

Material Data Declaration Sheet

ECS INC. INTERNATIONAL

ECS Model Number	ECOC-7050 Series	
Product Description	SMD OCXO	
Product Revision		
Product Total Weight	0.19131647309g/pcs	
Contact Information	Company	ECS INC.
	Contact Name	AJ Anderson
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Homogenous Component/Subcomponent	Homogenous Component/Subcomponent Weight (g)	Substance	CAS number	Substance Weight (g)	PPM Level (If Available) (Substance Weight/Total Homogenous Component or Subcomponent Weight*1000000)	Purpose/Location
IC Package	0.03287500000	Al2O3	1344-28-1	0.02713173750	825300	Ceramic
		SiO2	7631-86-9	0.00180878250	55020	Ceramic
		Cr2O3	1308-38-9	0.00060292750	18340	Ceramic
		TiO2	13463-67-7	0.00060292750	18340	Ceramic
		W	7440-33-7	0.00226837500	69000	Metalized
		Ni	7440-02-0	0.00041422500	12600	Plating
		Au	7440-57-5	0.00004602500	1400	Plating
IC	0.00122300000	Si	7440-21-3	0.00120990962	989297	IC
		B	7440-42-8	0.00000000208	2	IC
		P	7723-14-0	0.00000000465	4	IC
		Al	7429-90-5	0.00000721570	5900	IC
		Cu	7440-50-8	0.00000011985	98	IC
		W	7440-33-7	0.00000207910	1700	IC
		Ti	7440-32-6	0.00000366900	3000	IC
Die Adhesive	0.00152000000	Ag	7440-22-4	0.00106400000	700000	Epoxy
		Epoxy Acrylate	15625-89-5	0.00015200000	100000	Epoxy
		Substituted Polyamine	68490-66-4	0.00003040000	20000	Epoxy
		Bisphenol F	28064-14-4	0.00015200000	100000	Epoxy
		2-Ethylhexyl Glycidyl Ether	2461-15-6	0.00012160000	80000	Epoxy
Au Wire	0.00031050000	Au	7440-57-5	0.00031050000	1000000	Bonding Wire
Underfill	0.00647810000	Silicone Resin	67763-03-5	0.00097171590	150000	Polymer
		C	1333-86-4	0.00000647810	1000	Polymer
		SiO2	7631-86-9	0.00549990600	849000	Polymer
Chip Capacitance - 1	0.00033000000	BaO	1304-28-5	0.00013200000	400000	Capacitance
		TiO2	13463-67-7	0.00008800000	266667	Capacitance
		Cu	7440-50-8	0.00006840000	207273	Capacitance
		SiO2	7631-86-9	0.00000760000	23030	Capacitance
		Ni	7440-02-0	0.00001500000	45455	Capacitance
		Sn	7440-31-5	0.00001900000	57576	Capacitance
Chip Capacitance - 2	0.00310000000	BaO	1304-28-5	0.00123900000	399677	Ceramic Element
		TiO2	13463-67-7	0.00061950000	199839	Ceramic Element
		Al2O3	1344-28-1	0.00020650000	66613	Ceramic Element
		Cu	7440-50-8	0.00033300000	107419	Electrode
		Cr2O3	1308-38-9	0.00000740000	2387	Electrode
		SiO2	7631-86-9	0.00002960000	9548	Electrode
		Ni	7440-02-0	0.00057400000	185161	Ni Plating
		Sn	7440-31-5	0.00009100000	29355	Sn Plating
Chip Capacitance - 3	0.00033000000	BaO	1304-28-5	0.00013200000	400000	Ceramics
		TiO2	13463-67-7	0.00006600000	200000	Ceramics
		Al2O3	1344-28-1	0.00002200000	66667	Ceramics
		Cu	7440-50-8	0.00006840000	207273	Electrode
		SiO2	7631-86-9	0.00000760000	23030	Electrode
		Ni	7440-02-0	0.00001500000	45455	Ni Plating
		Sn	7440-31-5	0.00001900000	57576	Sn Plating

Package	0.0121800000	Al2O3	1344-28-1	0.00745416000	612000	Ceramics
		SiO2	7631-86-9	0.00048720000	40000	Ceramics
		CaO	1305-78-8	0.00012180000	10000	Ceramics
		MgO	1309-48-4	0.00012180000	10000	Ceramics
		Cr2O3	1308-38-9	0.00012180000	10000	Ceramics
		Mo	7439-98-7	0.00024360000	20000	Ceramics
		Fe	7439-89-6	0.00076734000	63000	Pin
		Ni	7440-02-0	0.00034104000	28000	Pin
		Co	7440-48-4	0.00028014000	23000	Pin
		W	7440-33-7	0.00155904000	128000	Metalized
		Ag	7440-22-4	0.00045066000	37000	Solder
		Cu	7440-50-8	0.00009744000	8000	Solder
		Ni	7440-02-0	0.00006090000	5000	Ni Plating
		Au	7440-57-5	0.00007308000	6000	Au Plating
		Alloy Lid	0.00159346667	C	7440-44-0	0.00000014341
Si	7440-21-3			0.00000101982	640	Alloy
Mn	7439-96-5			0.00000627826	3940	Alloy
Ni	7440-02-0			0.00042510504	266780	Alloy
Co	7440-48-4			0.00024780000	155510	Alloy
Cr	7440-47-3			0.00000068519	430	Alloy
Fe	7439-89-6			0.00077831286	488440	Alloy
Ni	7440-02-0			0.00013412209	84170	Ni Plating
Quartz Crystal Blank	0.00021799983	SiO2	14808-60-7	0.00021799983	1000000	Quartz Blank
Electrode	0.00011340659	Cr	7440-47-3	0.00000567033	50000	Electrode
		Au	7440-57-5	0.00010773626	950000	Electrode
Conductive Adhesive	0.00034500000	Ag	7440-22-4	0.00024322500	705000	Polymer
		Silicone Resin	68988-89-6	0.00004243500	123000	Polymer
		Pd	7440-05-3	0.00000931500	27000	Polymer
		CH3(CH2)9CH3	1120-21-4	0.00002794500	81000	Polymer
		CH3(CH2)10CH3	112-40-3	0.00000379500	11000	Polymer
		SiO2	7631-86-9	0.00001828500	53000	Polymer
Plastic Cover	0.05250000000	Polymer	110536-83-9	0.03675000000	700000	LPC
		Glass Fiber	65997-17-3	0.01575000000	300000	LPC
Non-Conductive Adhesive	0.00202000000	-	39817-09-9	0.00100697000	498500	Polymer
		(CF2CF2)n	2425-79-8	0.00050500000	250000	Polymer
		-	68475-94-5	0.00016160000	80000	Polymer
		-	9046-10-0	0.00008383000	41500	Polymer
		-	827-43-0	0.00010605000	52500	Polymer
		C	1333-86-4	0.00014645000	72500	Polymer
		-	9003-35-4	0.00001010000	5000	Polymer
PCB	0.05440000000	Cu	7440-50-8	0.02047332250	376348	Copper Foil
		Zn	7440-66-6	0.00001270872	234	Copper Foil
		Cr	7440-47-3	0.00000163983	30	Copper Foil
		Ni	7440-02-0	0.00001024896	188	Copper Foil
		Glass Fiber	65997-17-3	0.01592870123	292807	Laminate (core)
		Cu	7440-50-8	0.00180543068	33188	Laminate (core)
		Resin	Proprietary	0.00541332746	99510	Laminate (core)
		Epoxy	Proprietary	0.00115915172	21308	Laminate (core)
		-	80-80-0	0.00011561871	2125	Laminate (core)
		Filler	Proprietary	0.00522359419	96022	Laminate (core)
		-	7727-43-7	0.00339466880	62402	Solder Mask
		-	64742-94-5	0.00057957760	10654	Solder Mask
		SiO2	7631-86-9	0.00012419520	2283	Solder Mask
		-	111-15-9	0.00004139840	761	Solder Mask
		-	7786-81-4	0.00006984960	1284	Immersion Ni/Au
		-	6192-52-5	0.00002328320	428	Immersion Ni/Au
		Dipotassium phosphonate	13492-26-7	0.00002328320	428	Immersion Ni/Au
		Solder Paste	0.02178000000	Sn	7440-31-5	0.01883970000
Ag	7440-22-4			0.00065340000	30000	Metal

	Cu	7440-50-8	0.00010890000	5000	Metal
	Resin	65997-06-0	0.00217800000	100000	Metal