



# VISHAY TANTALUM

## MATERIAL DECLARATION SHEET

593D476X0025E2S072

Date : 9<sup>th</sup> June, 2008

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	
<b>593D476X0025E2S072</b>									
	Pellet								
		Tantalum 4506-1240							
			Tantalum	7440-25-7	100%	231.00001	231.00001	0.231	
	Cathode layer								
		Manganese Dioxide (MnO <sub>2</sub> ) 4506-519/869/1060							
			Manganese (MnO <sub>2</sub> )	7439-96-5	100%	2.4070919	2.4070919	0.0024071	
	Outer cathode layer								
		Silver 39-20-1							
			Silver (Ag)	7440-22-4	100%	6.8293539	6.8293539	0.0068294	
	Lead Frame 39-406-4								
		Alloy 42							
			Nickel (Ni)	7440-02-0	43.00	19.663	8.45509	0.00846	
			Iron (Fe)	7439-89-6	54.95		10.80482	0.01080	
			Manganese (Mn)	7439-96-5	0.80		0.15730	0.00016	
			Silicon (Si)	7440-21-3	0.30		0.05899	0.00006	
			Carbon (C)	7440-44-0	0.05		0.00983	0.00001	
			Aluminium (Al)	7429-90-5	0.10		0.01966	0.00002	
			Cobalt (Co)	7440-48-4	0.50		0.09832	0.00010	
			Chromium (Cr)	7440-47-3	0.25		0.04916	0.00005	
			Phosphorus (P)	7723-14-0	0.03		0.00492	0.00000	
			Sulphur (S)	7704-34-9	0.03		0.00492	0.00000	
		Solder layer							
			Tin (Sn)	7440-31-5	99.85	2.707	2.70291	0.00270	
			Copper (Cu)	7440-50-8	0.00		0.00002	0.00000	
			Iron (Fe)	7439-89-6	0.02		0.00054	0.00000	
			Zink (Zn)	7440-66-6	0.01		0.00027	0.00000	
			Aluminium (Al)	7429-90-5	0.01		0.00027	0.00000	
			Misc.	N/A	0.11		0.00299	0.00000	
	Adhesive 39-20-10/10(A)								
		Silver epoxy							
			Silver (Ag) 7440-22-4	7440-22-4	73.00	1.18	0.8614	0.0008614	
			Gamma Butyrolactone 96-48-0	96-48-0	27.00		0.3186	0.0003186	
	Encapsulation 22-92								
		Mold compound							
			Silica, vitreous	60676-86-0	67.80	195.01355	132.21919	0.1322192	
			Epoxy resin	14464-46-1	30.00		58.50406	0.0585041	
			Brominated epoxy resin	9003-35-4	1.30		2.53518	0.0025352	
			Diantimony Oxide	1309-64-4	0.90		1.75512	0.0017551	
			<b>Total Weight</b>				458.8	458.8	0.4588