

# Material Declaration Report

|                       |                   |
|-----------------------|-------------------|
| Package Type:         | TSSOP 28L (4.4mm) |
| Pericom Package Code: | L28(Pb-free)      |
| RoHS Compliance:      | Yes               |
| Applicable Exemption: | N/A               |
| REACH Compliance:     | Yes               |
| Halogen Free:         | Yes               |

|                           |                  |
|---------------------------|------------------|
| Component Weight (mg):    | 106.571          |
| Termination Plating:      | Matte Tin        |
| JESD 97 Pb-free Category: | e3               |
| Plating Thickness (um):   | 10-20            |
| Tin Whisker Mitigation:   | Anneal, 150C/1hr |

|                     |          |
|---------------------|----------|
| MSL Rating:         | 1        |
| Peak Body Temp (C): | 260      |
| Max Time (sec):     | 30       |
| Reflow Cycles:      | 3        |
| Rev Date:           | 4/8/2010 |

## Homogeneous Material Declaration

| MATERIAL ITEM    | MATERIAL WEIGHT(mg) | ASSEMBLY SUBCON | MATERIAL COMPOSITION | CAS NO.      | COMPOSITION % | COMPOSITION WEIGHT(mg) |
|------------------|---------------------|-----------------|----------------------|--------------|---------------|------------------------|
| MOLD COMPOUND    | 67.246              | GTK             | Epoxy Resin          | Trade secret | 8.000         | 5.380                  |
|                  |                     |                 | Phenol Resin         | Trade secret | 6.000         | 4.035                  |
|                  |                     |                 | Carbon Black         | 1333-86-4    | 0.300         | 0.202                  |
|                  |                     |                 | Silica fused         | 60676-86-0   | 75.400        | 50.704                 |
|                  |                     |                 | Silica fused         | 7631-86-9    | 10.000        | 6.725                  |
|                  |                     |                 | Silica crystalline   | 14808-60-7   | 0.300         | 0.202                  |
| LEADFRAME        | 32.184              |                 | Copper (Cu)          | 7440-50-8    | 94.900        | 30.543                 |
|                  |                     |                 | Nickel (Ni)          | 7440-02-0    | 3.200         | 1.030                  |
|                  |                     |                 | Silicon (Si)         | 7440-21-3    | 0.720         | 0.232                  |
|                  |                     |                 | Magnesium (Mg)       | 7439-95-4    | 0.180         | 0.058                  |
|                  |                     |                 | Silver(Ag)           | 7440-22-4    | 1.000         | 0.322                  |
| SILICON DIE      | 3.623               |                 | Silicon (Si)         | 7440-21-3    | 99.192        | 3.594                  |
|                  |                     |                 | Non-hazardous Metal  | Proprietary  | 0.808         | 0.029                  |
| DIE ATTACH EPOXY | 0.213               |                 | Silver               | 7440-22-4    | 74.500        | 0.159                  |
|                  |                     |                 | Epoxy Resin A        | 9003-36-5    | 4.000         | 0.009                  |
|                  |                     |                 | Epoxy Resin B        | Proprietary  | 6.000         | 0.013                  |
|                  |                     |                 | Diluent A            | Proprietary  | 4.000         | 0.009                  |
|                  |                     |                 | Diluent B            | Proprietary  | 6.000         | 0.013                  |
|                  |                     |                 | Hardener             | Proprietary  | 4.000         | 0.009                  |
|                  |                     |                 | Dicyandiamide        | 461-58-5     | 0.500         | 0.001                  |
|                  |                     |                 | Organic Peroxide     | Proprietary  | 1.000         | 0.002                  |
| GOLD WIRE        | 0.853               |                 | Gold(Au)             | 7440-57-5    | 99.990        | 0.852                  |
|                  |                     |                 | Impurities           | -            | 0.010         | 0.000                  |
| SOLDER PLATING   | 2.451               |                 | Tin (Sn)             | 7440-31-5    | 99.990        | 2.451                  |
|                  |                     |                 | Impurities           | -            | 0.010         | 0.000                  |

NOTE: The device contents disclosed are approximated and are based on engineering estimates.

## 3rd Party Analysis Results (PPM)

| MATERIAL           | Pb  | Hg | Cr+6 | Cd | PBB | PBDE |
|--------------------|-----|----|------|----|-----|------|
| Mold Compound      | <2  | <2 | <2   | <2 | <5  | <5   |
| Leadframe          | <50 | <2 | <2   | <2 | <5  | <5   |
| Device Silicon Die | <2  | <2 | <2   | <2 | <5  | <5   |
| Die Attach Epoxy   | <2  | <2 | <2   | <2 | <5  | <5   |
| Gold Wire          | <2  | <2 | <2   | <2 | <5  | <5   |
| Solder Plating     | <50 | <2 | <2   | <2 | <5  | <5   |

## ROHS MATERIAL COMPOSITION DECLARATION

|  |                               |  |          |         |          |          |
|--|-------------------------------|--|----------|---------|----------|----------|
| EU RoHS Directive 2002/95/EC<br><br>and<br><br>China RoHS Directive SJ/T11363-2006 | <b>Declaration Statement:</b> | Quantity limit of 0.1% (1000 PPM) by mass in homogeneous material for: Lead (Pb), Mercury, Hexavalent Chromium(Cr+6), Polybrominated Biphenyls (PBB), Polybrominated Diphenyl Ethers (PBDE); and Quantity limit of 0.01% (100 PPM) for Cadmium |          |         |          |          |
|  |                               | Pb   | Hg       | Cr+6    | Cd       | PBB      |
|  | <1000ppm                      | <1000ppm   | <1000ppm | <100ppm | <1000ppm | <1000ppm |
|  | O                             | O  | O        | O       | O        | O        |

O: Indicates that this toxic or hazardous substance contained in all of the homogeneous materials for this part is below the limit requirement in SJ/T11363-2006.  
X: Indicates that this toxic or hazardous substance contained in at least one of the homogeneous materials used for this part is above the limit requirement in SJ/T11363-2006.