

NEW MULTIMARKET PRODUCTS QUARTERLY HIGHLIGHTS

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Semiconductors

In this issue:

1. **P89LPC932**
First LPC900 device integrates 8 Kbytes Flash program memory
2. **BZA418A**
Quadruple ESD transient protection voltage suppressor in SOT457
3. **BUK9107-55ATE**
TrenchPLUS logic level FET
4. **MAX8878**
Very low noise, very low dropout, 150 mA linear regulator
5. **P89C51Rx2/01**
Flash microcontroller family with ISP and IAP capabilities
6. **SA57011 and SA57017**
New CapFREE™ Products have improved transient response and reverse battery protection features all without the need for external capacitors.
7. **PBSS5320T**
Low $V_{CE(sat)}$ (BISS) transistor in SOT23
8. **PIP202-12M**
An innovative powertrain solution for VR(M) and DC/DC POL
9. **PMN27UN, PMN28UN, PMN45EN**
30, 20 & 12 V N-channel MOSFETS in TSOP6
10. **PSMN002-25B/P, PSMN003-30B/P, PSMN004-60B/P, PSMN006-20K, PHB152NQ03LT, PHP152NQ03LT, PH3230**
Low-voltage, very low $R_{DS(on)}$ (sub 4 mΩ) N-channel MOSFETS
11. **SC16Cxxxx**
Flexible family of high-performance UARTs
12. **PicoGate Logic expansion**
World's smallest logic package offering now includes 6-pin SOT457 and 8-pin SOT505-2 options
13. **New Products List**

Discretes



Logic

Microcontrollers

Standard Analog

1. P89LPC932

First LPC900 device integrates 8 Kbytes Flash program memory
Philips LPC900 family is based on a high performance processor architecture executing instructions in two to four clocks, six times the rate of standard 80C51 devices. Many system level functions have been incorporated to reduce component count, board space, and system cost. Designed for applications that demand low-voltage, high-integration, high-performance, and low cost, the P89LPC932 integrates a variety of on-chip memory along with a host of communications ports and system supervisory functions all in a 28-pin package.

Features:

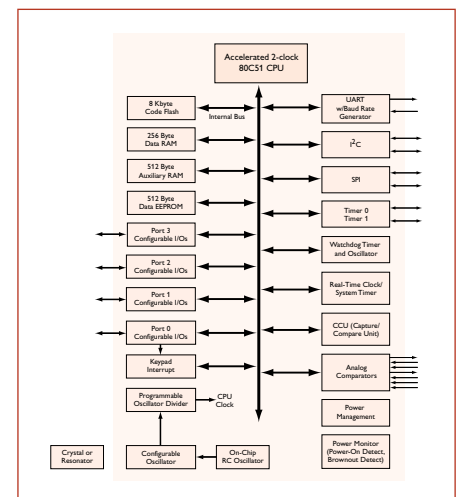
- High performance 2-clock 80C51 CPU
- 2.4V to 3.6V operating range with 5V tolerant I/O pins
- 8 Kbytes Flash code memory with 64-byte sectors and 2 ms block write/erase cycle
- 512 Byte data EEPROM memory allows device serialization, parameter storage etc.
- 256 Bytes RAM and 512 Bytes auxiliary on-chip XRAM
- 400 kBit/s I²C and 3 Mbit/s SPI communication ports plus enhanced UART
- Two 16-bit counter/timers with I/O port toggle and 8-bit PWM functions
- 16-bit Capture/Compare Unit (CCU) with 32x PLL

Benefits:

- 6 times the performance of the standard 80C51
- Power savings and reduced EMI at reduced clock frequency
- Reduced system cost
- Flexible power management
- Small footprint

Applications:

- Hand Held Devices
- White Goods
- Security Systems
- Thermal Management
- Protocol Conversion

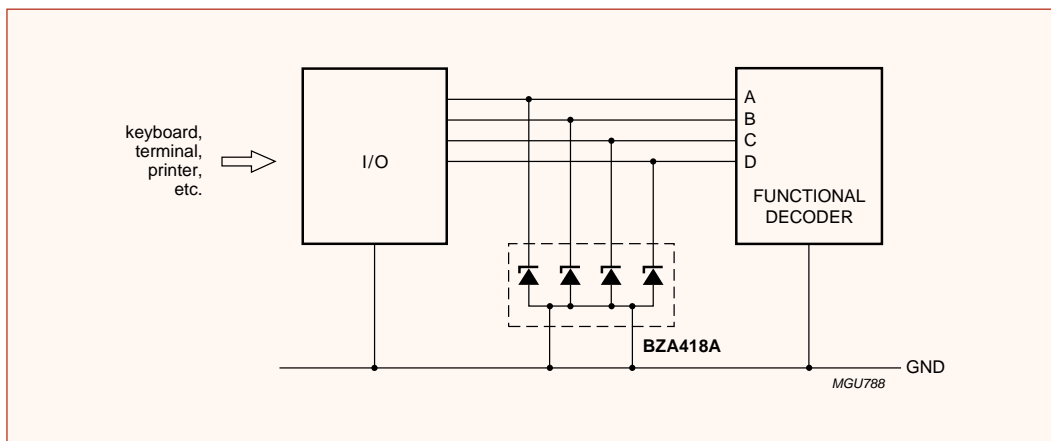


PHILIPS

2. BZA418A

Quadruple ESD transient protection voltage suppressor

Monolithic transient voltage suppressor diode in a six-lead SOT457 (SC-74) package for 4-bit wide ESD transient suppression.



Features:

- ESD rating >8 kV, according to IEC1000-4-2
- Common anode configuration
- Non-clamping range -0.5 to 18 V
- Maximum reverse peak power dissipation – 19.6 W at $t_p = 1$ ms
- Maximum clamping voltage at peak pulse current – 27 V at $I_{ZSM} = 0.7$ A

Benefits:

- High peak power dissipation
- Small surface mount package
- Low capacitance
- Low reverse current

Applications:

- Computers and peripherals
- Audio and video equipment
- Communication systems
- Medical equipment

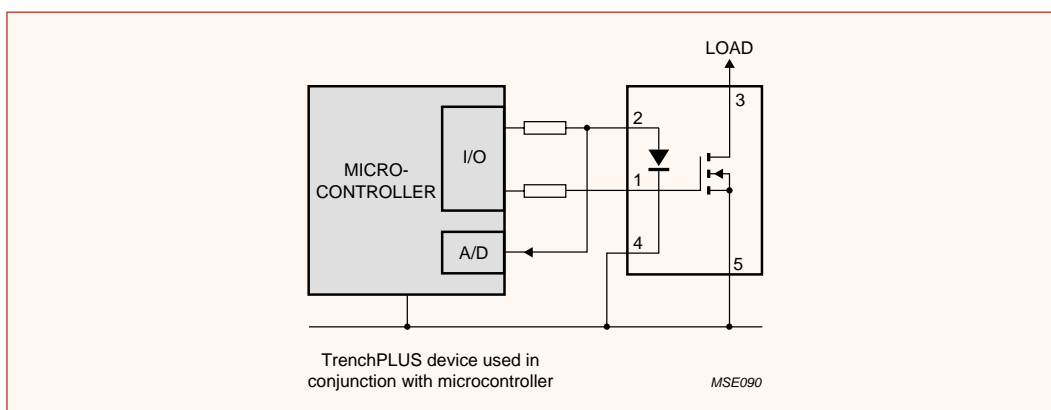
For more information:

www.semiconductors.philips.com/pip/BZA418A

3. BUK9107-55ATE

TrenchPLUS logic level FET

An N-channel power MOSFET in 5-pin D²PAK, with diodes for ESD protection and temperature sensing. The temperature sensor has a linear response up to 200 °C, and can be easily incorporated into a design. TrenchPLUS temperature sense ranges are market leaders in terms of accuracy and ease-of-use.



Features:

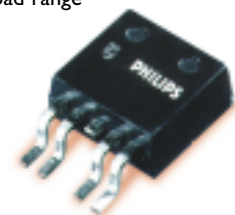
- Very low on-state resistance of 5.8 mΩ (typ) ($V_{GS} = 5\text{ V}$, $I_D = 50\text{ A}$)
- Monolithically integrated temperature sensor for high precision measurements in automotive applications
- ESD diodes protecting the device up to 6 kV.
- Fully Q101 compliant to 175 °C

Benefits:

- The temperature sensor lies within the chip centre delivering the fastest response to temperature changes
- Separate output pins for the temperature sense diode enables flexibility in the protection strategy employed
- Does not latch off above a fixed temperature, so it is possible to alter trip temperature by adjusting the reference voltage

Applications:

- Over-temperature protection within a broad range of automotive applications
- Automotive and power switching
- Protected drive for lamps



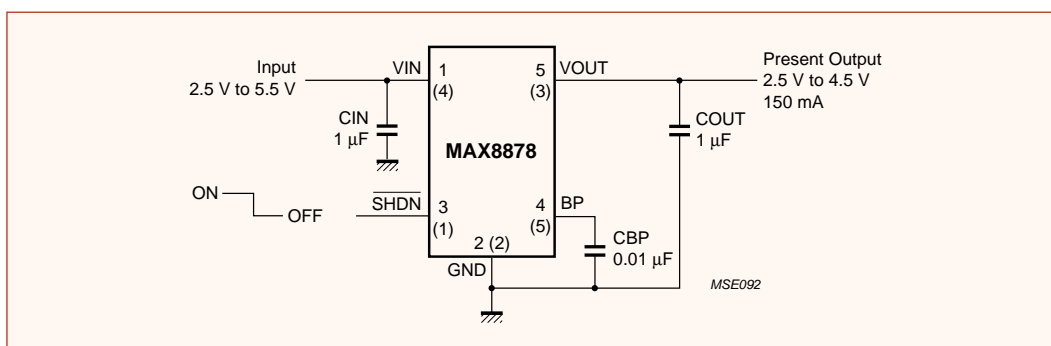
For more information:

www.semiconductors.philips.com/pip/BUK9907-55ATE

4. MAX8878

Very low noise, very low dropout, 150 mA linear regulator

The MAX8878 is a very low noise, very low dropout, low quiescent current linear regulator designed for battery-powered applications, although it can also be used for devices powered by AC-DC converters. Available in a range of preset output voltages from 2.5 V to 4.5 V, it incorporates an internal P-channel FET pass transistor to maintain an 85 μ A typical supply current, independent of the load current and dropout voltage, and a range of on-chip protection features.



Features:

- Low output noise (20 μ Vrms)
- Low dropout voltages – 165 mV @ 150 mA and 55 mV @ 41 mA
- Low reverse battery current of 0.5 μ A (typ)
- 85 μ A no load supply current
- 100 μ A typical operating supply current

Benefits:

- Reverse battery protection
- Industry standard nomenclature
- Thermal overload and short circuit protection
- Reduced cost and board space
- Available in SOT23 and WF Chip Scale Package

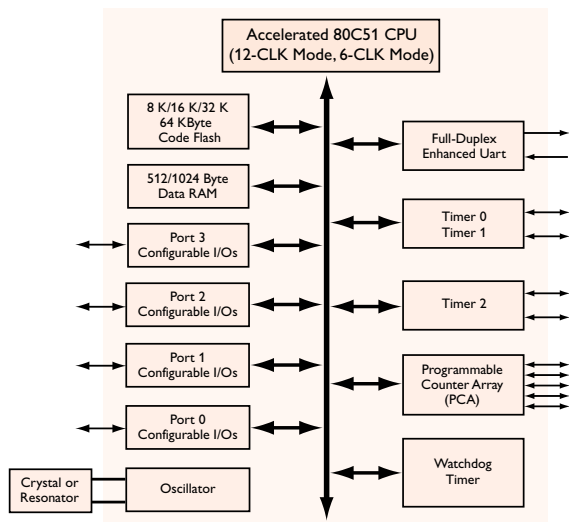
Applications:

- Handheld and portable instruments
- Palmtop computers and electronic planners
- PCMCIA cards and modems
- Cordless, PCS, and Cellular Telephones

5. P89C51Rx2/01

Flash microcontroller family with ISP and IAP capabilities

The P89C51Rx2 microcontrollers series offer on-chip up to 64 Kbytes Flash and 1024 bytes of data RAM. A key feature is the X2 mode option, which allows the microcontroller to run at 6-clocks per machine cycle, delivering either twice the throughput at the same frequency or dramatically reduced EMI with the same performance. The Flash program memory supports parallel programming, serial In-System Programming (ISP) and In-Application System (IAP) capabilities reducing programming costs, time to market and allowing firmware to updated in-field even when the application is running.



Features:

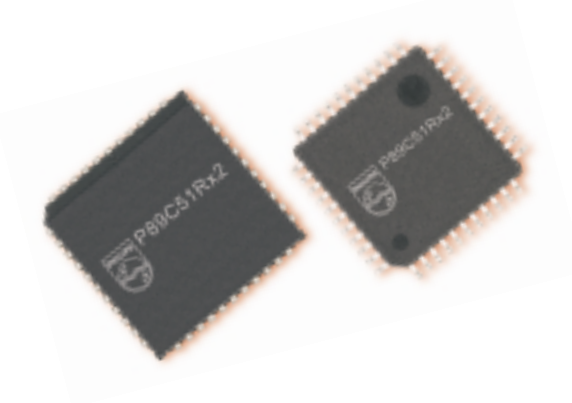
- Flash program memory with ISP and IAP capabilities
- Boot ROM contains low-level Flash programming routines for downloading via the UART
- Programmable Counter Array (PCA)
- Supports 12-clk / 6-clk mode selection via software, ISP or parallel programmer
- Up to 20 MHz in 6-clock mode (40 MHz equivalent) and 33 MHz in 12-clock mode
- Full-duplex enhanced UART with framing error detection and automatic address recognition
- Peripherals may use either 6-/12-clock mode while the CPU is in 6-clock mode
- Power control modes include Idle and Power down

Benefits:

- 6-clock mode provides twice the performance of the conventional 80C51 or significantly reduced EMI
- Flexible clock selection options
- Supports additional 4 Kbytes Flash sector size

Applications:

- LCD monitor
- Printer panel
- Industrial control



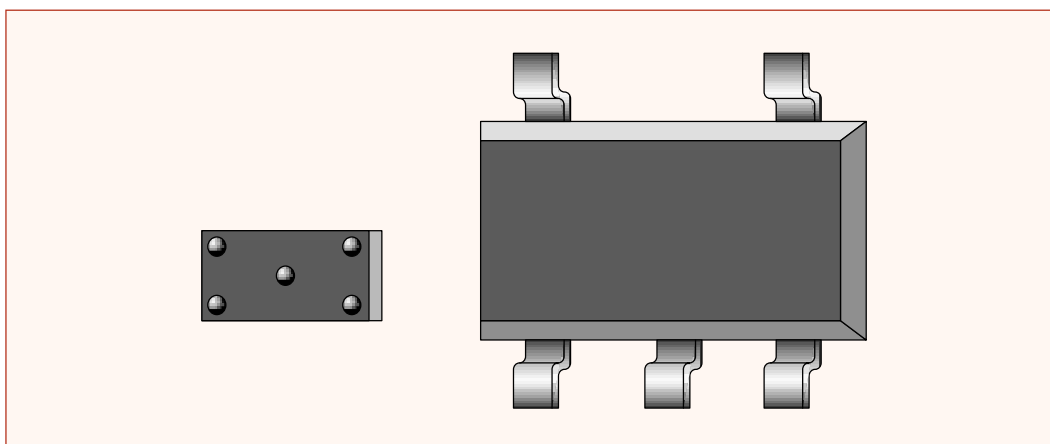
For more information:

www.semiconductors.philips.com/pip/p89c51ra2

6. SA570xx

CapFREE™, low-noise, low dropout regulators

Philips has introduced more CapFREE LDO regulators, extending this innovative family. The SA57011 provides a 500 mA solution with adjustable and fixed voltages of 2.5 to 3.6 V while the SA57017 is a 150 mA variant with voltage options from 1.6 to 2.4 V. These devices have improved transient response and reverse battery protection features, all without the need for external capacitors.



Features:

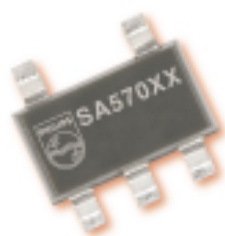
- Improved transient response time
- Reverse battery protection
- Stable for all loads regardless of equivalent series resistance without capacitors
- Typical dropout of 55 mV at 50 mA output current
- Low 30 μV_{rms} noise (typical) without a noise bypass capacitor
- Thermal overload, current limit and short circuit protection

Benefits:

- Reduced cost
- Reduced board space
- SOT23-5 package
- CSP for SA57000, SA57017

Applications:

- All portable and hand held equipment
- All battery powered equipment
- Industrial equipment
- Any microprocessor applications



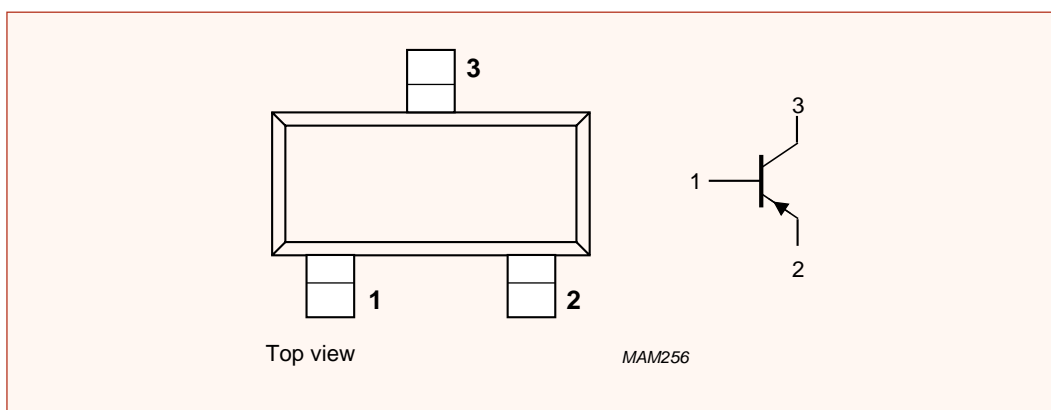
For more information:

www.semiconductors.philips.com/acrobat/literature/9397/75009963.pdf

7. PBSS5320T

PNP low V_{CEsat} (BISS) transistor in SOT23

Philips is further enlarging its' portfolio for exceptionally low collector-emitter saturation voltage transistors. Latest releases in the medium power range are new 3 A devices in a SOT23 plastic package offering further reductions in V_{CEsat} and R_{CEsat} .



Features:

- Exceptionally low R_{CEsat} and V_{CEsat}
- High collector current capability (I_C and I_{CM})
- Improved efficiency due to reduced heat generation
- Reduced PCB area requirements
- High current gain h_{FE} even at high I_C

Benefits:

- Less heat generation
- Cost saving alternative to MOSFETs
- Alternative for SOT89 and SOT223 general purpose transistors

Applications:

- Power management applications
- Low and medium power DC/DC converters
- Supply line switching
- Battery chargers
- Linear voltage regulation with low voltage drop-out (LDO)

For more information:

www.semiconductors.philips.com/pip/PBSS5320T

8. PIP202-12M

An innovative powertrain solution for VR(M) and DC/DC POL

Philips Semiconductors offers a next generation powertrain solution with improved performance in efficiency and output current. The PIP202-12M integrates all the power and driver functions required for a non isolated single and multi-phase DC to DC synchronous buck converter. Compatible with industry standard single and multi-phase PWM controllers, the PIP202-12M eliminates many of the design issues associated with synchronous buck converters. Multi-phase architectures providing higher output current capabilities are easily implemented by using one device for each phase.

Features:

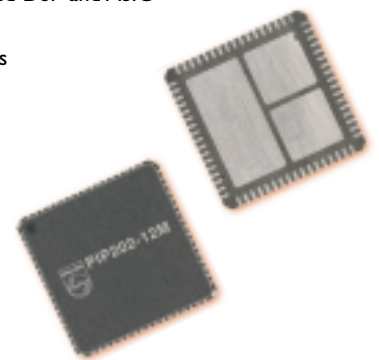
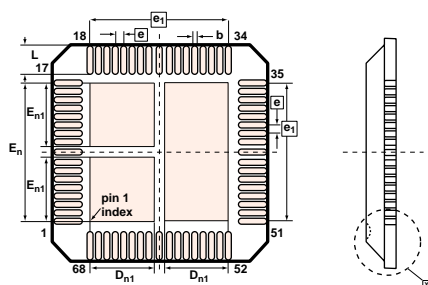
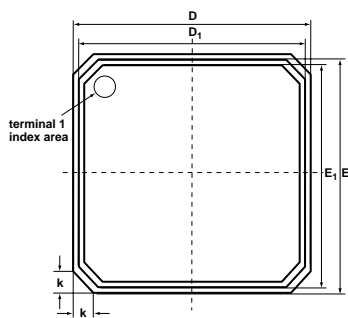
- Complete powertrain function, combining Control (high-side) FET, Synchronous (low-side) FET, Schottky diode, and FET driver in one package
- Input voltage conversion range from 3.3 V to 12 V
- Output voltages from 0.8 V to 5 V
- Capable of up to 25 A continuous output current
- Operating frequency up to 1 MHz
- Peak system efficiency > 92% @ 500 kHz
- Compatible with industry standard single and multi-phase PWM controllers

Benefits:

- Optimized solution, saving design time and enabling faster time to market
- Higher power densities through higher efficiencies at higher switching frequencies compared to discrete solutions
- Excellent thermal performance
- Industry standard HVQFN68 package for ease of manufacturing and reliability
- One package instead of four greatly increases system reliability

Applications:

- High power density DC/DC POL converters
- Small form factor CPU VRM cards for servers
- High current, space constrained DSP and ASIC applications
- Small form factor PC desktops



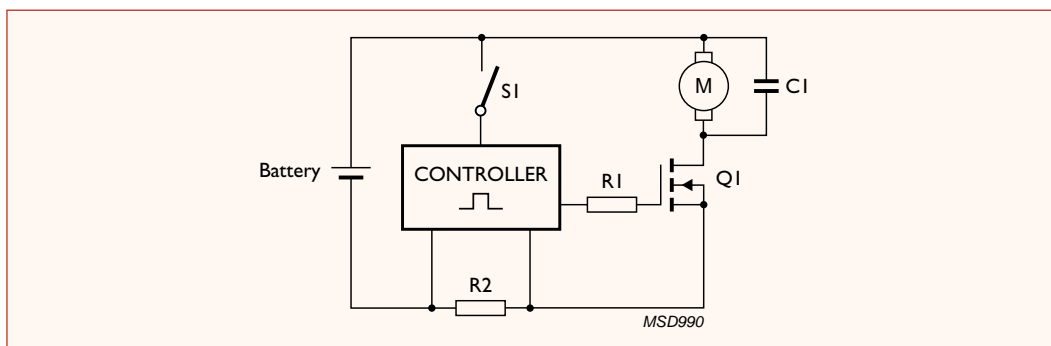
For more information:

www.semiconductors.philips.com/pip/PIP202-12M

9. PMN27UN, PMN28UN, PMN45EN

30, 20 & 12 V N-channel MOSFETS in TSOP6

Philips μ TrenchMOS is a new product portfolio exploiting Philips' core competencies in both innovative Trench technology and package miniaturization. The first devices are a range of 30 V, 20 V and 12 V N-channel MOSFETs in TSOP6 package. Capable of handling high peak currents and voltages, and tolerant of voltage drops they ensure reliable, stable operation of load, motor and signal switching circuits in a wide variety of low power and compact, portable and battery operated appliances.



Features:

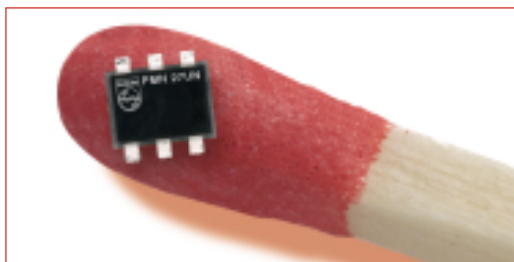
- 9.3 mm² footprint – comparable to that of SOT23 (7.4 mm²)
- Low $V_{GS(th)}$ (1.8 V) capability
- Very low $R_{DS(on)}$ – TSOP6 provides a $R_{DS(on)}$ that is 94% lower than the current SOT23 portfolio
- Superior thermal and electrical properties (50 K/W compared to 90 K/W for SOT23)

Benefits:

- High performance from a small footprint
- Longer battery life
- Lower power dissipation
- Cooler running applications

Applications:

- Battery powered motor control
- Load switch in notebook PC's
- High speed switch in set-top box power supplies
- Driver FET in DC/DC converters



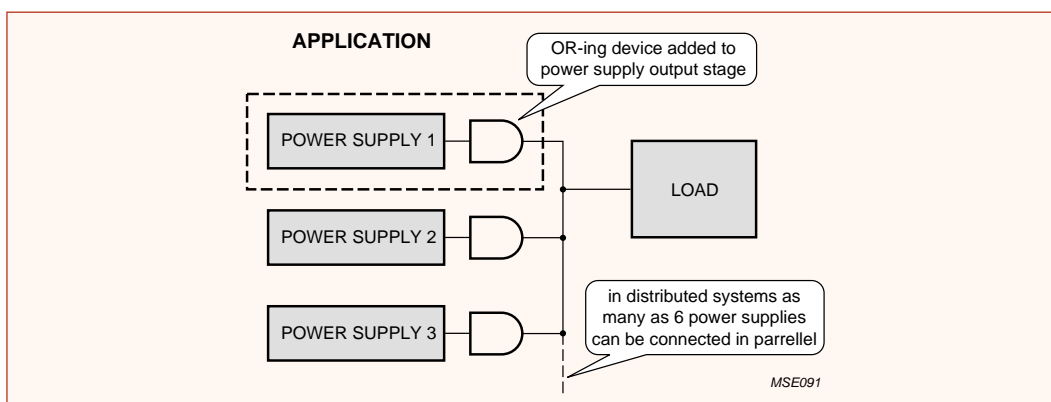
For more information:

- www.semiconductors.philips.com/pip/PMN27UN.html
- www.semiconductors.philips.com/pip/PMN28UN.html
- www.semiconductors.philips.com/pip/PMN45EN.html

10. PSMN002-25B/P, PSMN003-30B/P, PSMN004-60B/P, PSMN006-20K, PHB152NQ3LT, PHP152NQ3LT, PH3230

Low-voltage, very low $R_{DS(on)}$ (sub 4 m Ω) N-channel MOSFETs

In normal operation the MOSFET needs to be on but effectively 'invisible' to the system, and with an $R_{DS(on)}$ less than 4 m Ω , Philips portfolio of 'sub 4' discrete MOSFETs helps achieve this.



Features:

- Extremely low $R_{DS(on)}$ (less than 4 m Ω)
- Low forward power loss
- Fast switching
- Excellent reverse blocking
- Low reverse loss

Benefits:

- Improves system efficiency over Schottkys
- Low power dissipation
- Space saving

Applications:

- OR-ing applications in N+1 distributed power architectures



For more information:

www.semiconductors.philips.com/catalog/219/282/27046/30928/30689/41368/41380

11. SC16Cxxxx

Flexible family of high-performance UARTs

Philips has released a wide portfolio of high-speed 16C UARTs (Universal Asynchronous Receiver Transmitter) which are pin-to-pin compatible with solutions from leading manufacturers. Operating from a range of power supply voltages and with a wide choice of FIFO depths, this family can be used in a vast range of PC, telecommunications and industrial applications.

Features

- Broad portfolio of single, dual and quad 16C UARTs
- Choice of 2.5, 3.3 and 5 V power supply
- Fastest bus cycle times (<50 ns) compared to existing UARTs
- All specified at industrial temperature range (-40 to +85 °C)
- Power down mode for low power consumption
- Supports DMA mode and wide variety of FIFO size (1 to 64)
- Automatic hardware and software flow control
- IrDA feature on most products

Benefits

- One part fits multiple needs, significantly reducing inventory costs
- IrDA benefits wireless short range applications
- Fast bus cycle for compatibility with high speed processors
- DMA and deep FIFOs reduce CPU overhead
- Alternative sourcing with pin-to-pin compatibility

Applications

- PCs, ADSL boxes, rack modems, hubs and routers
- Base stations, cellular phones, fax servers
- Industrial automation control, medical instrumentation and scanners, Global Positioning Systems (GPS), Point of Sales (PoS), slot machines, residential gateways



For more information:

www.semiconductors.philips.com/logic/products/16c/

12. PicoGate Logic expansion

Range now includes 6-pin SOT457 and 8-pin SOT505-2 options

Philips has expanded its world's smallest logic package offering to include the 6-pin SOT457 and 8-pin SOT505-2. Capable of housing single, dual and triple gates – depending on the function – it is the simplicity of Philips PicoGate Logic packages that allows design engineers to create intricate line layout patterns without complications, thereby shortening design time. Furthermore, these packages can be used as glue or repair logic to implement last minute design change, further enhancing the time-to-market advantage for system designers.

Features

- Growing range of miniaturized package and product options
- Operating temperature range from -40 to +125 °C
- Ideal for repair logic or ASIC modifications
- Assembled on modern, dedicated high-volume flow lines for the highest product quality

Benefits

- Significant savings for space constrained applications
- Simplifies line layout and reduces time-to-market
- Qualified to automotive/military operating temperature specifications
- Excellent reliability
- Highly cost-effective

Applications

- Notebooks, PCs, CDROMs, PC cards, hard disks, floppy drives, printers, PDAs
- Faxes, cell phones, pagers, base stations
- VCR cameras, digital cameras, CD players, games, handheld LCD TVs, ADTV



For more information:

www.philipslogic.com/products/picogate/

New MultiMarket Products List

Comprehensive New Products List Q3 2002

In the following overview you will find all Philips MultiMarket Semiconductors released in the last quarter.

To ensure you can access more information quickly the type numbers are linked directly to their respective Product Information Page (PIP) on Philips Semiconductors website.

Discretes

Type Number	Description	Package	Type Number	Description	Package
General Application Discretes			Power Discretes		
PBSS5320T	Low $V_{CE(sat)}$ (BISS) Transistor	SOT23	PHB/P29N08T	80 V N-Channel Power MOSFET	PHP29N08T in SOT78 (TO-220AB)
PBSS5350T	Low $V_{CE(sat)}$ (BISS) Transistor	SOT23			PHB29N08T in SOT404 (D'PAK).
PBSS4320T	Low $V_{CE(sat)}$ (BISS) Transistor	SOT23	PHB/D/P63NQ03LT	30 V N-Channel Power MOSFET	PHP63NQ03LT in SOT78 (TO-220AB)
PBSS4350T	Low $V_{CE(sat)}$ (BISS) Transistor	SOT23			PHB63NQ03LT in SOT404 (D'PAK)
PBSS5320D	Low $V_{CE(sat)}$ (BISS) Transistor	SC-74 / SOT457			PHD63NQ03LT in SOT428 (DPAK).
PBSS4140V	Low $V_{CE(sat)}$ (BISS) Transistor	SOT666	PHB/D/P71NQ03LT	30 V N-Channel Power MOSFET	PHP71NQ03LT in SOT78 (TO-220AB)
BC807DS	General Purpose Transistor	SC-74 / SOT457			PHB71NQ03LT in SOT404 (D'PAK)
BC817DPN	General Purpose Transistor	SC-74 / SOT457			PHD71NQ03LT in SOT428 (DPAK).
BC817DS	General Purpose Transistor	SC-74 / SOT457	PHB64N03LT	30 V N-Channel Power MOSFET	SOT404 (D'PAK).
2PB709AQW	General Purpose Transistor	SC-70 / SOT323	PHB95N03LTA	30 V N-Channel Power MOSFET	SOT404 (D'PAK).
2PD601AQW	General Purpose Transistor	SC-70 / SOT323	PSMN005-75B/P	75 V SiliconMAX N-Channel Power MOSFET	PSMN005-75P in SOT78 (TO-220AB)
PDTC115EE	Resistor Equipped Transistor (RET)	SC-75 / SOT416			PSMN005-75B in SOT404 (D'PAK).
BZA418A	Quadruple protection array	SOT457	PSMN009-100B/P	100 V SiliconMAX N-Channel Power MOSFET	PSMN009-100P in SOT78 (TO-220AB)
BAT74V	Dual isolated Schottky Diode	SOT666			PSMN009-100B in SOT404 (D'PAK).
PMBD354	Dual, matched capacitance RF Schottky Diode	SOT23	PHK04P02T	200 V P-Channel Power MOSFET	SO8
			BUK9907-40ATC	Automotive specified N-Channel Power MOSFET transistor offering clamping and temperature sensing.	SOT263B
			BUK9907-55ATE	Automotive specified N-Channel Power MOSFET transistor offering clamping and temperature sensing.	SOT263B
			BUK9E04-40A	Automotive specified Power MOSFET transistor	SOT226 (I'PAK).

New MultiMarket Products List

Logic

Type Number	Description	Package	Type Number	Description	Package
PTN3331	High Speed Differential Line Driver	D, DH	74AHC1G08	Single 2-Input AND Gate	GV
PTN3341	High Speed Differential Line Driver	D, DH	74AHC1G125	Single 3-State Buffer	GV
PTN3310	High Speed Serial Logic Translators	DP	74AHC1G126	Single 3-State Buffer	GV
PTN3311	High Speed Serial Logic Translators	DP	74AHC1G126	Single 3-State Buffer	GV
74ALVC373	Octal D-Type Flip-Flop, 3-State	D, PW	74AHC1G126	Single 3-State Buffer	GV
74ALVC374	Octal D-Type Flip-Flop with Positive Edge Trigger, 3-State	D, PW	74AHC1G14	Single Inverter Schmitt Trigger	GV
74ALVC541	Octal Buffer/Line Driver, Inverting 3-State	D, PW	74AHC1G14	Single Inverter Schmitt Trigger	GV
74ALVC573	Octal Transparent Latch	D, PW	74AHC1G32	Single 2-Input OR Gate	GV
74ALVC574	Octal D-Type Flip-Flop; Positive Edge Trigger, 3-State	D, PW	74AHC1G32	Single 2-Input OR Gate	GV
CBTD3306	Dual Bus Switch with Level Shifting	D	74AHC1G66	Analog Switch	GV
PCK12429	25-400 MHz Differential PECL Clock Generatoar	D, BD	74AHC1G66	Analog Switch	GV
74LVC38A	Quad 2-Input NAND Buffer (Open Drain)	D, DB, PW	74AHC1G79	Single Positive Edge-Triggered D-Type Flip-Flop	GV
74AVC16835A	18-Bit Registered Driver with Dynamic Controlled Outputs (3-State)	DGV	74AHC1G79	Single Positive Edge-Triggered D-Type Flip-Flop	GV
PCK2111	1:10 LVDS Clock Distribution Device	BD	74AHC1G86	Single Exclusive-OR Gate	GV
PCK351	1:10 Clock Distribution Device with 3-State Outputs	D, DB	74AHC1GU04	Single Inverter (unbuffered)	GV
SSTV16857	14-Bit 2.5 V SSTL_2 Registered Driver with Differential Clock Inputs	EC	74HCT1GU04	Single Inverter (unbuffered)	GV
74ALVCHT16835	18-Bit Registered Driver with Bus Hold (3-State)	DGV	74HCT1G125	Single 3-State Buffer	GV
74LVC1G126GV	Single 3-State Buffer	GV	74HCT1G125	Single 3-State Buffer	GV
74LVC2G241DP	Dual Buffer (3-State)	DP	74HCT2G32	Dual 2-Input OR Gate	DP
74LVC1G08	Single Two-Input AND Gate	GV	74HCT2G32	Dual 2-Input OR Gate	DP
74LVC1G32	Single 2-Input OR Gate	GV	74HCT2G00	Dual 2-Input NAND Gate	DP
74LVC1G125	Single 3-State Buffer	GV	74HCT2G08	Dual 2-Input AND Gate	DP
74LVC1G14	Single Inverter Schmitt Trigger	GV	74HC2G08	Dual 2-Input AND Gate	DP
74LVC1G79	Single Positive Edge Triggered D-Type Flip-Flop Non-Inverted Output	GV	74HCT2G02	Dual 2-Input NOR Gate	DP
74LVC1GU04	Single Inverter (unbuffered)	GV	74HCT1G14	Single Inverter Schmitt Trigger	GV
74LVC1G80	Single Positive Edge Triggered D-Type Flip-Flop Inverted Output	GV	74HC1G14	Single Inverter Schmitt Trigger	GV
74LVC1G02	Single 2-Input NOR Gate	GV	74HC1G04	Single Inverter	GV
74LVC1G86	Single Exclusive-OR Gate	GV	74HCT1G04	Single Inverter	GV
74LVC1G00	Single 2-Input NAND Gate	GV	74HCT1G66	Analog Switch	GV
74LVC1G06	Single Inverter (Open Drain Output)	GV	74HC1G66	Analog Switch	GV
74LVC1G07	Single Buffer (Open Draing Output)	GV	74HCT3G04	Triple Inverter	DP
74LVC1G66	Analog Switch	GV	74HC3G04	Triple Inverter	DP
74LVC1G04	Single Inverter	GV	74HCT2G86	Dual Exclusive-OR Gate	DP
74HC2G02	Dual 2-Input NOR Gate	DP	74HC2G86	Dual Exclusive-OR Gate	DP
74HC2G00	Dual 2-Input NAND Gate	DP	74HCT1G32	Single 2-Input OR Gate	GV
74AHC1G00	Single 2-Input NAND Gate	GV	74HCT1G126	Single 3-State Buffer	GV
74AHC1G00	Single 2-Input NAND Gate	GV	74HCT1G32	Single 2-Input OR Gate	GV
74AHC1G02	Single 2-Input NOR Gate	GV	74HC1G00	Single 2-Input NAND Gate	GV
74AHC1G02	Single 2-Input NOR Gate	GV	74HCT1G00	Single 2-Input NAND Gate	GV
74AHC1G04	Single 2-Input NOR Gate	GV	74HC1G126	Single 3-State Buffer	GV
74AHC1G04	Single Inverter	GV	74HC1G08	Single 2-Input AND Gate	GV
74AHC1G04	Single Inverter	GV	74HCT1G02	Single 2-Input NOR Gate	GV
74AHC1G06	Single Inverter (Open Drain Output)	GV	74HCT1G86	Single Exclusive-OR Gate	GV
74AHC1G06	Single Inverter (Open Drain Output)	GV	74HCT1G08	Single 2-Input AND Gate	GV
74AHC1G07	Single Buffer (Open Draing Output)	GV	74HC1G02	Single 2-Input NOR Gate	GV
74AHC1G07	Single Buffer (Open Draing Output)	GV	74HCT1G86	Single Exclusive-OR Gate	GV
74AHC1G08	Single 2-Input AND Gate	GV	74HCT1G08	Single 2-Input AND Gate	GV
			74HC1G02	Single 2-Input NOR Gate	GV
			74HCT1G86	Single Exclusive-OR Gate	GV
			74HCT3G14	Single Inverter Schmitt Trigger	DP
			74HC3G14	Single Inverter Schmitt Trigger	DP

New MultiMarket Products List

Type Number	Description	Package
DIGITAL DATACOM PRODUCTS		
SCC2691AC1	Universal asynchronous receiver/transmitter (UART)	D24
MC145406	EIA-232-D/V.28 Driver/Receiver	N
SC16C2550IA44	Dual Channel Universal Asynchronous Receiver Transmitter with 16-Byte FIFOs and Infrared (IrDA) Encoder/Decoder	A44, B48, N40
SC16C2552IA44	Dual Channel Universal Asynchronous Receiver Transmitter with 16-Byte FIFOs	A44
SC16C650AIA44	Single Channel Universal Asynchronous Receiver Transmitter with 32-Byte FIFOs and Infrared (IrDA) Encoder/Decoder	A44, B48, N40
SC16C654DIB64	Quad Channel Universal Asynchronous Receiver Transmitter with 64-Byte FIFOs and Infrared (IrDA) Encoder/Decoder; IMPACT Series	B64, A68
SC16C654IA68	Quad Channel Universal Asynchronous Receiver Transmitter with 64-Byte FIFOs and Infrared (IrDA) Encoder/Decoder; IMPACT Series	A68, B64
SC16C750IA44	Single Channel Universal Asynchronous Receiver Transmitter with 64-Byte FIFOs	A44, B48
SC16C752IB48	Dual Channel Universal Asynchronous Receiver Transmitter with 64-Byte FIFOs	B48
SC16C550IA44	Single Channel Universal Asynchronous Receiver Transmitter with 16-Byte FIFOs and Infrared (IrDA) Encoder/Decoder	A44, B48, N40
SC16C554DIB64	Quad Channel Universal Asynchronous Receiver Transmitter with 16-Byte FIFOs and Infrared (IrDA) Encoder/Decoder; IMPACT Series	B64, A68
SC16C554IB64	Quad Channel Universal Asynchronous Receiver Transmitter with 16-Byte FIFOs and Infrared (IrDA) Encoder/Decoder; IMPACT Series	B64

Microcontrollers

Type Number	Description	Package
P89LPC932	First device in the LPC900 family integrates 8 KB of Flash program memory and 512 bytes of data EEPROM	TSSOP28, PLCC28, HVQFN28
P89C51Rx2/01	8-bit 80C51 Flash microcontroller family with In-System Programming (ISP) and In-Application System (IAP) capability	PLCC, LQFP, PDIP
P89C60X2/P89C61X2	8-bit 80C51 Flash microcontroller family with In-System Programming (ISP) capability	PLCC44, LQFP44

Standard Analog

Type Number	Description	Package
NE5232D or N	Matched Dual Low Volt Op Amp	SOT96 (SO8) and SOT97 (DIP8)
SA5232D or N	Matched Dual Low Volt Op Amp	SOT96 (SO8) and SOT97 (DIP8)
TDA1308TT	Class AB stereo headphone driver	SOT505 (TSSOP8)
SA56614-185	Supervisory circuit	SOT353 (SOT-23-5)

Type Number	Package	Contact
EVALUATION BOARDS		
SA57000-33x	Available in SOT23 package	lisa.m.williams@philips.com
SA57000-xx	Available in SOT23 and CSP package	lisa.m.williams@philips.com
SA8877-xx	Available in SOT23 package	lisa.m.williams@philips.com
SA57011-xx	Available in SOT23 package	lisa.m.williams@philips.com

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