



VISHAY TANTALUM

MATERIAL DECLARATION SHEET

MDS – 293D226X9020D8T

| Manufacturer Part Number (Material Product Family) | Material Description | Part Name | Substance Name | CUS Number | % of Material Weight | Material Weight (mg) | Typical Sub Mass mg | Typical Sub Mass gr | COMP. LEVEL PPM |
|--|-------------------------|---------------------------------------|-------------------------------|------------|----------------------|----------------------|---------------------|---------------------|-----------------|
| 293D226X96R3C8T | | | | | | | | | |
| | Pellet | | | | | | | | |
| | | Tantalum | Tantalum | 7440-25-7 | 100% | 12.9 | 12.9 | 0.0129 | 120854.4167 |
| | Cathode layer | | | | | | | | |
| | | Manganese Dioxide (MnO ₂) | Manganese (MnO ₂) | 7439-96-5 | 100% | 0.8092526 | 0.8092526 | 0.000809253 | 7581.530495 |
| | Outer cathode layer | | | | | | | | |
| | | Silver | Silver (Ag) | 7440-22-4 | 100% | 1.9239613 | 1.9239613 | 0.001923961 | 18024.74499 |
| | Lead Frame 39-406-4 | | | | | | | | |
| | | Alloy 42 | | | | | | | |
| | | | Nickel (Ni) | 7440-02-0 | 41.00 | | 6.59485 | 0.00659 | 61784.24208 |
| | | | Iron (Fe) | 7439-89-6 | 58.28 | | 9.37434 | 0.00937 | 87824.03972 |
| | | | Manganese (Mn) | 7439-96-5 | 0.50 | | 0.08043 | 0.00008 | 753.4663669 |
| | | | Silicon (Si) | 7440-21-3 | 0.20 | | 0.03217 | 0.00003 | 301.3865467 |
| | | | Carbon (C) | 7440-44-0 | 0.02 | 16.085 | 0.00322 | 0.00000 | 30.13865467 |
| | | Solder layer | | | | | | | |
| | | | Tin (Sn) | 7440-31-5 | 90.00 | | 1.99350 | 0.00199 | 18676.2226 |
| | | | Lead (Pb) | 7439-92-1 | 9.85 | | 0.21816 | 0.00022 | 2043.801293 |
| | | | Copper (Cu) | 7440-50-8 | 0.00 | | 0.00001 | 0.00000 | 0.136958966 |
| | | | Iron (Fe) | 7439-89-6 | 0.02 | | 0.00044 | 0.00000 | 4.150271688 |
| | | | Zink (Zn) | 7440-66-6 | 0.01 | | 0.00022 | 0.00000 | 2.075135844 |
| | | | Aluminium (Al) | 7429-90-5 | 0.01 | | 0.00022 | 0.00000 | 2.075135844 |
| | | | Misc. | N/A | 0.11 | 2.215 | 0.00244 | 0.00000 | 22.8970489 |
| | Adhesive 39-20-10/10(A) | | | | | | | | |
| | | Silver epoxy | | | | | | | |
| | | | Silver (Ag) | 7440-22-4 | 85.00 | | 0.765 | 0.000765 | 7166.947723 |
| | | | Epoxy resin | 25068-38-6 | 13.00 | | 0.117 | 0.000117 | 1096.121417 |
| | | | Phenol resin | 26402-79-9 | 2.00 | 0.9 | 0.018 | 0.000018 | 168.6340641 |
| | Encapsulation 22-92 | | | | | | | | |
| | | Mold compound | | | | | | | |
| | | | Silica, vitreous | 60676-86-0 | 79.50 | | 57.16589 | 0.057165895 | 535562.0634 |
| | | | Epoxy resin | 14464-46-1 | 15.00 | | 10.78602 | 0.010786018 | 101049.4459 |
| | | | Silica, quartz | 14808-60-7 | 5.00 | | 3.59534 | 0.003595339 | 33683.14864 |
| | | | Carbon Black | 1333-86-4 | 0.50 | 71.906786 | 0.35953 | 0.000359534 | 3368.314864 |
| | | | Total Weight | | | | 106.74 | 106.74 | 0.10674 |