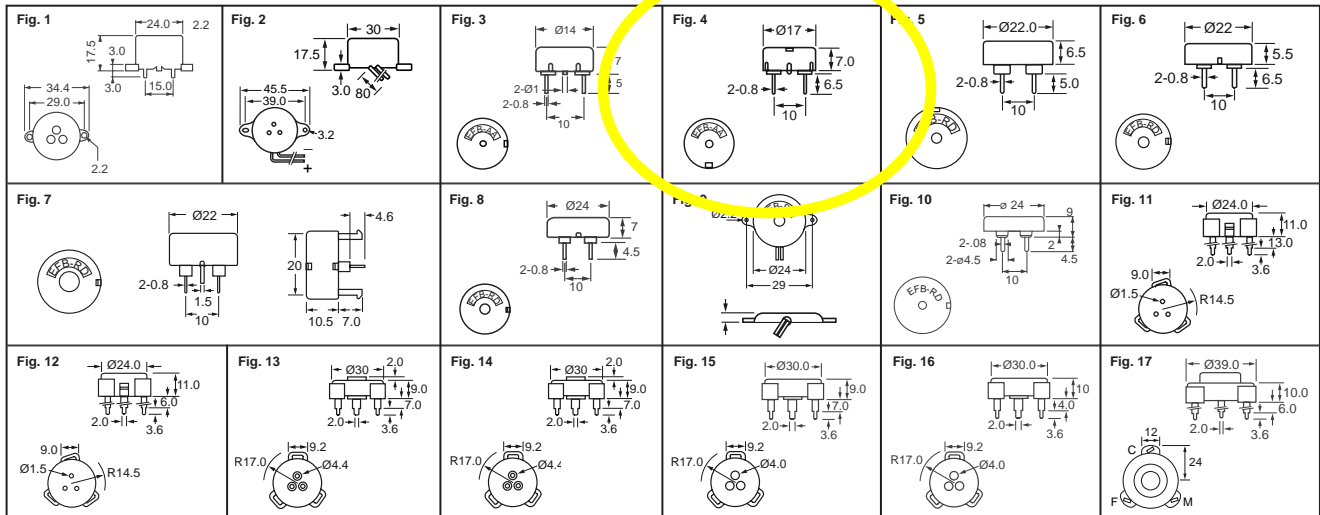
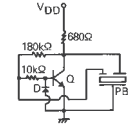


Fig.	Sound Pressure Level	Oscillating Freq.	Cap. (@ 1 KHz)	Current (@ 12 VDC)	Input Voltage	Digi-Key Part No.	Pricing					Panasonic Part No.	
							1	10	100	500	1,000		5,000
1	80dB min. @ 12VDC	3.7KHz	—	15mA	3 ~ 20VDC	P9948-ND	8.34	70.53	551.43	1943.00	3664.00	3420.00/M	EFB-CB37C11
2	90dB min. @ 12VDC	2.8KHz	—	15mA	3 ~ 20VDC	P9928-ND	8.32	70.41	550.47	1939.50	3658.00	3414.00/M	EFB-CC28C15
3	74dB min. @ (15V p-p, 4KHz Sq. Wave)	—	8500pF	—	25V p-p	P9900-ND	3.19	27.01	211.18	744.00	1403.00	1310.00/M	EFB-AA14D001
4	86dB min. @ (15V p-p, 4KHz Sq. Wave)	—	7000pF	—	25V p-p	P9957-ND	2.13	17.99	140.63	495.50	934.00	872.00/M	EFB-AA40D102
5	85dB min. @ (15V p-p, 4KHz Sq. Wave)	—	15000pF	—	30V p-p	P9929-ND	2.18	18.48	144.48	509.00	960.00	896.00/M	EFB-RD22C41
6	80dB min. @ (15V p-p, 4KHz Sq. Wave)	—	15000pF	—	30V p-p	P9951-ND	2.14	18.14	141.83	500.00	942.00	880.00/M	EFB-RD22C413
7	98dB min. @ (15V p-p, 4KHz Sq. Wave)	—	15000pF	—	30V p-p	P9909-ND	2.26	19.10	149.30	526.00	992.00	926.00/M	EFB-RD22C415
8	85dB min. @ (15V p-p, 4KHz Sq. Wave)	—	10000pF	—	30V p-p	P9910-ND	2.80	23.72	185.42	653.50	1232.00	1150.00/M	EFB-RD24C41B
9	80dB min. @ (15V p-p, 4KHz Sq. Wave)	—	12000pF	—	30V p-p	P9911-ND	2.18	18.48	144.48	509.00	960.00	896.00/M	EFB-RD24C41
10	85dB min. @ (15V p-p, 4KHz Sq. Wave)	—	10000pF	—	30V p-p	P9924-ND	1.80	15.25	119.20	420.00	792.00	739.00/M	EFB-RD24C411
11	96dB min. @ 10VDC	3.5KHz	—	—	3 ~ 20VDC	P9912-ND*	3.41	28.86	225.63	795.00	1499.00	1399.00/M	EFB-RM38C13
12	93dB min. @ 10VDC	3.5KHz	—	—	3 ~ 20VDC	P9913-ND*	3.41	28.86	225.63	795.00	1499.00	1399.00/M	EFB-RM38C123
13	85dB min. @ 12VDC	2.0KHz	—	—	3 ~ 20VDC	P9914-ND*	2.98	25.19	196.97	694.00	1309.00	1222.00/M	EFB-RL20C102
14	104dB min. @ 12VDC	2.8KHz	—	—	3 ~ 20VDC	P9915-ND*	2.92	24.67	192.88	679.50	1282.00	1196.00/M	EFB-RL28C11
15	106dB min. @ 12VDC	3.7KHz	—	—	3 ~ 20VDC	P9920-ND*	3.17	26.83	209.74	739.00	1394.00	1301.00/M	EFB-RL37C20
16	106dB min. @ 12VDC	3.7KHz	—	—	3 ~ 20VDC	P9921-ND*	3.17	26.83	209.74	739.00	1394.00	1301.00/M	EFB-RL37C22
17	106dB min. @ 12VDC	3.2KHz	—	—	3 ~ 20VDC	P9923-ND*	6.08	51.41	401.90	1416.00	2670.00	2492.00/M	EFB-BD32B21

\* Driving circuit required. NOTE: All buzzers and microphones are non-washable.

## Ultrasonic Ceramic Sensor/Transducer

Ultrasonic Ceramic Sensor consisting of a disc/bimorph type piezoelectric ceramic vibrator that is used as a sensor for transmitting and receiving ultrasonics in the air. Since the ultrasonic sensor has a resonance type vibrator, it is high in sensitivity and has outstanding sound pressure level.

It has wide applications for burglar alarm systems, automatic door openers, flow rate detectors, and remote-control systems in TV, home appliance and toys, etc.

Sensors are not washable.

Type U Standard Type \*  
Type S Temperature Stable Type \*\*

Type Q  
Enclosed Type \*



\* Temp. Range: -20°C to 60°C

\*\* Temp. Range: -40°C to 100°C



Type	Class	Ctr Freq. 51.0 (KHz)	Sensitivity (dBV/mbar)	Sensitivity (0dB = 1V/Pa)	Min. Band-Width (KHz)	Sound Pressure Level (dB)	Max. Input Volt. (Vrms)	Dimensions (mm)				Digi-Key Part No.	Pricing				Panasonic Part No.	
								Physical Size Dia.	Ht.	Leads Length	Space		1	10	100	500		1,000
Q	Receiver	40.0	-75	-55	1.0	—	—	18.0	12.0	12.5	7.5	P9892-ND	21.63	194.64	1730.18	6488.16	12111.23	EFR-RQB40K5
Q	Transmitter	40.0	—	—	1.0	105	20	18.0	12.0	12.5	7.5	P9893-ND	21.63	194.64	1730.18	6488.16	12111.23	EFR-RQB40K5
S	Receiver	40.0	-70	-50	4.0	—	—	16.0	12.0	10.0	10.0	P9894-ND	9.20	82.76	735.62	2758.56	5149.31	EFR-RSB40K5
S	Transmitter	40.0	—	—	4.0	105	20	16.0	12.0	10.0	10.0	P9895-ND	9.20	82.76	735.62	2758.56	5149.31	EFR-TSB40K5
U	Transmitter	40.0	—	—	4.0	110	20	16.0	12.0	10.0	10.0	P9851-ND	5.60	50.40	448.00	1680.00	3136.00	EFR-OUB40K22

More Product Available Online: [www.digikey.com](http://www.digikey.com)