



Aerospace
& Defence

Lighting

Power
Management

Internet
of Things

Transportation

Components – EMEA

PEMCO News – 2nd Quarter 2018





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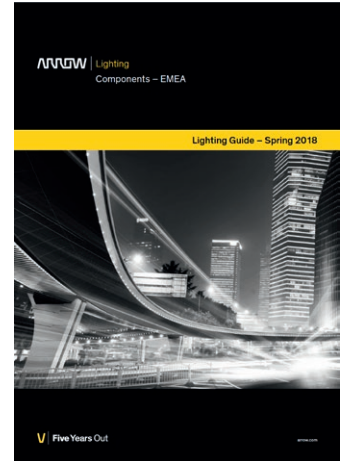
Transportation

Components – EMEA

Lighting Guide

The advent of LED lighting has provided more consistent and positively scalable lighting outcomes. LEDs offer huge energy savings, design flexibility, and reliability, and are now entering nearly every application in the built environment. Arrow is the Global Distributor with the full capability, offering the end-to-end support through a solution approach, staying flexible at the same time and leave the customer the full control of the IP.

To receive your copy of the Lighting Guide please contact your Arrow sales representative.



Sensor Guide

As an enabling technology for the IoT, sensors are one of today's fastest growing product areas, with the sensor specification often the starting point for a design. Whether you are looking for a board level component, packaged product, encapsulated wireless sensor, or complete end to end IoT system, we are confident Arrow will have a solution that works for you, with the tools, expertise and partners to get you to market as quickly as possible.

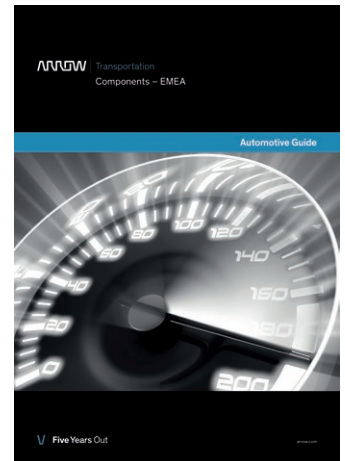
To receive your copy of the Sensor Guide please contact your Arrow sales representative.



Automotive Guide

Transportation and the automotive industry. At its core, it's about how people get from point A to point B. But for Arrow, it's about how we help drive the next wave of innovation. Not since Henry Ford's assembly line has there been a more transformative time in the automotive industry.

To receive your copy of the Automotive Guide please contact your Arrow sales representative.



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Arrow's performance results in three awards including overall prize

Arrow Electronics recognised as TE Connectivity's EMEA distributor of the year

Arrow Electronics was named EMEA Distributor of the Year by TE Connectivity (TE), a global leader in connectivity and sensors.

Presented at TE's regional summit in Bad Neuenahr, Germany, this honour recognizes Arrow's success throughout 2017, and was awarded based on strategic criteria that align with TE's initiatives and priorities, including sales growth, business plan realization, customer growth and training course completions.

In addition to the overall award, Arrow was presented with TE's EMEA Sales Growth Award for leading TE's EMEA region in sales growth and TE's EMEA New Design Wins Award for implementing TE products into new designs.

Close collaboration between Arrow's engineering support teams and the sales and marketing staff at its extensive network of branches played a crucial role in the company's results.

"These awards are all based on the figures achieved – the numbers tell the story of a highly successful year for TE and Arrow together", said Matthias Hutter, vice president of supplier marketing and product management at Arrow's components business in EMEA. "We are proud of our success, which is based on the work done during a long and fruitful association with TE."



Marino Bosco, Technology and Supplier Business Manager, Arrow Electronics (centre, holding award) with Craig McDonnell, VP Global Sales, TE Connectivity on left and Axel Prauss, Director Marketing PEMCO, Arrow, on right.

Twist Tail® Cable Tie – No Tool Needed!

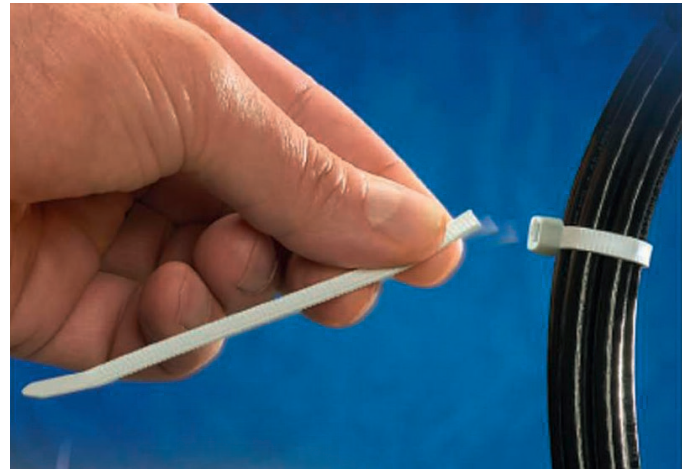
Looking for a cable tie fast and easy to install, without using an extra tool? How does it work? Wrap the Twist Tail® cable tie around the bundle of cables, bend the excess tail in two directions and twist! The tail breaks right off, leaving no sharp edges to scratch your hands or your cables. It's as simple as that.

Features & Benefits

- All-plastic cable tie, with unique, patent pending design
- Quick and easy to install, no tools required
- Strong, made of Polyamide 6.6, with 133N minimum tensile strength
- Safe, tail breaks off neat and clean, with no sharp edges
- General purpose applications, indoor and outdoor
- UL recognised
- Available in 3 different lengths and 2 colours (white and UV-resistant black)

Technical Information

- Material Polyamide 6.6
- Temperature max. +85°C
- Colour White or UV-resistant black
- Flammability rating UL 94 V-2
- Other properties Halogen free, Silicone free, UV resistant (black)



ORDERABLE PART NUMBERS

- TT-7-30-0-L-EU
- TT-7-30-9-L-EU
- TT-11-30-0-L-EU
- TT-11-30-9-L-EU
- TT-14-30-0-L-EU
- TT-14-30-9-L-EU

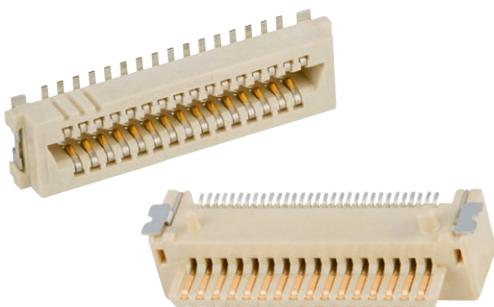
Conan® 1.00 mm Connector

Secure, High Speed Design for Harsh Environments

Amphenol's Conan® 1.00 mm is a mezzanine connector designed for industrial applications and harsh environments. Its unique design with an audible 'click' sound enhances the security and ease of use. With new Right Angle configurations in 4 pin counts it has a compact size with a depth of 8.5 mm and height of 5.3 mm on the PCB after mating.

Applications

Communications & Networking Equipment



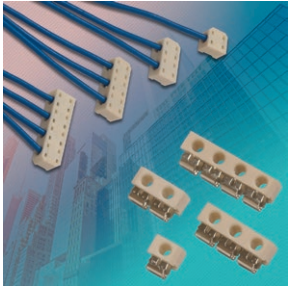
Features & Benefits

- Vertical configuration 9 to 69 positions and 4.15 to 7.0 mm stack heights increment
- Right angle configuration in 31, 41, 51, 69 position increments
- Vertical housing and terminal profile guarantees support up to 5Gb/s
- Compatible with PCIe® Gen 2 high speed performance on selected stack heights
- Vertical versus vertical mating configuration for parallel board stacking applications
- Vertical receptacle versus RA header mating configuration for perpendicular stacking applications
- Polarization feature of housing prevents mismatching
- RoHS compliant and lead free

ORDERABLE PART NUMBERS

- 10138400-111131LF
- 10138400-111141LF
- 10138400-111151LF
- 10138400-111169LF

Low Profile IDC Connectors 22–26 AWG



The 9176-800 series specifically developed for size critical applications. Reducing the height by 1.0mm and the overall volume by up to 50%, this new package size with only 2.5mm height is an ideal choice in space constrained applications over previous IDC connectors.

Key Features

- Redundant and fatigue resistant phosphor bronze material provides a gas tight, cold welded connection
- IDC connectors can be potted or over molded to encapsulate electronic modules and provide environmental protection
- Size range 1-4 positions, current rating up to 6 Amps. Version 1p available in industry standard colors, to match wires color

Applications

- Connecting discrete wires components to a PCB
- Industrial, Lighting, Medical, Transportation

ORDERABLE PART NUMBER

- Series 9176-800

BTB Jumper & WTB Poke-Home 2.5 mm



The BTB Jumper 10-9296 series has been developed in conjunction with the 2.5mm STRIPT™ 70-9296 contact. The new system provides additional mating tolerance absorption over traditional connector systems. With 2.5mm Poke-Home contact without a wire stop, the pin header is allowed to pass straight thru the contacts until the final dimension is achieved.

Key features

- Two different pin lengths (26 & 38.1 mm) to accommodate BTB and Module-to-Module connections
- Unique geometry of the insulator lends itself to water tightness when matched with a housing cavity. Current rating is 9Amps

Applications

- Single or dual pin connection between linear PCB's
- 38mm pin for modules to be connected with PCB recessed in plastic housing

ORDERABLE PART NUMBERS

- Series 10-9296 (BTB Jumper)
- Series 70-9296 (WTB Poke-Home)

HellermannTyton

FlexTack Cable Tie Mount for Curved Applications

Self-Adhesive Flexible Mount for Routing on Round or Angled Surfaces

The FlexTack cable tie mount is an innovative fixing solution for professional cable management along concave, convex and moderately angled surfaces, or where drilling a hole is not practicable.

The special acrylate-based adhesive provides a strong reliable bond on low energy plastic surfaces such as polypropylene and polyethylene as well as painted, varnished or metallic surfaces. FlexTack can be used long-term up to +105 °C and offers good weathering resistance, making it suitable for a wide range of indoor and outdoor applications.

The flexible self-adhesive mount gives engineers greater freedom of action in challenging routing scenarios, for example in electrical and switching cabinets.



ORDERABLE PART NUMBER

- FMB4APT-I 151-01527 (black); 151-01528 (white)

Bourns AEC-Q200 Compliant Power Inductor Series

Bourns Inductive Components Product Line has several Power Inductor Series that are AEC-Q200 compliant. These inductor series are manufactured with a metal alloy powder core featuring high saturation current, low DC resistance, wide operating temperature and shielded construction for low magnetic radiation.

Typical automotive applications for these inductors include driver assistant devices, information/entertainment systems, lighting and other applications including DC/DC converters and power supplies.

AVAILABLE PRODUCT SERIES

Power Inductors – AEC-Q200 Compliant

- SDExxxxA
- SDRxxxxA
- SRFxxxxA
- SRNxxxxTA
- SRNxxxxA
- SRPxxxxA
- SRRxxxxA
- SRUxxxxA



Latest Bourns® Multifuse® and SinglFuse™ Products

The Bourns® Multifuse® Models MF-USML, MF-NSML, and MF-PSML Series of Polymeric Positive Temperature Coefficient (PPTC) resettable fuses are used in a wide variety of circuit protection applications.

Features

- Tape & reel packaging
- Industry standard sizes
- freeXpansion™ Design

Applications

- Computers and peripherals
- General electronics
- Battery protection

The Bourns® SinglFuse™ models SF-1206FP, SF-1206SP, SF-0603FP, SF-0603SP and SF-0402FP series thin film chip fuses provide overcurrent protection in three surface mountable footprint sizes of 0402 (1005 metric), 0603 (1508 metric) and 1206 (3216 metric). This comprehensive line of thin film chip fuses covers diverse applications such as LCD monitors, digital cameras, cell phones, industrial controllers and rechargeable battery packs.

Features

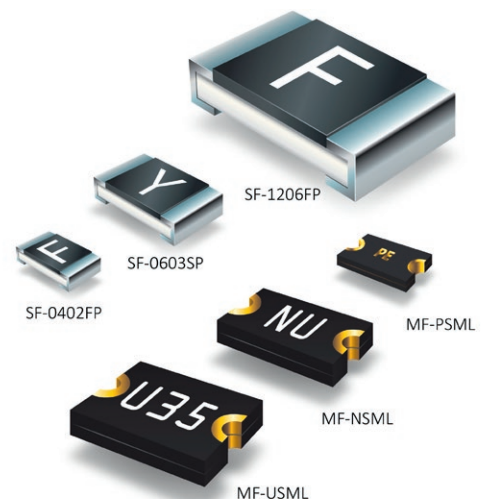
- Fast acting precision and time lag thin film chip fuses for overcurrent protection
- 1206, 0603, and 0402 footprints
- Surface mount packaging for automated assembly

Applications

- Portable memory/LCD monitors/Disk drives/PDAs
- Digital cameras/DVDs/Cell phones/Rechargeable battery packs
- Battery chargers/Set-top boxes/Industrial controllers

AVAILABLE PRODUCT SERIES

- MF-USML
- MF-NSML
- MF-PSML
- SF-1206FP
- SF-1206SP
- SF-0603FP
- SF-0603SP
- SF-0402FP



High Power Current Sense Resistor Families

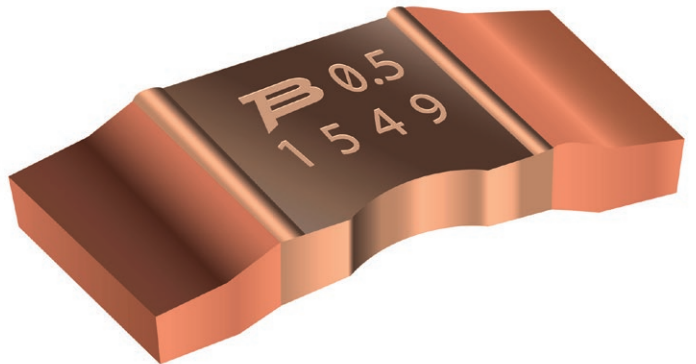
The Bourns® Model CSS Series comes in both 2-terminal and 4-terminal options. The popular 2-terminal models are available in three different footprint sizes, 5930, 3920 and 2512 (6332 Metric).

With resistance values as low as 0.5 mΩ, each family will have a range of low resistance options and power ratings of up to 9 W.

Current sense resistors are growing in popularity due to their high measurement accuracy and relatively low cost compared to other technologies. These resistors detect and convert current to an easily measured voltage which is proportional to the current through the device.

The 4-terminal designs allow for high precision 4 kelvin resistance measurements. Their metal alloy current sensing element allows for low thermal EMF and low TCRs of 50 PPM/°C in the 20 °C to 60 °C temperature range.

This new family complements Bourns' other circuit conditioning components, such as power inductors and rectifier diodes.



ORDERABLE PART NUMBERS

- CSS2H-2512
- CSS2H-3920
- CSS2H-5930
- CSS4J-4026



ANTENNAS BY **ABRACON**® LLC

THE RIGHT ANTENNA MAKES ALL THE DIFFERENCE

CONNECTIVITY SOLUTIONS FOR AN IOT FUTURE.

Abracón's wide range of high performance IoT antennas are designed for connectivity in the IoT. Contact an Abracón representative today to get connected to the future.

 <p>AMCA31-2R450G-SIF-T WLAN/Bluetooth Chip Antenna 3.2 x 1.6 x 1.2 mm Power Handling 3W Max</p>	 <p>APAM1268JL02V2.0 GPS Internal Active Patch 12.0 x 12.0 x 6.8 mm Internal LNA with 18dBi Gain</p>	 <p>ACAJ-110 Dualband Chip Antenna 9.0 x 3.0 x 1.2 mm Dual band 868/915MHz for ISM/LPWA/LoRa/Sigfox</p>
 <p>APAMPSLJ-140 4G/LTE + 2G/3G + WiFi + GPS Blade Antenna 196.0 X 38.0 X 13.8 mm</p>	 <p>APAMPG-117 GPS+GLONASS Active Antenna 44 x 14.5 mm LNA Gain of 30 dB</p>	



APPLICATIONS

- | | |
|--------------------------------|-------------------------|
| · Industrial & Home Automation | · LPWA/LoRa/Sigfox |
| · Wearables & IoT | · Automotive Navigation |
| · VR/AR | · Tracking Systems |
| · Set-Top Box | · RTLS |

TO LEARN MORE, VISIT ABRACON.COM

Windowless PIR Sensor

As the IoT market grows, sensors are taking greater importance and play a key role in these devices. The PIR sensor, short for pyroelectric infrared sensor, is a movement sensor detecting human presence. Its primary function induces great energy saving in household equipment, home appliances or office automation equipment. Ordinary infrared ray sensors emit infrared light and react to the reflection of objects. It keeps reacting as long as the objects or people are in the infrared light.

KEMET PIR sensor detects humans because its piezoelectric ceramic absorbs the infrared **rays** emitted from human body and can thus detect the infrared signature naturally emitted by humans. So here the detection works on a wider area and is not restricted to a ray's path. Another main feature of **KEMET** PIR sensor is that it can detect infrared rays without using lenses, which are essential for other infrared sensors. Other ordinary PIR sensors need protruding lenses, the projection housing distorts the design of the device. Due to the absence of a lens, **KEMET** PIR sensor is low profile, it does not protrude, which make it ideal for demanding visual requirements. For ordinary PIR sensors it is not possible to detect humans through glass or plastic. With our proprietary piezoelectric ceramic material and element structure of the **KEMET** PIR sensor, it can detect humans through glass. This gives more freedom in the design of the outer appearance of the device.

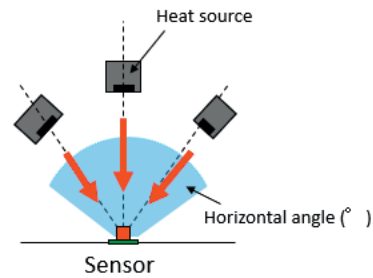
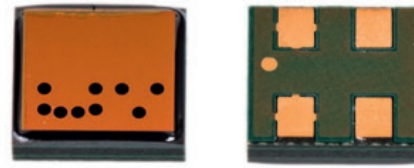
Features

- Reflow capable SMD configuration
- Wide view angle of $\pm 60^\circ$
- Low power consumption in a μA range
- Excellent radio wave performance in HF band
- Compact and low profile [5×4.8×1.7 mm]

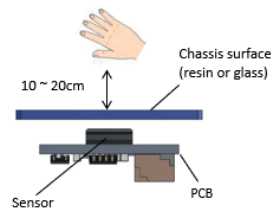
KEMET supply fully modular solutions that incorporate the sensor and the microcontroller as well as the sensor itself and a type with flat lens, which enables longer distance detection. The standard configuration detects the middle range up to 2 meters, the high sensitivity model SS-431 for short distance detection through glass or resin and finally, the long distance model, incorporating a flat lens, reaching out up to 5 meters. Having a non-obtrusive motion sensor will increasingly become the norm in many applications in home equipment, home appliances or office automation equipment. **KEMET** PIR sensor constitutes the ideal detection support for aesthetic solutions.

ORDERABLE PART NUMBER

- PL-N823-01

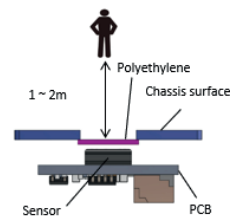


Non contact switch



Detecting distance will vary by the chassis material used.

Common application



Detecting distance increased to a few meters by using a polyethylene plate.

Automotive-Grade Precision Milliohm Metal Plate SHUNT Resistors – TLR Series

KOA has expanded its metal plate current detecting resistor portfolio by adding further standard resistance values and offering increased power ratings.

The TLR high power resistors are now offered in the ultra-low resistance range 0.5 mΩ...20 mΩ and allow power ratings up to 3 W at +110 °C terminal temperature.

The metal alloy element provides superior corrosion and heat resistance, perfect pulse resistance and shows excellent high-frequency characteristics.

Features & Benefits

- 0.5 mΩ to 20 mΩ
- 1 W (0805 inch) to 3 W (2512 inch)
- T.C.R.: ±50/±75 ppm/K
- Current ratings up 77 A
- Special no 'hotspot' trimming for higher reliability
- Low parasitic inductance
- Filletless product (soldering area is only the bottom electrode)
- AEC-Q200 qualified



Applications

- Automotive electronics
- Motor control units
- Power steering (EPS)
- Power supplies
- AC/DC-DC power converters
- Metering
- CPU current sensing

ORDERABLE PART NUMBERS

- TLR2ATTDxxxxF (0805 inch, 2 mΩ...10 mΩ, ±1 %, 1 W)
- TLR2BWDTDxxxxF (1206 inch, 0.5 mΩ...20 mΩ, ±1 %, 1 W)
- TLR2BPDTDxxxxF (1206 inch, 0.5 mΩ...20 mΩ, ±1 %, 1.5 W)
- TLR2HWDExxxxF (2010 inch, 0.5 mΩ...10 mΩ, ±1 %, 2 W)
- TLR3APDTExxxxF (2512 inch, 0.5 mΩ...10 mΩ, ±1 %, 3 W)

Anti Sulfuration Thick Film Resistors – x_RT Series

KOA's anti-sulfuration resistors are designed to be used in harsh environments where high levels of sulfur contamination gases are present.

Sulfuration-proof materials are used in the construction of the part which means that KOA's x_RT are able to achieve an extremely high level of sulfuration-proof performance, which in turn means that equipment failure rate, when used in high sulfur environments, is reduced.

Features & Benefits

- Excellent anti-sulfuration characteristic due to using high-sulfuration-proof inner top electrode material
- Available for most KOA thick film resistor ranges
- Ideal for use in harsh environments
- AEC-Q200 qualified

Applications

- Industrial control systems
- Automotive electronics
- Medical equipment
- Electrical instrumentation
- Power meter/conditioner
- Solar/wind inverter circuits
- Avionics



Resistor failure due to the effects of sulfuration. Picture shows silver sulfide (Ag₂S) needle crystal growth.

ORDERABLE PART NUMBERS

- RK73B/H_RT: General purpose
- RK73Z_RT: Jumper
- RK73G_RT: High precision
- RS73_RT: High precision and high reliability
- SG73(S/P)_RT: Anti Surge
- WK73(S/R)_RT: Wide terminal
- SR73_RT: Low ohm thick film
- HV73(V)_RT: High voltage
- CN_RT: Network arrays

1 W Regulated SMT DC-DC Converter

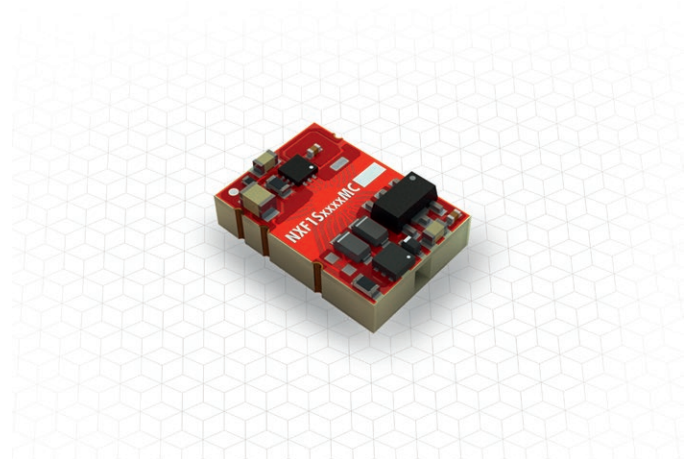
Murata has expanded its product range of embedded-core technology DC-DC converters with the NXF1 series, a cost effective, fully regulated, high isolation converter with 3.3 or 5V outputs from Murata Power Solutions. Inputs available are nominal 3.3 and 5V in an industry-standard surface-mount package with a uniquely low profile. Line regulation is typically better than 0.03% and load regulation typically better than 0.5%. All parts have continuous short circuit protection with auto re-start or latch-off depending on model and temperature. Input range is +/-5% around the nominals of 3.3 and 5V.

Parts are 100% production tested to 3kVDC and have agency recognition pending for 'basic' protection at 250Vrms and 'reinforced' protection at 125Vrms to UL60950. Medical recognition to ANSI/AAMI ES 60601-1 is also pending for 2 MOOPs (Means Of Operator Protection) and 1xMOPP (Means Of Patient Protection) at 125Vrms and 1 MOOP (Means Of Operator Protection) based upon a working voltage of 250Vrms max, between Primary and Secondary.

Typical applications for these converters are in systems where agency-recognized isolation is required with tight output regulation as is needed in power for remote pressure, hall-effect, mass airflow and other sensors. Markets addressed include alternative energy/ solar power, transportation, telecom/wireless equipment and medical.

"The NXF1 series is an exciting new product which builds on our unique embedded magnetic core technology giving our customers great electrical and isolation performance with hassle-free placement at a competitive price" said Ann-Marie Bayliss, Product Manager, Murata Power Solutions

The NXF1 series is rated at -40 to +105°C with derating depending on model and provides high reliability with its patented embedded-core technology which makes production fully automatic yielding a cost-effective product with excellent performance repeatability.



Packaging is the industry-standard footprint for SMT 1W converters in the Murata proprietary iLGA inspectable format with gold plated terminations. Height is an industry-leading 5.01 mm maximum including tolerances. Parts are fully compatible with Pb-free soldering and are backwards-compatible with Sn/Pb systems and can be mounted in accordance with J-STD-020 with a classification temperature of 260°C and Moisture Sensitivity Level (MSL) 2.

Features

- UL60950 recognition pending
- Output regulation <1%
- Single isolated output
- 3kVDC isolation 'Hi-Pot Test'
- 3.3V & 5V input
- 3.3V & 5V output
- SMD construction
- Patent protected
- Short circuit protection

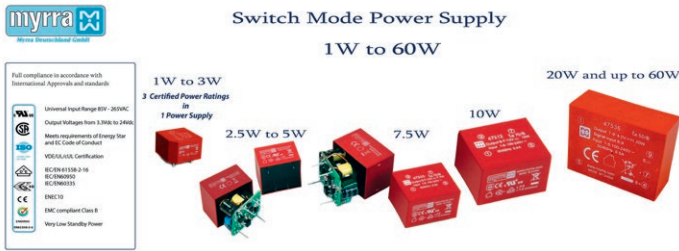
ORDERABLE PART NUMBER

NXF1 Series

Selection Guide

Order Code	Nominal Input Voltage	Output Voltage	Output Current	Ripple & Noise (Typ.)	Ripple & Noise (Max.)	Input Current (Typ.)	Efficiency (Min.)	Efficiency (Typ.)	Isolation Capacitance	MTTF ²	
										kHrs	
										MIL	TEL
NXF1S0303MC ³	3.3 V	3.3V	303 mA	10 mVp-p	30 mVp-p	510 mA	56 %	59 %	3 pF	1093	9499
NXF1S0305MC	3.3 V	5 V	200 mA	15 mVp-p	40 mVp-p	510 mA	55.5 %	59 %	3 pF	1053	11148
NXF1S0505MC	5 V	5 V	200 mA	15 mVp-p	40 mVp-p	310 mA	62 %	65 %	3 pF	937	14652

47 & 48 Series Encapsulated Power Supplies from MYRRA



MYRRA's large range of encapsulated, PCB mounted Power Supplies from 1 to 60W provide an immediate power solution to assist product-to-market timescales.

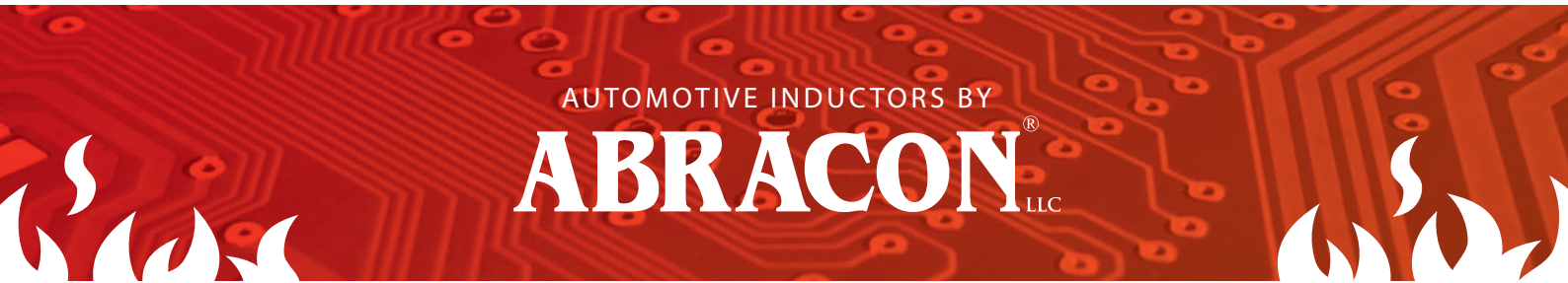
Features include a universal wide range input voltage and a large choice of both single and dual output voltage combinations. Low standby power, high efficiency and reliability are also key features of the 47 and 48 range. The modules include self-protection and are EMC compliant without the need for any additional external components. International Safety Standard certifications for both industrial and household applications is available for most models making the 47 and 48 series a suitable option for global applications.

The standard range of MYRRA Power Supplies are available in small, medium and large volume quantities, and ideally suited for a large range of solutions from domestic white goods to building automation, industrial solutions, security to lighting controls and portable test equipment.

- UL and VDE certified
- Universal input voltage
- Low standby power consumption meets requirements of Energy Star or EC code of conduct
- Class II – reinforced insulation
- Input/Output Isolation test voltage: 4000Vac
- Input protection by integrated fusible resistor/fuse
- Output short circuit protection: automatic restarts when fault condition is removed
- Thermal shutdown with automatic recovery if internal temperature exceeds allowable value

ORDERABLE PART NUMBERS

- 47 and 48 Series

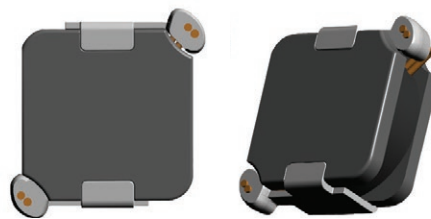


WHERE SIZE MEETS POWER. CAN YOU TAKE THE HEAT?

Power inductor components that drive more power for your device, can fit anywhere, and can tolerate more heat than ever before from your large applications.

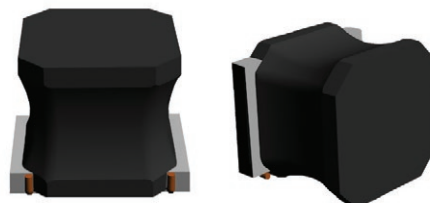
APPLICATIONS

- Automotive body electronics and comfort system
- Automotive infotainment and entertainment
- Automotive navigation
- Transportation
- Lighting, LED ballasts
- Industrial Internet of Things (IIoT)
- Industrial applications
- Solar power
- DC/DC converters and switch mode power supplies



ASPIAIG-H6530
7.1 x 6.5 x 3.0 mm

ASPIAIG-H8540
8.8 x 8.5 x 4.0 mm



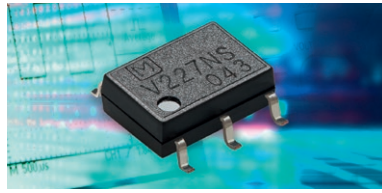
ASPIAIG-S6055
6.0 x 6.0 x 5.5 mm

ASPIAIG-S8050
8.0 x 8.0 x 5.0 mm

TO LEARN MORE, VISIT ABRACON.COM

High Power PhotoMOS

PhotoMOS relays with even more power in the tightest spaces. Panasonic doubles the load current in the SOP6 package.



The new high-current series of PhotoMOS relays from Panasonic Electric Works permits non-wearing, silent, reliable switching within the smallest spaces. The unlimited number of switching cycles of the PhotoMOS is particularly beneficial where the service lives of electromechanical or reed relays fall short of requirements. The new PhotoMOS relays permit switching voltages up to 100V (AC&DC) and continuous load currents up to 3.3A. In DC-only mode (parallel configuration of MOSFET transistors at the output) up to 6.6A is even possible at room temperature.

The low on-resistance and resultant little variation across the temperature range also opens up numerous potential applications in measurement and testing, especially where a consistent loop resistance or limiting voltage drop at the switching contact is vital. Other typical applications are in automation, safety engineering and building automation, enabling input and output units featuring virtually infinite lifecycles and absolute maintenance-free operation to be realized with minimal actuation power.

Typical Applications

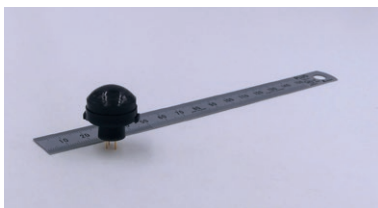
- Industrial control systems
- Measuring devices and technology
- Signal/alarm contacts
- Outputs for programmable controllers
- Pulse and counter outputs

The Most Important Advantages at a Glance

- Linear output characteristics
- No threshold voltage
- Low operate current
- Extremely long lifetime
- Stable ON-resistance over the entire lifetime
- Compact design
- No contact bounce
- Highly resistant to shock and vibration

	Load voltage (peak AC DC)	Load current	On-resistance	I/O insulation	Package
AQV252G3S	60V	3.3A	0.033Ω	1.5kV	SOP6
AQV255G3S	100V	2.2A	0.073Ω		

High-Density Long-Distance PIR Motion Sensor



Panasonic's new passive infrared sensor excel through the unbelievable small optic and a specified installation height up to 17 m. A special lens design with an

additional lip allows fast integration into IP-rated applications by using for example an o-ring construction.

The pyroelectric sensor complements the PaPIRs families EKMC (standby current consumption: 170 μA) and EKMB (standby current consumption: 1 μA, 2 μA and 6 μA) for battery-free and battery-operated devices, respectively.

The quad-sensor-based design with a very high detection zone density of 128 guarantees a reliable response even over huge distances. The detection area is circular and symmetrical which simplifies sensor integration because of the independence of sensor orientation within the final product.

Evaluation samples and tentative specifications are available. The official market launch will be at the end of April 2018.

Features

- Detection distance up to 17 m
- Detection area: ca. 16 m at an installation height of 12 m, ca. 23.5 m at an installation height of 17 m
- Lens diameter: 20.45 mm
- Output: digital (open-collector output) and analogue (op-amplifier output)
- Available lens colours: white, pearl white, and black

Applications

- Passive infrared motion sensors for lighting controls in general
- High-bay motion sensors and luminaires for warehouses, public and industrial-production buildings
- Street lights
- Security cameras

ORDERING INFORMATION

- EKMC – standby current consumption: 170 μA
- EKMB – standby current consumption: 1 μA, 2 μA and 6 μA

Ergonomic Cable Tie Installation Hand Tools

Comfort, Performance and Durability

Panduit's ergonomic series of hand-operated, tool-controlled tension, and cut-off cable tie installation tools are the most preferred hand-operated tools in the industry. These versatile tools can be used for production, maintenance, or construction applications. The ergonomic series of tools is excellent for low to medium volume applications (under 50,000 ties/year) and promote worker safety, help reduce downtime, improve productivity and provide the lowest total installed cost.

Impact Resistant Resin Tools

- **GTS-E** Tool installs subminiature (8 lbs.) through standard (50 lbs.) cross section cable ties
- **GTH-E** Tool installs standard (50 lbs.) through heavy (175 lbs.) cross section cable ties

Metal Resin Tools

- **GS2B-E** Tool installs subminiature (8 lbs.) through standard (50 lbs.) cross section cable ties
- **GS4H-E** Tool installs standard (50 lbs.) through heavy (175 lbs.) cross section cable ties
- **GS4EH-E** Tool installs light-heavy (120 lbs.) through extra-heavy (250 lbs.) cross section cable ties

Key Features and Benefits

- Improved cable tie cut-off mechanism that minimizes the impact to the installer's hand by more than 40% – the lowest in the industry
- Low handle force required to cut-off the cable tie – 15% lower handle force than comparable tools



Part Number	Installs Cable Tie Cross Sections	Description	Std. Pkg. Qty.	Std. Ctn. Qty.
GTS-E	Subminiature, Miniature, Intermediate, Standard	Trigger Handle: Black, Selector Knob: Black, Cushioned Handle: Black. Material: Impact Resistant Resin	1	5
GTH-E	Standard, Heavy-Standard, Light-Heavy, Heavy	Trigger Handle: Red, Selector Knob: Red, Cushioned Handle: Red. Material: Impact Resistant Resin	1	5

Beveled Tie Entry

allows quick side entry of tie into tool to speed installation

Easy to Read

tension setting label eliminates guesswork

Tension Adjustment Knob

with 1/2-stop tension-setting increments simplifies the process by having only one control to set

Long, Narrow Nose

improves installer's visibility and access to confined areas

Slip-Proof, Soft Handle and Rear Grip

cushions the fingers and hand during the operation

Ergonomically-Designed Grip

allows the hand to naturally and comfortably leverage the strength of all fingers when engaging the trigger

Impact Resistant Resin Housing

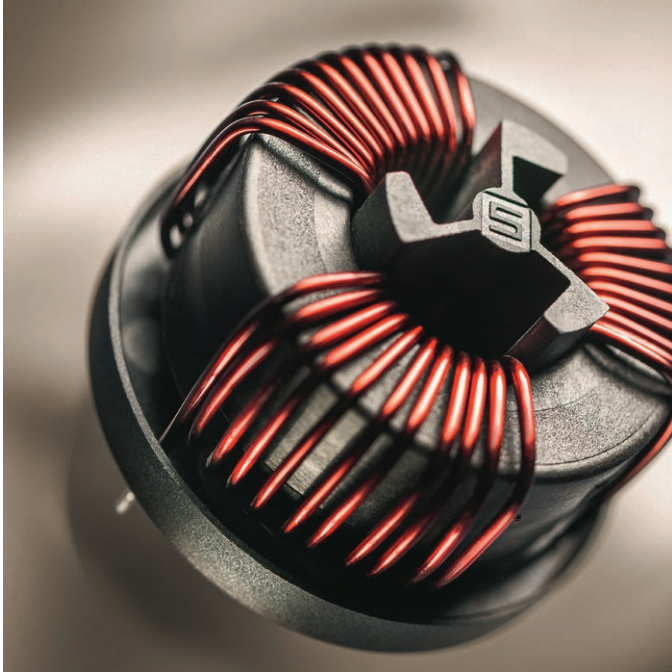
is lightweight and durable

Hanger Hook

allows tool to be "hung-up" for easy storage



Nanocrystalline Common Mode Chokes for 1- and 3-phase Applications Mount on PCB



SCHURTER expands its wide range of current compensated chokes with high current types for PCB mounting. The new DKIH series is available with a nanocrystalline ring core, offering 8 times higher inductance performance than ferrite core versions in the same compact dimension. The new product is designed for single and three phase applications with rated currents from 10 to 50 amperes. Due to its open design, the chokes are light weight and compact, ideally designed to suppress EMI noise caused by power applications on the PCB.

Like all other aspects of electronic design, the power portion is oftentimes built today using discrete components on printed circuit boards. With the trending integration of components, to achieve smaller and smaller form factors, thermal problems and high currents on the PCB can become a challenge. Traditional block filters might well address these challenges, but their larger package size also presents challenges due to the mentioned space constraints; therefore an asymmetrical effective common mode choke and capacitors mounted on the PCB is a better solution.

The new DKIH-1 series is suitable for single phase AC or DC applications from 10 up to 50 amperes. Light weight and compact, the common mode chokes are easily placed on the PCB with through hole technology (THT). They are designed and approved according IEC 60938, UL 1283 and CSA 22.2 no. 8. The voltage rating is 300 VAC (IEC, UL) and 250 VAC (CSA) with an inductance range of 1.6 to 6.9 mH.

The new DKIH-3 series is suitable for three phase AC applications from 10 up to 50 amperes. The common mode chokes are also designed according IEC 60938 and are rated 600 VAC with an inductance range of 0.7 to 10.8 mH, making them suitable for many applications such as UPS systems, switching power supplies, charge stations for electric vehicles and frequency converters for energy storage.

The DKIH-1 and -3 have a wide temperature range of -40 to +100°C. They are available with a standard pin out or customer specific pin out. Variations in the winding are also available upon request.

Technical data DKIH-1

- Rated voltage: 300 VAC (UL, ENEC), 250 VAC (CSA), 425 VDC
- Rated currents: 10 to 50 A (ENEC/UL/CSA) at 40 °C
- Rated inductance:
 - ferrite: 0.15 to 0.80 mH, nanocrystalline: 1.4–6.9 mH
- Same dimensions and weight for ferrite and nanocrystalline versions
- Other pin outs available on request

Technical data DKIH-3

- Rated voltage: 600 VAC
- Rated currents: 10 to 50 A at 40 °C
- Rated inductance: ferrite: 0.08 to 1.10 mH, nanocrystalline: 0.7–10.8 mH
- Same dimensions and weight for ferrite and nanocrystalline versions
- Other pin outs available on request

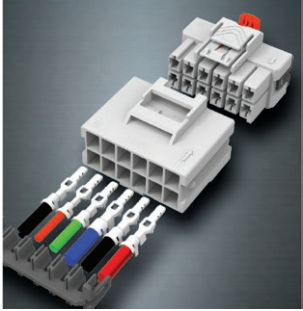
Applications

- Frequency converters for photovoltaic or energy storage
- Charge stations for electric vehicles
- UPS-systems
- Switching power supplies

ORDERABLE PART NUMBERS

- DKFS-6248-02D5
- DKFP-6248-02D5
- DFK-20-0002
- DFKH-31-0008

Power Triple Lock Connector Solutions



TE Connectivity (TE) POWER TRIPLE LOCK connector system offers high performance with a functional design. From the audible lock to the many added customer benefits, the POWER TRIPLE LOCK connector system has been specifically developed for better power and signal applications in all industries.

For 3-in-1 reliability, the system offers 3 enhanced methods of connectivity, making your design connections better in every way. It locks in three ways. Cap (or header) and plug latch together. The connector position assurance (CPA) device locks the cap (or header) and plug together. The terminal position assurance (TPA) device helps assure terminals are fully seated and remain that way. Three material options support standard 105°C, high temperature 150°C and glow wire applications. Four keying options, multiple colors and snagless design features help assure fast, accurate connections on the assembly line. Up to 15 positions are offered on 6.0 mm [GKR1] spacing.

Features

- For 3-in-1 reliability
- Wire-to-wire, wire-to-board components available
- Up to 20A current rating
- Single, dual row and matrix configurations
- Various material, colors, and temperature offering

Applications

- Appliances
- Automotive
- Commercial Building
- Industrial Machinery
- HVAC
- Rail

ORDERABLE PART NUMBER

- TE GPL J35

Power Key Connector Solutions



TE Connectivity (TE) power key connectors are built to optimize contact seating and proper mating to the PCB header, with design features that permit the release of bubbles created by the PCB potting process.

The 5.0 mm centerline connection system offers a compact 20.7 mm

mated height, and is ergonomically friendly for assembly. Power key connectors are available in various colors and keys to help prevent mis-mating, and also offer double lock plates as terminal position assurance (TPA) devices. The power key connector system uses housing lances to prevent tangling of wired contacts, and consists of plug housings for wire and compact wire-to-board PCB header assemblies. This connector family now includes models that are GWT compliant and meet UL 94 V-0.

Features

- Power circuit connector with 5.0 mm contact centerline
- Wire-to-board connectors consisting of plug housings for wires and PCB header assemblies
- With a clear clicking sound, contact insertions can be easily confirmed and the double lock plate provides for complete loading of contacts

Applications

- Control boards across various industries
- Household appliances
- Industrial equipment
- Power cord applications

ORDERABLE PART NUMBER

- GPL 442

Soft Termination MLCCs – CS Series

Yageo's soft termination MLCC – CS series covers both class I NPO and class II X7R, a capacitance range of 0.47 pF~22 μF and 16V to 3KV rated voltage with case sizes (inch) 0402 to 1812. Soft termination is also known as Resin termination or flexible termination, it absorbs any excessive mechanical stress resulting from board flexing or temperature cycling, and is a better solution than open mode.

Featured with flexible termination system, Yageo's CS series MLCC can resist at least 3 mm boardflex. These MLCCs have well performance in high flexure stress circuit boards, switch power supplies and telecom base station. Polymer conductive layer between outer electrodes (Ag, Cu) and plated Ni, provides a stress relax function which helps to prevent board flex crack (Mechanical stress) and temperature cycle (Thermal stress).

Features & Benefits

- Flexible termination system
- Improved resistance to thermal stresses
- Increased mechanical performance
- Leaded-free termination meets RoHS requirements



Applications

- High flexure stress circuit boards
- Switch power supplies
- Telecom base station
- Smart meter

ORDERABLE PART NUMBERS

- CS0603KRX7R9BB473
- CS0603KRX7R9BB472
- CS1206KKX7RZBB102

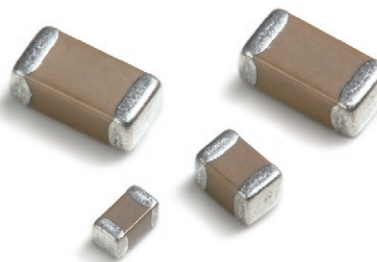
Automotive Grade with Soft Termination MLCCs – AS Series

Yageo automotive grade with soft termination MLCC – AS series is AEC-Q200 qualified as well as MIL-STD-020D test to ensure its reliability under various temperatures (from -55 to +125 °C) and humidity (1,000 hours, 85 °C/85% RH) conditions and still possess long endurance.

These capacitors consist of a rectangular block of ceramic dielectric in which a number of interleaved metal electrodes are contained. The inner electrodes are connected to the two end terminations and covered with a layer of plated tin. The terminations are lead-free and all capacitors in the AS series are RoHS compliant.

Features & Benefits

- AEC-Q200 qualified & PPAP ready
- Factory QMS: IATF16949 certified
- 100% performed by automatic optical inspection prior to taping
- Case size: 0805~1210
- Capacitance range: 1 nF~4.7 μF
- Voltage range: 10V~250V
- Flexible termination system
- Increased mechanical performance



Applications

- All general applications
- Infotainment applications
- Remote vehicle control
- Navigation
- Comfort/security applications

ORDERABLE PART NUMBER

AS1210KKX7R9BB475

WAGO 221: New 6 mm² Connector

Higher Power and Faster Operation

WAGO's new 221 Series COMPACT Splicing Connectors

Easier, faster, safer: These three attributes characterize WAGO's 221 Series Splicing Connectors. Pull the lever up, insert a conductor and push the lever back down – done. And because lever-actuation is so convenient, reliable and time-saving in everyday installations, WAGO has expanded its electrician-trusted 221 Series with a model for conductors up to 6 mm² (10AWG).

Electricians simply open the clamp with an iconic orange lever, push a stripped conductor into the connector until it hit a backstop and close the clamp by lowering the lever. The connector's transparent housing enables users to verify connection integrity at a glance.

The new connector's expanded application scope includes the wiring of three-phase sockets, installing air conditioners or the general connection of larger consumers. Manufacturers of electrical equipment (OEMs) also benefit from the newly expanded 221 Series. The possibility of connecting up to 6 mm² offers completely new possibilities to e.g. wire high-power lighting and signal systems, or HVAC systems within commercial buildings.

Benefits

- Easy conductor termination up to 6 mm² (10 AWG)
- Safe wiring thanks to WAGO's spring pressure connection technology
- Time-saving for OEMs technicians
- New applications for WAGO's industry-proven splicing connector

ORDERABLE PART NUMBERS

- 221-612
- 221-613
- 221-615



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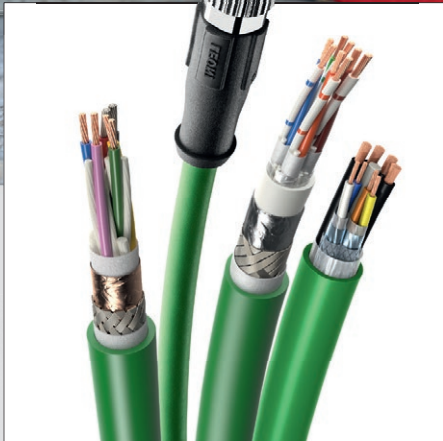
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