Device Material Content

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Package: 100 TQFP (1.0mm)
Total Device Weight 0.50 **Grams**
Package Code: VQ100
Products: ICE40

Assembly: ASEM
Size (mm): 14 x 14 x 1.0
Lead pitch (mm): 0.5
MSL: 3
Reflow max (^{o}C): 260

	% of Total Pkg. Wt.	Weight (g)	% of Total Pkg. Wt.	Weight (g)	Substance	CAS #	% of Subst.	Notes / Assumptions:
Die	0.26%	0.0013			Silicon chip	7440-21-3	100.00%	Die size: 58 x 55 mil
Mold Compound	71.77%	0.3559						Mold Compound: CEL 9240HF
			4.52%	0.0224	Epoxy Resin	-	6.30%	
			3.23%	0.0160	Phenol Resin	-	4.50%	
			0.14%	0.0007	Carbon Black	1333-86-4	0.20%	
			63.16%	0.3131	Silica	60676-86-0	88.00%	
			0.72%	0.0036	Others	-	1.00%	
D/A Tape	0.01%	0.0001						TAPE: FH-900T-25_HR9004
			0.00%	0.00001	Epoxy Resin	-	15.00%	
			0.00%	0.00001	Phenol Resin	-	15.00%	
			0.00%	0.00000	SiO2 Filler	99439-28-8	5.00%	
			0.01%	0.00004	(Meta)Acrylic Copolymer	-	65.00%	
Wire	0.15%	0.0007	0.15%	0.0007	Copper (Cu)	7440-50-8	100.00%	0.7 MIL COPPER WIRE
Plating	1.20%	0.0059	1.20%	0.0059	Tin (Sn)	7440-31-5	100.00%	Plating is 100% Matte Sn; thickness is >10.2µm
Leadframe	26.60% v	0.1319						C7025
			25.72%	0.1275	Copper (Cu)	7440-50-8	96.70%	
			0.80%	0.0040	Nickel (Ni)	7440-02-0	3.01%	
			0.05%	0.0002	Silicon (Si)	7440-21-3	0.17%	
			0.01%	0.0000	Magnesium (Mg)	7439-95-4	0.03%	
			0.02%	0.0001	Silver (Ag)	7440-22-4	0.09%	

Notes:
The values listed above are nominal values based on studies of representatives of this particular package type, and are believed to be as accurate as possible.
Constituent substances and proportions in epoxy materials are before curing.
The information provided above is representative of the package as of the date listed, and is subject to change at any time.
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Rev. B