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Analog

Microchip Unveils Unique Features on 1.5 Amp LDO Regulator - MCP1727

- Adjustable Output Voltage 1.5 Amp LDO in 8-pin SOIC or 3 x 3mm DFN Packages
- Shutdown Pin and Power Good Output Pin with Programmable Delay
- 300mV Dropout at Full Load with Bond Wire Compensation
- 140uA Quiescent Current



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The combination of high output current (1.5A) and low output voltage (down to 0.8V) makes the MCP1727 ideally suited for powering a variety of power supply applications including high-performance embedded processors

Power Modules

Astrodyne's M-Series of Switching Power Supply Modules

Offering the designer the ultimate in power density and performance features for new and existing designs in instrumentation, communications, industrial controls, and embedded systems. Pin out and package size compatible to industry standards, these feature universal 85 - 265 VAC input and are fully encapsulated and require no external components or heat sinking for operation

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- 85 to 265 VAC Universal Wide Range Input
- Full Agency Approvals - UL, TUV, CE Mark
- PCB and Chassis Mount Package
- Convection Cooled Encapsulated Design
- 5 to 30 Watt
- 3.3 to 24 VDC Output

Passives

Murata replace crystal oscillators

Tighter resonator tolerances than ever before mean that the one crystal advantage is fading, designers can increasingly take advantage of resonator pricing and performance and get the required frequency tolerance

The CSTCE-G-C and V-C series offer a frequency tolerance of $\pm 0.3\%$ (-40°C to 125°C), cover the range from 8.00 to 20.00Mhz, weigh 12mg, occupy a 3.2x1.3 footprint 1.3mm high and are ideal for CAN-Bus applications



- Tight tolerances - and improving
- "Instant" start-up
- Mechanical shock resistant
- Small and light - No tank circuit
- Low power consumption
- Competitive prices

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Passives

Vishay's New IHLP-2525EZ-01 Low-Profile, High-Current Inductors



The Key Benefits :

- Feature the lowest DCR/ μ H for their respective package sizes
- Save space with 2525-size footprint and maximum height profile of 0.197 in. [5.0 mm]
- Save power with inductance values from 10 μ H down to 0.56 μ H
- Handle high transient current spikes without saturation
- Operate at a frequency below 1 MHz

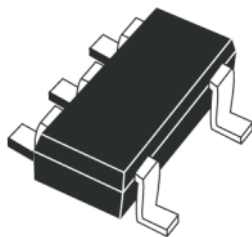
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Power Devices

ST's STM6x2x, 5-Pin Supervisor with Watchdog Timer and Push-button Reset



Features

- Precision Vcc Monitoring of 5, 3.3, 3, or 2.5V Power Supplies
- \overline{RST} Outputs (Active-low, Push-pull or Open Drain)
- RST Outputs (Active-high, Push-pull)
- Reset Pulse Width of 1.4ms, 200ms and 240ms (typ)
- Watchdog Timeout Period of 1.6s (typ)
- Manual Reset Input (\overline{MR})
- Low Supply Current - 3 μ A (typ)
- Guaranteed \overline{RST} (RST) Assertion down to Vcc = 1.0V
- Operating Temperature: -40 to 85°C (Industrial Grade)
- RoHS Compliance, Lead-free Components are Compliant with the RoHS Directive

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Micros & DSP

Freescale Expands Digital Signal Controller Portfolio



Freescale is answering the market demand for more advanced digital control solutions by adding four digital signal controllers (DSCs) to its 16-bit 56F8000 DSC family, significantly broadening its array of cost-effective DSC offerings. Consumer and industrial products that previously required both digital and analog control algorithms and circuits now can be controlled digitally through flexible, intelligent embedded software running on a DSC.

The 56F8000 DSCs provide optimal digital control solutions for motor control, digital power conversion and advanced lighting control, including high-brightness LED arrays for architectural lighting and LCD backlights.

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Power Devices

IR's PVN012APbF Microelectronic Relay

The PVN012APbF is a single-pole, normally open solid-state relay. It utilizes a HEXFET® MOSFET output switch, driven by an integrated circuit photovoltaic generator of novel construction. The output switch is controlled by radiation from a GaAlAs light emitting diode (LED) which is optically isolated from the photovoltaic generator.

Compared to its predecessor, the PVN012A family offers a 50% reduction of AC/DC on-state resistance ($R_{D(ON)}$) and 37.5% increase of maximum AC/DC load current rating at full (100%) duty cycle. The new series is also rated for maximum pulses (surge) load current.

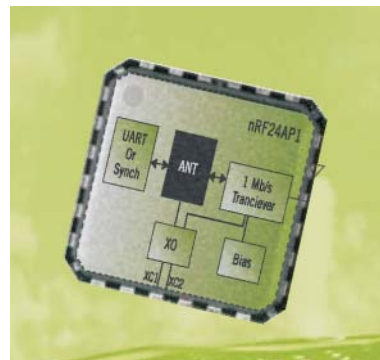
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RF & Microwave

Nordic Semi's nRF24AP1™ - Ultra-low power 2.4GHz transceiver with embedded ANT protocol for wireless Personal Area Networks (PAN)



Features

- UART and synchronous serial interface
- 2.4GHz operation
- 125 RF channels
- 1.9 - 3.6V voltage supply
- 1Mbit/sec air datarate
- -20 dBm to 0 dBm output

RF Performance and Quality

- GFSK modulation
- Efficient output spectrum
- Embedded ShockBurst™ engine
- -40°C to + 85°C operation
- 100% RF tested

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Features and Benefits :

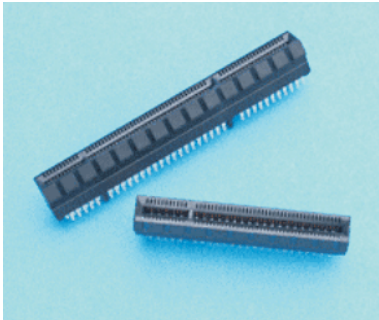
- 50m Ω On-resistance
- Bounce-free operation
- 4.0 - 6.0 amp capability
- Linear AC/DC operation
- 4,000 V_{RMS} I/O isolation
- Solid-state reliability
- UL recognition pending
- ESD tolerance :
 - 4000V human body model
 - 500V machine model
- Smaller footprint
- Stable on-resistance over life
- Greater input sensitivity

New Product Line Card Available for Download

Interconnect

FCI's Card-Edge Connectors

FCI has developed card-edge connectors designed to accept PCI Express® ExpressModule™ modular I/O adapters used in rack servers. Two connector size and interface options. Part series 10055293 describes the 98-position connectors, which support up to an x8 PCI Express (PCIe) connection. Part series 10055295 defines the larger, 140-position connectors that also provide an internal storage interface for up to four x1 ports of SATA/SAS and sideband signals in addition to the x8 PCIe link.



The card-edge connectors utilize an "eye-of-needle"-compliant section for termination to a backplane. The press-fit connectors are targeted for use on 2.36mm (0.093") to 4.19mm (0.165") thick PCBs. By using press-fit connectors, manufacturers can avoid soldering problems and improve manufacturing yields when implementing I/O slots on thick backplanes. RoHS-compliant connector versions are available.

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Datacom / Telecom

CML's new CMX869B V.32 bis Modem IC, sets the standard for component integration



Envisaged as a versatile modem for new-generation telemetry and wireline data systems, this single chip product provides all of the functions needed to construct an ITU V.32 bis automodem, or a V.32, V.22 bis, V.22, V.21 and Bell 202/Bell 103 compatible modem operating under the control of external host timing. The CMX869B boasts a fully-integrated HDLC framer/de-framer also known as a PAD (Packet Assembler Disassembler), CRC block and HDLC/SDLC signalling - these tasks are essential to new generation EPOS systems, such as the expanding Chip-and-Pin terminals.

The CMX869B is the latest addition to CML's extensive portfolio of low-power telecom products and is a new addition to the CMX86x family of wireline modems.

The CMX869B operates from a single 3.3V supply and is available in 24-pin plastic SOIC and TSSOP packages.

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Electromechanical

Tyco's versatile micro switch offers variety of mounting options and long service life

A new straight or right angle PCB mount ultra miniature micro switch has been introduced by Tyco Electronics. Available with current ratings of 100mA/30Vdc for dry circuit applications and 3A/125Vac for higher current requirements, the new devices benefit from long actuation life and very high reliability.



Offering a service life of 1 million cycles, new ultra miniature micro switches provide two operating force options ensuring usability in the widest possible range of applications. Devices are available with or without levers, offering a choice of different operating positions. New micro switches are designed for security systems, testing equipment and medical/dental equipment. They can also be used as detect switch for doors, gates and flaps or as end switch for industrial machinery, vending machines, HVAC equipment and valves.

Switches are cUL certified.

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Magnetics

VAC's T60403-K5024-X04485 Power Line Transformer

Advantages :

- Excellent transmission characteristics
- Low insertion loss
- Low THD, especially low 50Hz distortion
- Matching transformer for **ST Microelectronics** ST7540 Power Line Modem IC
- Insulation according to EN 60950 / UL 1950
- Compact designs
- Compliance with all PLC standards, Homeplug 1.0, EIA 709.2, CENELEC EN 50065-1, and CEA R7.3



Technical Characteristics :

- SMD Assembly
- 1:1 turn-ratio
- Frequency range 0.001 - 1 MHz
- Inductance 1.4mH
- Insulation 3kV

Applications :

- Automatic Meter Reading for energy meters
- Water Meters
- Gas Meters
- Home Automation
- PC Home networking

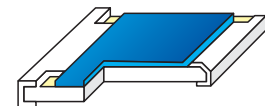
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Passives

Royal Ohm's High Voltage Thick Film Chip Resistors



- Superior to chip resistors in maximum working voltage
- Ideal for use in AV adapters, LCD back-light camera strobe etc
- Suitable for reform and wave soldering
- Lead free terminations
- Op temp of -55°C to +155°C
- 0805, 1206, and 2010 types
- Resistance range of up to 10MΩ
- Tolerances of 1%, and 5% available

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Passives

Murata's Tiny High Q 1GHz Wound Chip Inductors

Miniature Alumina cores, using a combination of unique materials and horizontal winding methods, are at the heart of their LQW04A series on inductors



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Stable inductance values range from 1.1nH to 22nH in twentyfour steps, with minimum Q of 15 or 20.

Low DC resistance in all values ensures low loss, with maximum output in low power applications.

The operating temperature range is a full -55 to 125°C, making them suitable for robust applications and a resin coating provides protection during processing and subsequent operation.

The miniature package (0.8x0.4mm) allows very high-density mounting and the 0.4mm profile height adds to that. In turn, this puts 10,000 pieces in 180mm diameter reels, reducing replenishment stops, labour time and storage space.

Features

- High Q (Typically 50 at 1.0 GHz)
- High SRF (10nH=4.0GHz min.)
- Reflow soldering Low DCR
- Horizontal windings
- Low volume (0.128cc)
- Small footprint
- Easy / fast processing

Electromechanical

American Zettler's AZ2501 Series - Stand-up Latching Power Relay



AZ2501 Series relay, the stand-up PC mount variation to their AZ2500 Latching Power Relay. The AZ2501 has the capacity to handle heavy loads up to 13,850 VA, 50 Amps @ 277 VAC making it ideal for applications such as HVAC-R, UPS systems, lighting controls, industrial heating, and spa controls. AZ2501 features include: dielectric strength of 4000 Vrms contact to coil, single or dual coil latching, a 50 millisecond pulse to "Set" or "Reset", an optional manual switch, an option PCB retaining stud, and available epoxy sealing (excluding versions with manual switch).

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Micros

Freescal's High Performance with Cool Possibilities

MC9S08QD4 MCU for DC Fans and More



The 8-bit MC9S08QD4 (QD4) microcontroller expands the low-end capabilities of Freescale's Controller Continuum. The QD4 offers enhanced functionality and flexibility while maintaining pin compatibility with the ultra-low-end KA2 family and the highly integrated QG8 family of controllers. The QD4 incorporates a high-performance 4-channel, 10-bit analog-to-digital converter (ADC), which makes it an ideal solution for DC cooling fans in computer applications, low power supplies and telecommunications equipment.

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Interconnect

Bulgin's Waterproof Miniature USB Connector



A new Miniature USB connector joins Bulgin's Buccaneer family of waterproof data connectors.

USB is a well established PC interface using the standard 'A' and 'B' type connectors, but as the trend for smaller equipment continues naturally smaller connectors are required. The Miniature USB is very familiar to digital camera users but is also applicable for use on any equipment where the full functionality of the USB interface is required.

In common with others in the Buccaneer range, Bulgin's new 5 pole miniature USB connector is dust and waterproof to IP68, when mated, and provides USB V2.0 performance up to 480Mbs.

The pre-wired cables, PX0441 and PX0442, are available in 2, 3 and 4.5m lengths with a sealed Mini 'B' type USB connector paired with either standard or miniature 'A' type USB. These will cater for most applications.

The panel mounted Mini 'B' connector is available for front-of-panel, PX0443, or rear-of-panel mounting with either PC pins, PX0446 or pre-wired, PX0447, with a short length of cable terminated with a PCB header.

The diameter over the coupling ring of the cable connector is just 19mm and the screw coupling provides a secure, proven locking system.

Mini USB Buccaneer will find many applications within smaller peripherals or where panel space is at a premium and, as with all Bulgin products, is fully RoHS compliant.

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The Edge