

# endrich news

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## OUR PRODUCT OF THE MONTH: ULTRA-WIDE & -HIGH INPUT VOLTAGE ISOLATED PV200-27BXX SERIES FOR NEW ENERGY



### FEATURES

- Ultra wide input voltage range: 250 - 1000 VDC
- 4000 VAC high isolation voltage
- Industrial grade operating temperature: -40 °C to +70 °C
- High efficiency, low ripple & noise
- Reverse input voltage protection, output short circuit, over current, over-voltage protection
- High reliability, long lifespan
- Meets EN62109 standards (pending)



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## EXTENSION OF THE IP68-PROTECTED FAN SERIES

ADDA has supplemented its IP68-protected axial fans with additional model series. In addition to the AQ series, the high-performance models of the AG, AS and AY series are now also available.

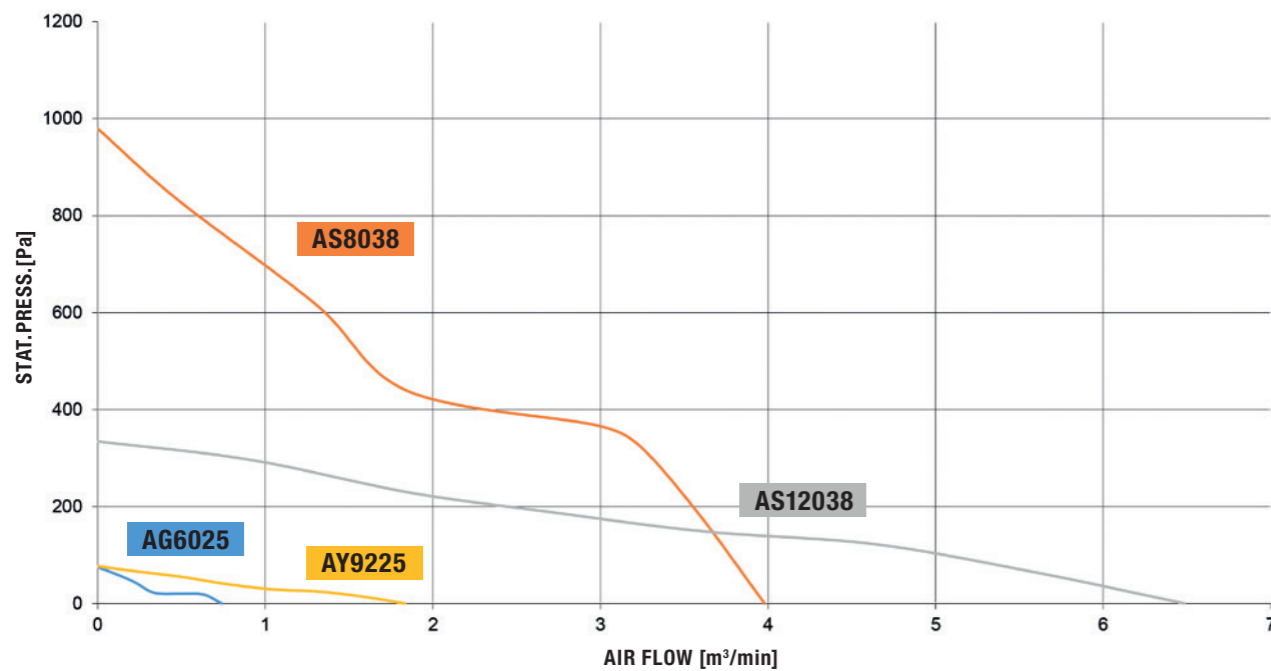
The special feature of this fan series is the complete encapsulation specially developed for these models, which reliably protect the fans against the ingress of impurities such as dust and water.

The IP code meets the DIN EN IEC 60529 standard and causes a hermetic separation of the motor and the integrated electronics from the elements (IP6x: protection against dust ingress, dustproof/IPx8: protection against permanent submersion).

Further advantages are the protection against electrical shock as well as the improvement of the thermal conductivity. In addition, stainless steel shafts are used in this series and the fans contain double shielded double ball bearings that are also made of stainless steel.



AY09212HB257100



P-Q-CHARACTERISTICS – mean performance models (additional curves available on request)

## EXTENSION OF THE IP68-PROTECTED FAN SERIES

SERIES	FRAME SIZE	MODEL NUMBER	RATED VOLTAGE	MAX. AIR FLOW	MAX. PRESSURE
<b>AQ-SERIE</b>					
AG6025	60 x 60 x 25 mm	AG06012DB257B03	12V	16.8 m³/h	12.9 Pa
	60 x 60 x 25 mm	AG06012LB257B03	12V	26.4 m³/h	27.7 Pa
	60 x 60 x 25 mm	AG06012MB257B03	12V	36.0 m³/h	50.3 Pa
	60 x 60 x 25 mm	AG06012HB257B03	12V	44.4 m³/h	74.3 Pa
	60 x 60 x 25 mm	AG06012UB257B03	12V	54.0 m³/h	110.9 Pa
AS8038	60 x 60 x 25 mm	AG06012XB257B03	12V	62.8 m³/h	155.0 Pa
	80 x 80 x 38 mm	AS08012LB385BB2	12V	160.3 m³/h	453.7 Pa
	80 x 80 x 38 mm	AS08012MB385BB2	12V	196.0 m³/h	670.5 Pa
	80 x 80 x 38 mm	AS08012HB385BB2	12V	230.5 m³/h	981.0 Pa
	80 x 80 x 38 mm	AS08024LB385BB2	24V	160.3 m³/h	453.7 Pa
	80 x 80 x 38 mm	AS08024MB385BB2	24V	196.0 m³/h	670.5 Pa
	80 x 80 x 38 mm	AS08024HB385BB2	24V	230.5 m³/h	981.0 Pa
	80 x 80 x 38 mm	AS08048LB385BB2	48V	160.3 m³/h	453.7 Pa
	80 x 80 x 38 mm	AS08048MB385BB2	48V	196.0 m³/h	670.5 Pa
	80 x 80 x 38 mm	AS08048HB385BB2	48V	230.5 m³/h	981.0 Pa
AS12038	120 x 120 x 38 mm	AS12012DB389B00	12V	191.9 m³/h	85.5 Pa
	120 x 120 x 38 mm	AS12012LB389B00	12V	260.1 m³/h	160.2 Pa
	120 x 120 x 38 mm	AS12012MB389B00	12V	323.7 m³/h	236.7 Pa
	120 x 120 x 38 mm	AS12012HB389B00	12V	387.7 m³/h	333.9 Pa
	120 x 120 x 38 mm	AS12024DB389B00	24V	191.9 m³/h	85.5 Pa
	120 x 120 x 38 mm	AS12024LB389B00	24V	260.1 m³/h	160.2 Pa
	120 x 120 x 38 mm	AS12024MB389B00	24V	323.7 m³/h	236.7 Pa
	120 x 120 x 38 mm	AS12024HB389B00	24V	387.7 m³/h	333.9 Pa
	120 x 120 x 38 mm	AS12048DB389B00	48V	191.9 m³/h	85.5 Pa
	120 x 120 x 38 mm	AS12048LB389B00	48V	260.1 m³/h	160.2 Pa
120 x 120 x 38 mm	AS12048MB389B00	48V	323.7 m³/h	236.7 Pa	
120 x 120 x 38 mm	AS12048HB389B00	48V	387.7 m³/h	333.9 Pa	
AY9225	92 x 92 x 25 mm	AY09212HB257100 (V59T)	12V	109.8 m³/h	76.7 Pa

The fans are suitable for air supply and other subjects of similar density under harsh environmental conditions up to IP68. Typical applications are e.g. professional refrigerated display cases and steamers, but also frequency converters or servo drives, as well as electro mobility.

- Dust-tight according to IEC 60529: IP6x not certified
- Waterproof according to IEC 60529: IPx8 not certified

Certificates and prices are available on request. Testing and certification are chargeable.

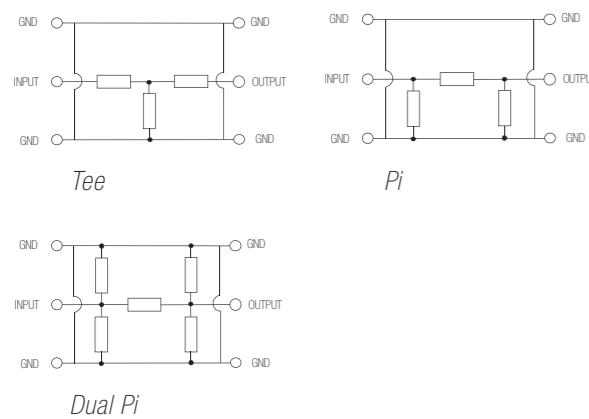
**PRE-ANNOUNCEMENT:  
ATS-SERIES: HIGH FREQUENCY CHIP ATTENUATORS**

**UNDER DEVELOPMENT**



Thin film expert Susumu pre-announces the new ATS-series which are thin film chip attenuators with extended frequency range up to 30GHz. ATS series offers attenuation between 0-10 dB. Thin film chip attenuators offer lowest noise, best long term and frequency stability. By Susumus unique production process with photolithographic principle to create a fine pattern, it is possible to realize Tee-, Pi- and dual-Pi circuits on 2012 (0805) chip size.

**CIRCUIT DIAGRAM**



**FEATURES**

- 2012 EIA standard case size
- Attenuation values between 0-10 dB
- DC-30GHz performance
- Ni-alloy thin -film resistive elements
- Ground-Signal-Ground (GSG), Land Grid Array (LGA) construction
- Immersion gold over Ni terminations (RoHs compliant and Pb Free)

**APPLICATIONS**

- Wireless communication devices
- Wireless communication modules
- HF test equipment

ATTENUATION		TYPE (CIRCUIT DIAGRAM)		FREQUENCY RANGE	ATTENUATION TOLERANCE	IMPEDANCE	POWER RATING	RETURN LOSS	PACKAGING QUANTITY
0-10 in 1.0 dB steps	0 dB	Thru		DC - 30GHz	± 0.25 dB (DC - 10 GHz)	50 Ω	100 mW	≤ 25 dB (DC - 10 GHz)	Reel T1 = 1,000 pcs T05 = 500 pcs
	1 - 2dB	Tee	± 0.5 dB (10 GHz - 20 GHz)		≤ 20 dB (10 GHz - 20 GHz)				
	3 - 7dB	Pi	± 0.75dB (20 GHz - 30 GHz)		≤ 15 dB (20 GHz - 30 GHz)				
	8 - 10 dB	Dual Pi							

**250 - 1000 VDC ULTRA-WIDE & ULTRA-HIGH INPUT VOLTAGE ISOLATED PV200-27BXX SERIES FOR NEW ENERGY**

MORNSUN added 200 W PV200-27Bxx to PV series to further meet customer demand for higher powers, based on 5 - 40 W ultra-wide & ultra-high input voltage DC/DC PV05/PV10/PV15/PV40 series, which are widely used in new energy-related photovoltaic, energy storage BMS, high voltage inverter and other industries. The new series PV200-27Bxx has the following advantages:

**1) Ultra-wide & ultra-high input voltage, high power, high efficiency**

PV200-27Bxx series provide a wide input voltage range of 250 - 1000 VDC, power up to 200 W to meet higher demands for high-power power supply in ultra-wide and ultra-high input voltage application, and high efficiency up to 87 %, low power consumption and more energy-saving.

**FEATURES**

- Ultra wide input voltage range: 250 - 1000 VDC
- 4000 VAC high isolation voltage
- Industrial grade operating temperature: -40 °C to +70 °C
- High efficiency, low ripple & noise
- Reverse input voltage protection, output short circuit, over-current, over-voltage protection
- High reliability, long lifespan
- Meets EN62109 standards (pending)

**2) Complete protection, high reliability**

PV200-27Bxx series have input voltage protection to avoid frequent restart of system to maintain the system's stability. Offering MTBF over 300,000 h, they have reverse input voltage protection, output short circuit, over-current and over-voltage protection. These protections greatly reduce the probability of failure of the power supply itself while greatly enhance the safety performance of the module power supply and the load under abnormal working conditions.

**3) CE certified (pending)**

PV200-27Bxx series meet EN62109 standards (pending) with a certified voltage of 1000 VDC. The series offers isolation voltage up to 4000 VAC and high reliability, to effectively protect the safety of the system.

**APPLICATIONS**

- Photovoltaic power generation, stored energy and high voltage frequency conversion, etc.



High efficiency, high reliability and high safety isolation DC/DC converter



Coming soon - PV200-29B24 for an even wider and higher input voltage of 300 - 1500 VDC

## PRODUCT LINEUP – PART 2

The explosive growth in Internet-connected devices, or the Internet of Things (IoT), is driven by the convergence of people, device and data across the web. The IoT revolution means that everything from kitchen oven via medical systems to industrial production line, will reliably operate and connect.

Future growth will be strongly influenced by portable and wearable technology as products transition from the laptop to the sensor actuator or pocket to a data collector or the body and reverse. Several standards are established to

connect notes. Experts estimate that IoT will consist of about 18 billion "things" by 2022. Portable in most cases means wireless. And everyone expects the best from this technology. Being connected and having access to information is taken for granted. 2.4 GHz is by today the most used frequency band for wireless standards of short range communication.

But did you know that connectivity relies heavily on timing and filtering?

P/N	FREQUENCY	LOAD CAPACITANCE	TOLERANCE	SIZE	NOTE
<b>WIFI / BT XTAL</b>					
TZ3023A	24 MHz	7 pF	± 10 ppm	1.6 x 1.2 mm	
TZ3126A	26 MHz	7 pF	± 5 ppm	1.6 x 1.2 mm	
TZ1987A	37.4 MHz	16 pF	± 10 ppm	1.6 x 1.2 mm	
TZ2936A	48 MHz	9 pF	± 15 ppm	1.6 x 1.2 mm	
TZ1325D	26 MHz	8 pF	± 10 ppm	2.0 x 1.6 mm	
TZ2947A	26 MHz	10.5 pF	± 7 ppm	2.0 x 1.6 mm	
TZ2901B	37.4 MHz	8 pF	± 10 ppm	2.0 x 1.6 mm	
TZ2323C	48 MHz	7 pF	± 7 ppm	2.0 x 1.6 mm	
TZ2980A	24 MHz	15 pF	± 10 ppm	2.5 x 2.0 mm	
TZ2300A	26 MHz	11.5 pF	± 7 ppm	2.5 x 2.0 mm	
TZ3048B	26 MHz	9 pF	± 50 ppm	2.5 x 2.0 mm	
TZ0661E	26 MHz	9 pF	± 10 ppm	2.5 x 2.0 mm	
TZ1478A	40 MHz	10.5 pF	± 10 ppm	2.5 x 2.0 mm	
TZ0977B	40 MHz	15 pF	± 10 ppm	2.5 x 2.0 mm	
TZ2650E	40 MHz	12 pF	± 5 ppm	2.5 x 2.0 mm	
TZ2968C	40 MHz	11.5 pF	± 7 ppm	2.5 x 2.0 mm	wide temp range to +105 °C
TZ0502D	20 MHz	18 pF	± 10 ppm	3.2 x 2.5 mm	
TZ2102A	26 MHz	13.5 pF	± 10 ppm	3.2 x 2.5 mm	
TZ1421A	40 MHz	15 pF	± 10 ppm	3.2 x 2.5 mm	
TZ0475B	40 MHz	15 pF	± 10 ppm	3.2 x 2.5 mm	
TZ2855A	40 MHz	10.5 pF	± 7 ppm	3.2 x 2.5 mm	
TZ3075A	40 MHz	12 pF	± 10 ppm	3.2 x 2.5 mm	
TZ2746A	40 MHz	11.5 pF	± 7 ppm	3.2 x 2.5 mm	
TZ1596E	40 MHz	10.5 pF	± 10 ppm	3.2 x 2.5 mm	AEC-Q200
TZ2145C	52 MHz	12 pF	± 5 ppm	3.2 x 2.5 mm	
TZ2486A	16 MHz	8 pF	± 10 ppm	2.0 x 1.6 mm	Low profile
TZ2701A	32 MHz	12 pF	± 10 ppm	2.5 x 2.0 mm	
TZ3266A	38.4 MHz	10 pF	± 10 ppm	1.6 x 1.2 mm	

## PRODUCT LINEUP – PART 2

Because short range communication devices using the ISM bands are limited to certain bands of frequencies, filtering and precise clocking is important to fulfil the specific radio regulations'- and normative.

With the PRODUCT LINEUP – PART 2 we focus on timing and filtering components for 2.4 GHz applications as WiFi, BTM, Lora etc.. 2.4 GHz is by today the most used frequency band of those wireless standards for short range communication.

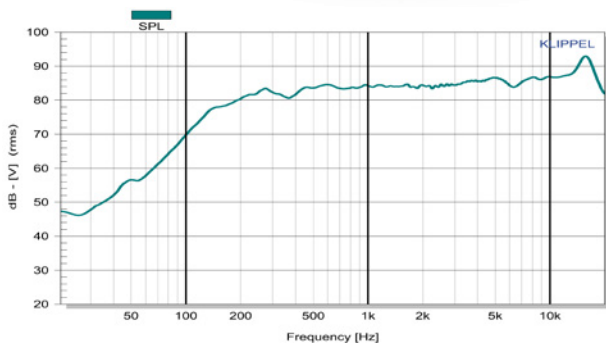
P/N	FREQUENCY	VOLTAGE	TOLERANCE	SIZE	NOTE
<b>WIFI TCXO/XO</b>					
TW0523A	24 MHz	1.8V	± 25 ppm	2.0 x 1.6 mm	
TW0296D	26 MHz	1.8V	± 10 ppm	2.5 x 2.0 mm	low phase noise
TW0511A	80 MHz	3.3V	± 20 ppm	2.5 x 2.0 mm	
TW0517A	37.4 MHz	1.8V	± 50 ppm	2.5 x 2.0 mm	
TW0473C	40 MHz	2.5V	± 10 ppm	3.2 x 2.5 mm	low phase noise
TW0521A	25 MHz	3.3V	± 50 ppm	7.0 x 5.0 mm	EMI reduction / Spread Spectrum
TX0439C	24 MHz	1.68 ~ 3.0V	± 2 ppm	3.2 x 2.5 mm	
TX0546C	26 MHz	2.8V	± 2 ppm	2.0 x 1.6 mm	
TX0617D	26 MHz	2.3V	± 0.5 ppm	2.5 x 2.0 mm	
TX0341E	26 MHz	2.0V	± 2 ppm	3.2 x 2.5 mm	
TX0359B	40 MHz	2.5V	± 8 ppm	3.2 x 2.5 mm	CMOS

P/N	FREQUENCY	BAND WIDTH	INSERTION LOSS	SIZE	NOTE
<b>WIFI / BT FILTER</b>					
TA2105A	2442 MHz	79 MHz	2.5 dB	1.1 x 0.9 mm	WiFi / LTE co-existence / BAW
TA1218A	2436 MHz	72 MHz	3.0 dB	1.4 x 1.1 mm	
TA1834A	2441.75 MHz	83.5 MHz	3.0 dB	1.4 x 1.1 mm	
TA1468A	2441.8 MHz	83.5 MHz	1.6 dB	1.4 x 1.1 mm	
TA1869A	2442 MHz	79 MHz	1.9 dB	1.4 x 1.1 mm	WiFi / LTE co-existence / BAW
TA1629A	2450 MHz	100 MHz	1.6 dB	1.4 x 1.1 mm	
TA0222A	2442 MHz	55 MHz	1.9 dB	3.0 x 3.0 mm	AEC-Q200
TA0223A	2441.8 MHz	83.5 MHz	2.1 dB	3.0 x 3.1 mm	AEC-Q200
TA2269B	2441.75 MHz	83.5 MHz	-	1.4 x 1.1 mm	TC-SAW (R&D)
TA2104B	2441.75 MHz	83.5 MHz	-	1.1 x 0.9 mm	TC-SAW (R&D)
TL0009A	2450 MHz	100 MHz	-	2.0 x 1.25 mm	Bluetooth, wireless LAN Notch filter
TL0010A	2450 MHz	100 MHz	1.7 dB	1.6 x 0.8 mm	WiFi Multi Layer
TL0011A	5425 MHz	1050 MHz	-	2.0 x 1.25 mm	W-LAN LTCC Filter
TL0012A	5235 MHz	180 MHz	-	8.6 x 4.05 mm	Dielectric Filter
TL0013A	5697 MHz	360 MHz	-	8.6 x 3.95 mm	Dielectric Filter

## FULL RANGE LOUDSPEAKERS

Vansonic Enterprise Co., Ltd. (VECO) introduces his full range loudspeakers with a wide, flat and balanced frequency response. Suitable for applications with high quality reproduction of speech, melodies and acoustic signals. Its mounting holes makes it easy to mount them in every suitable application.

32KUG08XNT

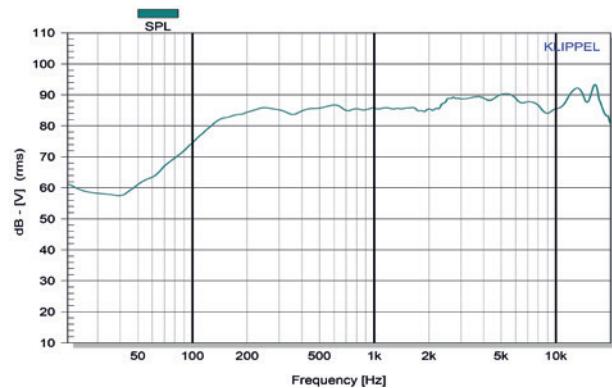


### FEATURES OF FULL RANGE LOUDSPEAKERS

- Dimension (square and round type) between 32 mm and 50 mm
- Height between 16,5 mm and 24,9 mm
- Different impedance on request
- Nominal power between 3 W and 5 W
- Temperature range -40 ~ +85 °C
- Frequency range from 200 Hz to 20 kHz



50CUG04HXE



### APPLICATIONS

- Portable handheld devices
- White goods
- Medical healthcare
- Industry devices
- Measuring devices
- Communication devices

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