

PRESS RELEASEJapan
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<http://www.torex.co.jp/english/>

TRX031 December 17, 2007

**XC6601 Series
Low Input Voltage LDO Regulator**

Torex Semiconductor Ltd. (Chuo-Ku, Tokyo : President, Tomoyuki Fujisaka) announces the release of the XC6601 Series of Low Input Voltage, High Speed LDO regulators.

The XC6601 is a 400mA high speed voltage regulator with a built-in N channel FET. Even at low output voltages, it is still possible to achieve high efficiency operation, thanks to the ultra low ON resistance of the IC. The device is ideal for applications which require low dropout voltage operation. The XC6601 consists of a voltage reference, error amplifier, driver transistor, current limiter, fold-back circuit, thermal shutdown (TSD) circuit, under voltage lockout (UVLO) and a phase compensation circuit.

The output voltage is selectable in 0.05V increments within the range of 0.70V to 1.80V using laser trimming technologies. The output stabilization capacitor (C_L) is also compatible with low ESR ceramic capacitors.

The XC6601 has a built-in over current protection and TSD circuit. These two protection circuits will operate when the output current reaches its current limit or the junction temperature reaches its temperature limit.

With the built-in UVLO function, the regulator output is forced OFF when the V_{BIAS} pin or the V_{IN} pin drops below the UVLO voltage.

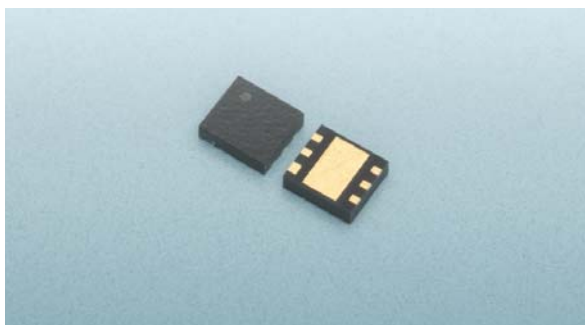
The CE (chip enable) function means that the output can be turned off and the IC put into stand-by mode, thereby greatly reducing power consumption. During the switch into stand-by mode, the electric charge at the C_L capacitor will be discharged via the internal auto-discharge switch so that the V_{OUT} pin drops down to ground quickly.

【XC6601 Features】

- Ideally suited for use with a broad range of battery operated products such as mobile phones
- ON resistance reduced by 50% in comparison to a conventional LDO such as the XC6210 at $V_{BIAS}=3.6V$
- Under voltage lockout integrated
- Available in an ultra small USP-6C package

Maximum Output Current : 400mA (Limit=500mA TYP)
Dropout Voltage : 35mV @ IO_{UT}=100mA ($V_{BIAS}-V_{OUT}=2.4V$)
Bias Voltage : 2.5V ~ 6.0V ($V_{BIAS}-V_{OUT}$ 0.9V)
Input Voltage : 1.0V ~ 3.0V (V_{IN} V_{BIAS})
Output Voltage : 0.7V ~ 1.8V (0.05V steps)
Output Accuracy : ± 20mV
Supply Current : $I_{BIAS}=25\mu A$, $I_{IN}=1.0\mu A$ (TYP)
Standby Current : $I_{BIAS}=0.01\mu A$, $I_{IN}=0.01\mu A$ (TYP)
UVLO : $V_{BIAS}=2.0V$, $V_{IN}=0.4V$ (TYP)
TSD : Shutdown: 150 , Release: 125
Operating Temperature Range : -40 ~ 85
C_L High Speed Discharge Function
Low ESR Capacitor Compatible
Packages : SOT-25, USP-6C, SOT-89-5

*Performance depends on external components and wiring on the PCB.



▲USP-6C (1.8 x 2.0 x 0.6mm)

[Company Outline]

Name : Torex Semiconductor Ltd.
 Found : 1995
 Capital : 984.78 million JPY
 President : Tomoyuki Fujisaka
 Employees : 213 (as of April 1, 2007)
 Operations : Manufacturing of ICs and active discrete components.
 Sales of ICs and active discrete components.

<http://www.torex.co.jp/english/>

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