


MATERIAL DECLARATION SHEET



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|-----------------|------------------------|-----|--|---|
| Material Number | 3313 HF (200Ω to 25KΩ) | | |  |
| Product Line | Trimmer GK2 and GL5 | | | |
| Compliance Date | 3-8-2005 | | | |
| RoHS Compliant | Yes DC 510 | MSL | | |

| No. | Construction Element (Subpart) | Homogeneous Material | Material Weight (g) | Homogeneous Material | | Material Mass % | Material Mass % of total unit wt. | Subpart mass of total wt. (%) |
|-----|--------------------------------|----------------------|---------------------|--|--------------|-----------------|-----------------------------------|-------------------------------|
| | | | | Substance | CASRN | | | |
| 1 | Contact Spring | Ni/Ag | 0.0009 | Nickel | 7440-02-0 | 18 | 0.135 | 0.75 |
| | | | | Copper | 7440-50-8 | 65 | 0.486 | |
| | | | | Zinc | 7440-66-6 | 17 | 0.127 | |
| 2 | Rotor | Nylon | 0.074 | Liquid Crystal Polymer | 70679-92-4 | 60 | 36.908 | 61.51 |
| | | | | Glass fiber | 65997-17-3 | 40 | 24.605 | |
| 3 | Seal Ring | Rubber | 0.0001 | Silicone Rubber | 112926-00-8 | 100 | 0.083 | 0.08 |
| 4 | Housing | Nylon | 0.0125 | Polyphthalamide resin | 27135-32-6 | 50 | 5.195 | 10.39 |
| | | | | Glass fibers | 65997-17-3 | 30 | 1.818 | |
| | | | | Phosphorus-based flame retardant (not red P) | trade secret | 17.5 | 0.260 | |
| | | | | Pigment | trade secret | 2.5 | 10.391 | |
| 5 | Lead Frame | Copper Alloy | 0.0117 | Copper | 7440-50-8 | 100 | 9.726 | 10.56 |
| | | Plating | 0.001 | Tin | 7440-31-5 | 100 | 0.831 | |
| 6 | Substrate | Ceramic | 0.019 | Aluminum oxide | 1344-28-1 | 96 | 15.162 | 15.79 |
| | | | | Silicon dioxide | 7631-86-9 | 2 | 0.316 | |
| | | | | Magnesium oxide | 1309-48-4 | 1 | 0.158 | |
| | | | | Calcium oxide | 1305-78-8 | 1 | 0.158 | |

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|--------------|-----------------|------|--------|-------------------------------|------------|------|-------|------|
| 7 | Termination Ink | Ink | 0.0004 | Silver | 7440-22-4 | 50.5 | 0.168 | 0.33 |
| | | | | Palladium | 7440-05-3 | 34.1 | 0.113 | |
| | | | | Platinum | 7440-06-4 | 3.1 | 0.010 | |
| | | | | Manganese oxide | 1313-13-9 | 1 | 0.003 | |
| | | | | Bismuth trioxide | 1304-76-3 | 8.9 | 0.030 | |
| | | | | Boron oxide | 1303-86-2 | 1.5 | 0.005 | |
| | | | | Silicon oxide | 7631-86-9 | 0.9 | 0.003 | |
| 8 | Resistive Ink | Ink | 0.0002 | Ruthenium Dioxide | 12036-10-1 | 35 | 0.058 | 0.17 |
| | | | | Calcium Silicate borate glass | 59794-15-9 | 46 | 0.076 | |
| | | | | Silver | 7440-22-4 | 7 | 0.012 | |
| | | | | Titanium dioxide | 13463-67-7 | 5 | 0.008 | |
| | | | | Manganese dioxide | 1313-13-9 | 6 | 0.010 | |
| | | | | Cuprous oxide | 1317-39-1 | 1 | 0.002 | |
| 9 | Lubricant | Lube | 0.0005 | Polydimethylsiloxane | 63148-62-9 | 24 | 0.100 | 0.42 |
| | | | | Silica, amorphous | 7631-86-9 | 3 | 0.012 | |
| | | | | Siloxane/silicones | 63148-56-1 | 73 | 0.303 | |
| Total Weight | | | 0.1203 | | | | | |

This Document was updated on: 4-25-2012

Important remarks:

1. It is the responsibility of the user to verify they are accessing the latest version.
2. See RoHS Certificate of Compliance for exemptions used, if any.
3. Halogen Free Model available GK2 version for single-slot rotor and GL5 for cross-slot rotor.