

# MILITARY Brief



Volume 15

September 2002

Issue 1  
SGZN001

## QML Class V Space Products from Texas Instruments

Integrated circuits are designed for use in a wide range of applications and environments. Some applications are very benign while other applications require careful device selection to ensure system reliability. Semiconductor devices are designed and manufactured for various environments ranging from desktop computers to manned space vehicles. Each environment has very different requirements that must be addressed in specifying the microcircuits used in that environment. For critical applications, Texas Instruments offers the enhanced quality and reliability of devices fully qualified to Class Level V in accordance with MIL-PRF-38535.

The demand for semiconductors with greater performance, lower power, higher integration levels and cost effective solutions has increased, and Texas Instruments has the solution. A line of QML Class V products is available to support the demanding nature of space applications.

Power Management and 5-V Digital Logic devices have been released with planned expansion into other product families. An extensive portfolio of devices are all under evaluation for integration into TI's QML Class V line and this includes DSPs, Analog, Mixed-Signal, 3.3-V Digital Logic and ASICs.

If there is some function or technology TI offers that is not currently included in the QML Class V line, contact the Product Information Center to request the release.

Further updates on device releases and QML Class V strategic expansions will be available on the QML Class V website ([www.ti.com/space](http://www.ti.com/space)) which will go live during 4Q02. This will provide you with the most up-to-date information on what TI offers the space community and will show how your programs can benefit by working with the Military Products Division.



### Current QML Class V Products (Analog)

Unitrode Part #	Orderable DSCC SMD #	Package	Function
UC1525	5962-8951105VEA 5962-8951105V2A	16/J 20/L	PWM Controller, Regulating, Voltage Mode
UC1705	5962-9579801VPA	8/J	Power Driver, High Speed
UC1707	5962-8761901VEA 5962-8761901V2A	20/L 16/J	Power Driver, Dual channel
UC1708	5962-0051401VPA	8/J	Power Driver, Dual, Non-Inverting
UC1709	5962-0151201VPA 5962-0151201V2A	8/J 20/L	FET Driver, Dual, High Speed
UC1710	5962-0152001VPA	8/J	MOSFET Driver, Complementary High Current
UC1823	5962-8990502VEA	16/J	PWM Controller, High Speed, Current-Mode
UC1825	5962-8768101VEA 5962-8768101V2A	16/J 20/L	PWM Controller, High Speed, Current-Mode
UC1825A	5962-8768102VEA 5962-8768102V2A	16/J 20/L	PWM Controller, High Speed, Current-Mode
UC1832	5962-9326501VCA 5962-9326501V2A	14/J 20/L	LDO Linear Regulator Controller, Precision
UC1834	5962-8774201VEA 5962-8774201V2A	16/J 20/L	LDO Linear Regulator Controller, High Efficiency
UC1842	5962-8670401VPA 5962-8670401V2A	8/J 20/L	PWM Controller, Current-Mode
UC1842A	5962-8670405VPA 5962-8670405V2A	8/J 20/L	PWM Controller, Current-Mode
UC1843	5962-8670402VPA 5962-8670402V2A	8/J 20/L	PWM Controller, Current-Mode
UC1843A	5962-8670406VPA 5962-8670406V2A	8/J 20/L	PWM Controller, Current-Mode
UC1844	5962-8670403VPA 5962-8670403V2A	8/J 20/L	PWM Controller, Current-Mode
UC1844A	5962-8670407VPA 5962-8670407V2A	8/J 20/L	PWM Controller, Current-Mode
UC1845	5962-8670404VPA 5962-8670404V2A	8/J 20/L	PWM Controller, Current-Mode
UC1845A	5962-8670408VPA 5962-8670408V2A	8/J 20/L	PWM Controller, Current-Mode
UC1846	5962-8680601VEA 5962-8680601V2A	16/J 20/L	PWM Controller, Current-Mode
UC1863	5962-9203103VEA 5962-9203103V2A	16/J 20/L	PWM Controller, Soft-Switching, Resonant Mode
UC1875	5962-9455501VRA 5962-9455501V3A	20/J 28/L	PWM Controller, Phase Shift, Resonant Mode
UCC1806	5962-9457501VEA 5962-9457501V2A	16/J 20/L	PWM Controller, Low Power, Dual Output, Current Mode

### Current QML Class V Products (Logic)

Device	Orderable DSCC SMD #	Package	Function
54HC00	5962-8403701VCA 5962-8403701VDA	14/J 14/W	Quad 2-input NAND
54HC02	5962-8404101VCA 5962-8404101VDA	14/J 14/W	Quad 2-Input NOR Gates
54HC04	5962-8409801VCA 5962-8409801VDA	14/J 14/W	Hex Inverters
54HC08	5962-8404701VCA 5962-8404701VDA	14/J 14/W	Quad 2-Input Positive-AND Gates
54HC14	5962-8409101VCA 5962-8409101VDA	14/J 14/W	Hex Schmitt-Trigger Inverters
54HC32	5962-8404501VCA 5962-8404501VDA	14/J 14/W	Quad 2-input OR

## Current QML Class V Products (Logic)

Device	Orderable DSCC SMD #	Package	Function
54HC74	5962-8405601VCA 5962-8405601VDA	14/J 14/W	Dual Positive-Edge-Triggered D Flip-Flop With Clear And Preset
54HC132	5962-8984502VCA 5962-8984502VDA	14/J 14/W	Quad Positive-NAND Gates With Schmitt-Trigger Inputs
54HC138	5962-8406201VEA 5962-8406201VFA	16/J 16/W	3-Line To 8-Line Decoders/Demultiplexers
54HC245	5962-8408501VRA 5962-8408501VSA	20/J 20/W	Octal Bus Transceivers With 3-State Outputs
54HC244	5962-8409601VRA 5962-8409601VSA	20/J 20/W	Octal Buffers/Drivers With 3-State Outputs
54HC373	5962-8407201VRA 5962-8407201VSA	20/J 20/W	Octal D-type Transparent Latches With 3-State Outputs
54HC374	5962-8407101VRA 5962-8407101VSA	20/J 20/W	Octal D-type Edge-Triggered Flip-Flops With 3-State Outputs
54HC573A	5962-8512801VRA 5962-8512801VSA	20/J 20/W	Octal D-type Transparent Latches With 3-State Outputs
54HC595	5962-8681601VEA 5962-8681601VFA	16/J 16/W	8-Bit Shift Registers With 3-State Output Registers
54HCT04	5962-8974701VCA 5962-8974701VDA	14/J 14/W	Hex Inverters
54HCT244	5962-8513001VRA 5962-8513001VSA	20/J 20/W	Octal Buffers/Drivers With 3-State Outputs
54HCT245	5962-8550601VRA 5962-8550601VSA	20/J 20/W	Octal Bus Transceivers With 3-State Outputs
54HCT373	5962-8686701VRA 5962-8686701VSA	20/J 20/W	Octal D-type Transparent Latches With 3-State Outputs
54HCT374	5962-8550701VRA 5962-8550701VSA	20/J 20/W	Octal D-type Edge-Triggered Flip-Flops With 3-State Outputs
54AHCT08	5962-9682101VCA 5962-9682101VDA	14/J 14/W	Quad 2-Input Positive-AND Gates
54AHCT14	5962-9680101VCA 5962-9680101VDA	14/J 14/W	Hex Schmitt-Trigger Inverters
54AHC244	5962-9678201VRA 5962-9678201VSA	20/J 20/W	Octal Buffers/Drivers With 3-State Outputs
54AHC245	5962-9681801VRA 5962-9681801VSA	20/J 20/W	Octal Bus Transceivers With 3-State Outputs
54AC14	5962-8762401VCA 5962-8762401VDA	14/J 14/W	Hex Schmitt-Trigger Inverters
54AC74	5962-8852001VCA 5962-8852001VDA	14/J 14/W	Dual Positive-Edge-Triggered D Flip-Flop With Clear And Preset
54AC244	5962-8755201VRA 5962-8755201VSA	20/J 20/W	Octal Buffers/Drivers With 3-State Outputs
54AC245	5962-8775801VRA 5962-8775801VSA	20/J 20/W	Octal Bus Transceivers With 3-State Outputs
54AC373	5962-8755501VRA 5962-8755501VSA	20/J 20/W	Octal D-type Transparent Latches With 3-State Outputs
54AC374	5962-8769401VRA 5962-8769401VSA	20/J 20/W	Octal D-type Edge-Triggered Flip-Flops With 3-State Outputs
54ACT04	5962-8973401VCA 5962-8973401VDA	14/J 14/W	Hex Inverters
54ACT244	5962-8776001VRA 5962-8776001VSA	20/J 20/W	Octal Buffers/Drivers With 3-State Outputs
54ACT245	5962-8766301VRA 5962-8766301VSA	20/J 20/W	Octal Bus Transceivers With 3-State Outputs
54ACT373	5962-8755601VRA 5962-8755601VSA	20/J 20/W	Octal D-type Transparent Latches With 3-State Outputs
54ACT374	5962-8763101VRA 5962-8763101VSA	20/J 20/W	Octal D-type Edge-Triggered Flip-Flops With 3-State Outputs

See the next page for a listing of potential QML Class V product releases.

Products must be ordered by the orderable DSCC SMD number which is referenced in the tables.

## QML Class V Products (Potential)

Device	Function
SMJ320C6701*	Floating Point Digital Signal Processor
LM111	Single, Strobed Differential Comparator
LM124	Quad General-Purpose Op Amp
LM139	Quad General-Purpose Op Amp
LM148	Quad General-Purpose Op Amp
LM193	Dual, General Purpose Differential Comparator
LT1013	Dual Precision Op Amp
LT1014	Quad Precision Op Amp
LVCH245	Octal Bus Transceiver With 3-State Outputs And Bus Hold
LVDS31/32	Quad High-Speed Differential Drivers/Receiver
LVTH245	Octal Bus Transceiver With 3-State Outputs And Bus Hold
SE555	Single Precision Timer
TL062	Dual Low-Power JFET-Input Op Amp
TL064M	Quad Low-Power JFET-Input Op Amp
TL072M	Dual Low-Noise JFET-Input Op Amp
TL074M	Quad Low-Noise JFET-Input Op Amp
TL082M	Dual JFET-Input Op Amp
TL084M	Quad JFET-Input Op Amp
TL1431	Low Voltage Adjustable Precision Shunt Regulator
TLC1542	10-Bit, 38 kSPS ADC Serial Out, On-Chip System Clock, 11 Ch.
TLC2201	Low Noise Precision Rail-To-Rail Output Op Amp
TLC2274	Quad Low-Noise Rail-To-Rail Op Amp
TLC2654	Low-Noise Chopper-Stabilized Op Amp
TLC277	Dual Precision Single Supply Op Amp
TLC372	Dual General Purpose LinCMOS(TM) Differential Comparator
TLC555	Low Power Timer
TLC7705	Single Power SVS (5v) With Programmable Time Delay & Push-Pull Outputs
TLC7733	Single SVS For 3.3V Systems With Programmable Time Delay
TLE2022	Excalibur High-Speed Low-Power Precision Dual Op Amp
TLE2062	Excalibur JFET-Input High-Output-Drive $\mu$ Power Dual Op Amp
UA78M05	5V, 500mA Fixed Positive Voltage Regulator
UC1901	Isolated Feedback Generator
UC2827	Buck Current/Voltage Fed Push-Pull PWM Controllers

\* Planned 2003 release

The QML Class V website ([www.ti.com/space](http://www.ti.com/space)) will be available in 4Q02. If you need information on a device before the QML Class V website is active, go to [www.ti.com/sc/military](http://www.ti.com/sc/military) and place the part number in the search engine.

If you are interested in a function that is not yet released or would like to investigate having TI add another function to the QML Class V portfolio, please contact the Product Information Center or fill out the feedback form located at [www.ti.com/sc/docs/general/military/feedback.htm](http://www.ti.com/sc/docs/general/military/feedback.htm)

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### Product Information Center

#### North America

Telephone: 972-644-5580 (English)

Fax: 972-480-7800

PIC: <http://www.ti.com/sc/docs/pic/americas.htm>

PIC E-mail: [sc-infomaster@ti.com](mailto:sc-infomaster@ti.com)

Military Products: <http://www.ti.com/sc/docs/military/welcome.htm>

Distributor Listing: <http://www.ti.com/sc/docs/distmenu.htm>

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