

# Ultrasound System - NEW

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# Ultrasound System - NEW

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## VISHAY Components used for Ultrasound System include:

- o Power MOSFETS
  - o Switching Diodes and Rectifiers
  - o Capacitors
  - o Resistors
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## Application Overview

An Ultrasound System is used in medical application for sonography. It allows to show real time video and also can give acoustic information. Ultrasound Systems are designed to be connected to a plug as well as to be powered by a 12V battery. Modern systems also have connections to the digital patient database system.

## Ultrasound System - NEW : Communication, USB interface

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### Analog Switch

Product Name	Status	Description	Features	Package	Q-Level
<a href="#">DG2730</a>		2 Port, USB 2.0 High Speed (480 Mbps) Switch	Low Power Consumption	miniQFN-10	

### ESD Protection

Product Name	Status	Description	Features	Package	Q-Level
<a href="#">VBUS052CD-FAH</a>		2-Line BUS-Port ESD Protection	Low load capacitance CD = 0.8 pF	LLP1713-7L	

# Ultrasound System - NEW : Communication, Wi-Fi

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## RF MLCCs

Product Name	Status	Description	Features	Package	Q-Level
<a href="#">QUAD HIFREQ</a>		Surface Mount Multilayer Ceramic Capacitors	Ultra-stable, high Q dielectric material	0505, 1111, 2525, 3838	

## Ultrasound System - NEW : HMI, Audio

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### Analog Switch

Product Name	Status	Description	Features	Package	Q-Level
<a href="#">DG401.403.405</a>		Low-Power, High-Speed	Low leakage - ID(on): 40 pA	16-Pin Plastic DIP 16-Pin Narrow SOIC	

## Ultrasound System - NEW : HMI, Control Element/Keyboard

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### Optical Sensor

Product Name	Status	Description	Features	Package	Q-Level
<a href="#">VCNT2020</a>		Reflective Optical Sensor With Transistor Output	Operating range within > 20 % relative collector current: 0.2 mm to 2.5 mm	Dimensions (L x W x H in mm): 2.5 x 2 x 0.8	

## Ultrasound System - NEW : HMI, Display

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### Diode

Product Name	Status	Description	Features	Package	Q-Level
<a href="#">SS2FH10</a>		Surface Mount Schottky Barrier Rectifiers	VF at IF = 2.0 A (TA = 125 °C) 0.63 V	SMF	

### Inductor

Product Name	Status	Description	Features	Package	Q-Level
<a href="#">IHLP-1616BZ-11</a>		IHLP Commercial Inductors	0.1µH...4.7µH, IDC_heat=12A...1.7A	1616	

### MOSFET

Product Name	Status	Description	Features	Package	Q-Level
<a href="#">SiS488DN</a>		N-Channel 40 V (D-S) MOSFET	RDS(on) (Ohm) (Max.)=0.0055	PowerPAK 1212-8	

## Ultrasound System - NEW : HMI, Printer

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### MOSFET

Product Name	Status	Description	Features	Package	Q-Level
<a href="#">SiA910EDJ</a>		Dual N-Channel 12 V (D-S) MOSFET	RDS(on) (Ohm) (Max.)=0.028 at VGS = 4.5 V	PowerPAK SC-70- Dual	

### Optical Sensor

Product Name	Status	Description	Features	Package	Q-Level
<a href="#">TCPT1300X01</a>		Subminiature Transmissive Optical Sensor with Transistor Output	Gap (in mm): 3	Dimensions (L x W x H in mm): 5.5 x 4 x 4	



## Ultrasound System - NEW : Power Supply, AC/DC

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### Bridge Rectifier

Product Name	Status	Description	Features	Package	Q-Level
<a href="#">KBL005...KBL10</a>		Single-Phase Bridge Rectifier	High case dielectric strength of 1500 VRMS	Case Style KBL	

### Rectifier

Product Name	Status	Description	Features	Package	Q-Level
<a href="#">S4PB, S4PD, S4PG, S4PJ, S4PK, S4PM</a>		High Current Density Surface Mount Rectifiers	Low forward voltage drop	SMPC	

## Ultrasound System - NEW : Power Supply, Battery Management

### MOSFET

Product Name	Status	Description	Features	Package	Q-Level
<a href="#">SUM60020E</a>		N-Channel 80 V (D-S) MOSFET	RDS(on) max. (Ohm) at VGS = 10 V 0.00210	TO-263	

### Precharge Resistor

Product Name	Status	Description	Features	Package	Q-Level
<a href="#">LTO 100</a>		Power Resistor Thick Film Technology	100 W at 25 °C case temperature heatsink mounted	TO-247	

### Voltage Divide Resistor

Product Name	Status	Description	Features	Package	Q-Level
<a href="#">ACAS 0606 AT</a> , <a href="#">ACAS 0612 AT</a> <a href="#">-Precision</a>		Precision Thin Film Chip Resistor Array	Rated dissipation P70 up to 125 mW per resistor	0606, 0612	

## Ultrasound System - NEW : Power Supply, DC/DC

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### microBUCK IC

Product Name	Status	Description	Features	Package	Q-Level
<a href="#">SiC414, SiC424</a>		microBUCK SiC414, SiC424 Integrated Buck Regulator with 5 V LDO	current ratings: 6A	PowerPAK MLP44-28	

### Polymer Capacitor

Product Name	Status	Description	Features	Package	Q-Level
<a href="#">T55</a>		vPolyTan™ Polymer Surface Mount Chip Capacitors	ultra low ESR	J, P, A, T, B, C, Z, V, D	

## Ultrasound System - NEW : Power Supply, Filter

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### X Filter Capacitor

Product Name	Status	Description	Features	Package	Q-Level
<a href="#">F1772 X2</a>		Interference Suppression Film Capacitor	Class X2 Radial MKT 310 VAC	lead pitch 15 mm to 37.5 mm	

### Y Filter Capacitor

Product Name	Status	Description	Features	Package	Q-Level
<a href="#">YY1 Compact Series</a>		AC Line Rated Ceramic Disc Capacitors	Class X1, 760 VAC, Class Y1, 500 VAC	diameter 7.5mm - 15.5mm	

## Ultrasound System - NEW : Power Supply, PFC

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### Diode

Product Name	Status	Description	Features	Package	Q-Level
<a href="#">VS-5EWL06FN-M3</a>		Ultralow VF Ultrafast Rectifier	5A FRED Pt	D-PAK	

### HIV MOSFET

Product Name	Status	Description	Features	Package	Q-Level
<a href="#">SiHH14N65EF</a>		E Series Power MOSFET	Fast Body Diode	PowerPAK 8x8	

## Ultrasound System - NEW : Ultrasound driver, HV supply piezo

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### AluCap

Product Name	Status	Description	Features	Package	Q-Level
<a href="#">182 CPHZ</a>		Hybrid Conductive Polymer Aluminum Capacitors SMD (Chip), Low Impedance	Rated capacitance range, CR 10 $\mu$ F to 330 $\mu$ F	5.0 x 5.0 x 5.8mm	

### MOSFET

Product Name	Status	Description	Features	Package	Q-Level
<a href="#">Si4590DY</a>		N- and P-Channel 100 V (D-S) MOSFET	N-channel: 0.057Ohm at 4.5VGS P-channel: 0.0183Ohm at 4.5VGS	SO-8 Dual	

## Ultrasound System - NEW : Ultrasound driver, Signal Conditioning

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### Resistor

Product Name	Status	Description	Features	Package	Q-Level
<a href="#">TNPW e3</a>		Precision Thin Film Chip Resistor	Rated dissipation P70 up to 125 mW	0606, 0612	