



May 1, 2008

Dear Customer:

The purpose of this letter is to update customers on the die inventory of Aeroflex's 3.3V 4M Quantified Commercial-Off-The Shelf (QCOTS™) used in our UT8Q512K8 and UT8Q512K32 products. In August 2007, Aeroflex announced the finite supply of the commercial die. Aeroflex now projects that die source will exhaust in 3 to 6 months.

Aeroflex's replacement devices for the UT8Q512 and UT8Q512K32 devices are the new RadTolerant UT8Q512E and UT8Q512K32E based on Aeroflex's twelve transistor (12T) memory technology. The new designs are a functional replacement offered via SMD (Standard Microcircuit Drawing) and available for order. The devices are QML Q qualified with QML V qualification pending.

**Products affected by the die inventory**

Product	Existing Part Number	Replacement Part Number	Standard Microcircuit Drawing	Package
3.3V 4M SRAM	UT8Q512	UT8Q512E	5962-99607	36-lead CFP
3.3V 16M SRAM MCM	UT8Q512K32	UT8Q512K32E	5962-01533	68-lead CQFP
3.3V 8M SRAM	UT8Q1024K8	<b>Reached EOL</b>	5962-01532	44-lead CFP

The following AC and DC Electrical Characteristic differences have been identified between the 3.3V QCOTS and the new 3.3V RadTolerant devices.

**AC and DC Electrical Characteristic Differences (4M SRAM)**

Specification	UT8Q512 3V QCOTS	UT8Q512E 3V RadTolerant
V <sub>OL1</sub> Low-level output voltage	I <sub>OL</sub> = 8mA	I <sub>OL</sub> = 6mA
I <sub>DD</sub> (OP) supply current @ 1MHz	125mA	50mA
I <sub>DD</sub> (OP) supply current @ 40MHz	180mA	75mA
I <sub>DD</sub> (SB) @ 0MHz (-55°C & 25°C)	6mA	10mA
I <sub>DD</sub> (SB) @ 0MHz (125°C)	40mA	45mA
t <sub>AVQV</sub> Read Access time	25ns	20ns
t <sub>ETQV</sub> E-controlled access time	25ns	20ns
t <sub>WHQX</sub> Data hold time	5ns (min)	4ns (min)
t <sub>GLQX</sub> G-controlled output enable time	0ns (min)	3ns (min)
t <sub>WHAX</sub> Address hold time for write	2ns (min)	0ns (min)

**Note:**

1. At maximum operating speed the RadTolerant replacement 4M device uses 60% less current (75mA vs. 180mA)

## AC and DC Electrical Characteristic Differences (16M SRAM)

Specification	UT8Q512 3V QCOTS	UT8Q512E 3V RadTolerant
Operating Temperature	-40°C to +125°C	-40°C to +105°C
V <sub>OL1</sub> Low-level output voltage	I <sub>OL</sub> = 8mA	I <sub>OL</sub> = 6mA
I <sub>DD</sub> (OP) supply current @ 1MHz	125mA	40mA
I <sub>DD</sub> (OP) supply current @ 40MHz	180mA	70mA
I <sub>DD</sub> (SB) @ 0MHz (-55°C & 25°C)	6mA	9mA
I <sub>DD</sub> (SB) @ 0MHz (125°C)	40mA	24mA
t <sub>WHQX</sub> Data hold time	5ns (min)	4ns (min)
t <sub>AVET</sub> Address setup time for write	1ns (min)	0ns (min)

### Note:

1. At maximum operating speed the RadTolerant replacement 16M device uses 60% less current (75mA vs. 180mA per byte)

Aeroflex packaging engineers have identified the following fit and form differences between the 3.3V QCOTS and the new 3.3V RadTolerant device packages. A comparison of the package differences is shown below.

## Fit and Form Differences 4M

### 4M Package Dimension Differences

	UT8Q512 3V QCOTs	UT8Q512E 3V RadTolerant
<b>Length</b>	.920 + .010	.920 + .010
<b>Width</b>	.480 + .005	.580 + .005
<b>Height</b>	.124 + .013	.117 + .013

### 16M Package Dimension Differences

	UT8Q512K32 3V QCOTs	UT8Q512K32E 3V RadTolerant
<b>Length (ceramic)</b>	.880 + .009	.980 + .009
<b>Width (ceramic)</b>	.880 + .009	.980 + .009
<b>Height (includes lids)</b>	.205 + .016	.209 + .020

For application questions regarding fit, form, and function of the 3V QCOTS or the new 3V RadTolerant memory devices, please contact Mike Leslie at (719) 594-8148 or e-mail [leslie@aeroflex.com](mailto:leslie@aeroflex.com)

Aeroflex provides this product information to allow customers to plan in advance of this product modification. If you have any questions please contact me at (719) 594-8252 or e-mail [Jordan@aeroflex.com](mailto:Jordan@aeroflex.com). Aeroflex looks forward to continued business with your company.

Regards,

Anthony Jordan  
Director of Standard Products  
Aeroflex Colorado Springs