

## RoHS

### Declaration of Conformity (DoC)

This DoC provides information regarding the materials used in the manufacture of the product series noted below. The specifications for the Relays and Switches specified below are in compliance with the European Union Directive **2011/65/EU**, “Restriction of the use of certain Hazardous Substances in electrical and electronic equipment “and “Legislation amending RoHS 2 Directive(EU) **2017/2102** of the European Parliament and of the Council of 15 November 2017. The following details apply to the specifications for the mentioned components:

a) The following substances were not intentionally added to any of the products identified:

- Lead
- Mercury
- Cadmium
- Hexavalent chromium
- Poly-Brominated Biphenyl (PBB’s)
- Poly-Brominated Diphenyl Ethers (PBDE’s)
- Bis ( 2-Ethylhexyl) phthalate ( DEHP)
- Butyl benzyl phthalate (BBP)
- Dibutyl phthalate (DBP)
- Diisobutyl phthalate (DIBP)

and

b) Unintentional amounts of the following substances are at or below Directive limits:

- Lead 0.1% (1000 ppm)
- Mercury 0.1% (1000 ppm)
- Cadmium 0.01% (100 ppm)
- Hexavalent chromium 0.1% (1000 ppm)
- Poly-Brominated Biphenyl (PBB’s) 0.1% (1000 ppm)
- Poly-Brominated Diphenyl Ethers (PBDE’s) 0.1% (1000 ppm)
- Bis ( 2-Ethylhexyl) phthalate ( DEHP) 0.1% (1000 ppm)
- Butyl benzyl phthalate (BBP) 0.1% (1000ppm )
- Dibutyl phthalate (DBP) 0.1% (1000 ppm)
- Diisobutyl phthalate (DIBP) 0.1% (1000 ppm )

**Coto Technology**



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Enrique Vasquez  
Director of Quality

**COTOMOS®**

Product Series	Package Type	Item weight (grams)	Termination Lead finish	Maximum Process Temp/Time	Compliance date code	MSL	Comments
CT1XX	6-pin DIP	0.475	Sn100	250C / 30Sec. Reflow	R353	2	
CT3XX	8-pin DIP	0.510	Sn100	250C / 30Sec. Reflow	R353	2	
CT4XX	6-pin DIP	0.475	Sn100	250C / 30Sec. Reflow	R353	2	
CT6XX	8-pin DIP	0.510	Sn100	250C / 30Sec. Reflow	R353	2	
CT7XX	8-pin DIP	0.510	Sn100	250C / 30Sec. Reflow	R353	2	
CTA17	8-pin DIP	0.510	Sn100	250C / 30Sec. Reflow	R353	2	
CS1XX	6-pin SMD	0.455	Sn100	250C / 30Sec. Reflow	R353	2	
CS3XX	8-pin SMD	0.490	Sn100	250C / 30Sec. Reflow	R353	2	
CS4XX	6-pin SMD	0.455	Sn100	250C / 30Sec. Reflow	R353	2	
CS6XX	8-pin SMD	0.490	Sn100	250C / 30Sec. Reflow	R353	2	
CS7XX	8-pin SMD	0.490	Sn100	250C / 30Sec. Reflow	R353	2	
CSA17	8-pin SMD	0.490	Sn100	250C / 30Sec. Reflow	R353	2	
C2XXS	4-pin SOP	0.085	Sn100	250C / 30Sec. Reflow	R353	2	
C3XXS	8-pin SOP	0.180	Sn100	250C / 30Sec. Reflow	R353	2	
C5XXS	4-pin SOP	0.085	Sn100	250C / 30Sec. Reflow	R353	2	
C6XXS	8-pin SOP	0.180	Sn100	250C / 30Sec. Reflow	R353	2	
C7XXS	8-pin SOP	0.180	Sn100	250C / 30Sec. Reflow	R353	2	

**TMR PRODUCTS**

Product Series	Package Type	Item weight (grams)	Termination Lead finish	Maximum Process Temp/Time	Compliance date code	MSL	Comments
RR1XX	SOT Family	0.014	N/A	260C	1540	1	

**REED RELAYS**

Product Series	Package Type	Item weight (grams)	Termination Lead finish	Maximum Process Temp/Time	Compliance date code	MSL	Comments
1200	Potted THT	6.17	Sn100	270C / 10 Sec. Wave	0525	1	
1300	Potted THT	26.47	Sn100	270C / 10 Sec. Wave	0525	1	
2200	Potted THT	1.48	Sn100	270C / 10 Sec. Wave	0525	1	
2400-0058	Potted THT	3.62	Sn 100	270C / 10 Sec. Wave	0908	1	
2300	Potted THT	2.48	Sn100	270C / 10 Sec. Wave	0525	1	
2600	Potted THT	2.60	Sn100	270C/ 10 Sec. Wave	0525	1	
2900	Potted THT	1.94	Sn100	270C / 10 Sec. Wave	0525	1	Excludes 2920 models due Hg content
3500	Potted THT	10.07	Sn100	270C / 10 Sec. Wave	0525	1	Excludes 3520 models due Hg content
3600	Potted THT	13.18	Sn100	270C / 10 Sec. Wave	0525	1	
4000	Potted THT	3.06	Sn100	270C / 10 Sec. Wave	0525	1	
5500	Potted THT	39.40	Sn100	270C / 10 Sec. Wave	0525	1	
5800	Potted THT	18.59	Sn100	270C / 10 Sec. Wave	0525	1	
7000	Potted THT	8.39	Sn100	270C / 10 Sec. Wave	0525	1	Excludes 7200 models due Hg content
8200	Potted THT	5.04	Sn100	270C / 10 Sec. Wave	0525	1	
8300	Potted THT	4.36	Sn100	270C / 10 Sec. Wave	0525	1	
8600	Potted THT	6.86	Sn100	270C / 10 Sec. Wave	0525	1	
8700	Potted THT	73.56	Sn100	270C / 10 Sec. Wave	0525	1	
8000/8L	Molded THT	2.22	Sn100	270C / 10 Sec. Wave	0540	1	8061/8L61 are SMT type
9000	Molded THT	1.56	Sn100	270C / 10 Sec. Wave	0545	1	
9007	Molded THT	1.56	Sn100	270C / 10 Sec. Wave	0545	1	
9011	Molded THT	0.64	Sn100	270C / 10 Sec. Wave	0501	1	
9012	Molded THT	0.82	Sn100	270C / 10 Sec. Wave	0501	1	
9090	Molded THT	0.92	Sn100	270C / 10 Sec. Wave	0501	1	
9091	Molded THT	0.92	Sn100	270C / 10 Sec. Wave	0501	1	
9092	Molded THT	1.24	Sn100	270C / 10 Sec. Wave	0501	1	
9081	Molded THT	2.20	Sn100	270C / 10 Sec. Wave	0501	1	
9104	Molded THT	3.08	Sn100	270C / 10 Sec. Wave	0501	1	
9117	Molded THT	0.60	Sn100	270C / 10 Sec. Wave	0501	1	
9200	Molded SMT	0.20	Gold flash	260C / 60 Sec. Reflow	0812	2	RoHS Compliance by exemption 7(a) see note 3
9290	Molded SMT	0.20	Gold flash	260C / 60 Sec. Reflow	0816	2	RoHS Compliance by exemption 7(a) see note 3
9300	Molded SMT	0.20	Gold flash	260C / 60 Sec. Reflow	0641	2	RoHS Compliance by exemption 7(a) see note 3
9400	Molded SMT	0.20	Gold flash	260C / 60 Sec. Reflow	0805	2	RoHS Compliance by exemption 7(a) see note 3

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9852	Molded SMT	0.20	Gold flash	260C / 60 Sec. Reflow	0825	2	RoHS Compliance by exemption 7(a) see note 3
9802/9814	Molded SMT	0.20	Gold flash	260C / 60 Sec. Reflow	0748	2	RoHS Compliance by exemption 7(a) see note 3
9900	Molded SMT	0.20	Gold flash	260C / 60 Sec. Reflow	0601	2	RoHS Compliance by exemption 7(a) see note 3
B21C	Molded BGA	0.20	N/A	260C / 60 Sec. Reflow	TBD	5A	
B41	Molded BGA	0.20	N/A	260C / 60 Sec. Reflow	1204	5A	RoHS Compliance by exemption 7(a) see note

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### MOLDED SWITCHES

Product Series	Package Type	Item weight (grams)	Termination Lead finish	Maximum Process Temp/Time	Compliance date code	MSL	Comments
CT05	Molded SMT	0.12	Sn100	260C / 60 Sec. Reflow	0501	1	
CT10	Molded SMT	0.14	Sn100	260C / 60 Sec. Reflow	0501	1	
CM10	Molded SMT	0.12	Sn100	260C / 60 Sec. Reflow	0501	2	
MN / MN2S	SMT	0.12	Sn100	260C / 60 Sec. Reflow	0437	2	

### REED SWITCHES

Product Series	Package Type	Item weight (grams)	Termination Lead finish	Maximum Process Temp/Time	Compliance date code	MSL	Comments
FR / FR2S / FRB	SMT	0.12	Sn100	260C / 60 Sec. Reflow	0437	1	Discontinued

Notes:

1. Substance matrix represents products when Pb is removed from devices. See compliant availability date and production break-in date code for actual conversion.
2. Molded SMT devices currently use 95Sn/5Sb alloy for internal interconnects, which limits the maximum processing temperature. Coto is currently evaluating RoHS high Pb alloys to attain higher processing temperatures.
3. For molded SMT products after production break-in date code. Parts will be RoHS compliant but not Pb free using exemption 7(a) from Directive 2011/65/EU **“Lead in high melting temperature type solders (i.e. lead- based alloys containing 85 % by weight or more lead)”**
4. All series are pure matte tin finish (Sn100), except for the series that use Gold flash finish which use a nickel sulfamate matte finish.

**Other Relays**

Product Series	Product Name	Part Numbers	Compliance date code
1"x 0.1" Grid relays	MRB	All	All
	922A	All	All
ATE series	ATE	ATEXXXXXXXX X – model number (1, 2, 3, 4, 6, 7) XX – contact form (1A, 2A, 3A, 4A, 5A, 6A, 1B, 2B, 1L, 2L, 1N, 2N) XX – relay type (blank = 1 x 0.1", 15 = 1 x 0.1") XX – nominal coil voltage (05, 06, 12, 24) X – options (A = end coil, E = E/S shield) Any other model number do not comply due to Mercury content	All
CUP series	CUPC	CUPCXXXX1XX XXXX – contact form (001A, 002A, 003A, 004A, 005A, 001B, 002B, 1A1B, 2A2B, 001L) XX – nominal voltage (05, 12, 24, 48) Any other model number do not comply due to Mercury content	All
	CUPP	CUPPXXXX1XX XXXX – contact form (001A, 002A, 003A, 004A, 005A, 001B, 002B, 1A1B, 2A2B, 001L) XX – nominal voltage (05, 12, 24, 48) Any other model number do not comply due to Mercury content	All
	CUPE	CUPEXXXX1XX XXXX – contact form (001A, 002A, 003A, 004A, 005A, 001B, 002B, 1A1B, 2A2B, 001L) XX – nominal voltage (05, 12, 24, 48) Any other model number do not comply due to Mercury content	All
	CUPV	CUPVX0X0X X – switch type (1: dry reed) X – contact form (0: 1 form A, 1: 1 form A, 2: 1 form B, 3: 1 form A, 1 form B, 4: 2 form A) X – nominal voltage (1: 5V, 2: 12V, 3: 24V, 4: 48V) Any other model number do not comply due to Mercury content	All
DIP series	DIP	DIPXXXXXX X – model number (3, 4, 6) XX – contact form (1A, 1C) XX – nominal coil voltage (05, 12, 24) X – pin options (1, 2, 3) X – options (A: magnetic shield, B: diode, C: E/S shield) Any other model number do not comply due to Mercury content	All
	DIP100	DIP10001, DIP10002, DIP10015, DIP10025, DIP10050, DIP10100	All
DIP 14 series	PRMA	All part numbers	0543
	DSS7	All part numbers	0543
	PRME	All part numbers	All
MLR series	MLR	MLRXXXXXX X – model number (3, 4, 6) XX – contact form (1A, 1C) XX – nominal coil voltage (05, 12) X – pin options (1, 2, 3, 4, 5) Any other model number do not comply due to Mercury content	0543
	MLR100	MLR10001, MLR10002, MLR10003, MLR10004, MLR10005	0543
MRBS series	MRBS	All part numbers	All
	MRBS2	MRBS20001, MRBS20003, MRBS20010, MRBS20031, MRBS20043, MRBS20002, MRBS20037, MRBS20046, MRBS20012	All
MRF series	MRF3	All part numbers	All
	MRFL4	All part numbers	All
	MFRL8	All part numbers	0639
MSS Series	MSS21, MSS41A, MSS71A	All part numbers	Exclude models due Hg content
MVS Series	MVS21A, MVS41A, MVS61A, MVS71A	All part numbers	Exclude models due Hg content
HG Series	HG's	All part numbers	Exclude models due Hg content
SIP series	DSS4	All part numbers	0543
SIL series	TFT	TFTXXXXXX X – model number (3, 4, 6, 7, 9) XX – contact form (1A, 1B, 1C) XX – nominal coil voltage (05, 12, 24) X – pin options (2, 3) X case style (1: plastic, 2: magnetically shielded steel case) Any other model number do not comply due to Mercury content	All
EMR series	LM	All part numbers	0437
	LQ	All part numbers	0437
	LX	All part numbers	0437