

**RM02 - 0201**

NO.	BREAKDOWN OF COMPONENT	MATERIAL NAME	CAS NO.	SUBSTANCE MASS (mg/pc)	PERCENTAGE OF HOMOGENEOUS MATERIAL	REMARK
1	Substrate	Aluminium Trioxide	1344-28-1	0.0979958	96%	
		Silicon Dioxide	14808-60-7	0.0020416	2%	
		Magnesium Oxide	1309-48-4	0.0020416	2%	
2	Termination Inner (C1)	Silver	7440-22-4	0.0026629	95.65%	
		Glass	65997-18-4	0.0001211	4.35%	
3	Termination Inner (C2)	Silver	7440-22-4	0.0013635	86.96%	
		Glass	65997-18-4	0.0002045	13.04%	
4	Termination Inner (C3)	Nickel	7440-02-0	0.0000128	80%	
		Chromium	7440-47-3	0.0000032	20%	
5	Resistive Element	Ruthenium Oxide	12036-10-1	0.0000380	5.00%	RoHS Exemption No.: 7(c)-I (Pb in glass of electronic components)
		Silver	7440-22-4	0.0001900	25.00%	
		Palladium	7440-05-3	0.0000760	10.00%	
		Glass	65997-18-4	0.0004560	59.88%	
7	Protective Coating (G1)	Glass	65997-18-4	0.0004791	67%	
		Ethyl Cellulose	9004-57-3	0.0000215	3%	
		Turpentine Alcoholize	10482-56-1	0.0002145	30%	
8	Protective Coating (G2)	Resin	25068-38-6	0.0006634	48.00%	
		Color Pigment	68186-91-4	0.0001842	13.33%	
		Silicon Dioxide	60676-86-0	0.0004606	33.33%	
		Talc	14807-96-6	0.0000738	5.34%	
9	Termination Between	Nickel	7440-02-0	0.0084220	100%	
10	Termination Outer	Tin	7440-31-5	0.0082890	100%	
<b>TOTAL</b>				<b>0.126015</b>		

# MATERIAL DECLARATION

RM SERIES

 **RM04 (0402)**

NO.	BREAKDOWN OF COMPONENT	MATERIAL NAME	CAS NO.	SUBSTANCE MASS (mg/pc)	PERCENTAGE OF HOMOGENEOUS MATERIAL	REMARK
1	Substrate	Aluminium Trioxide	1344-28-1	0.414230	96%	
		Silicon Dioxide	14808-60-7	0.008630	2%	
		Magnesium Oxide	1309-48-4	0.008630	2%	
2	Termination Inner (C1)	Silver	7440-22-4	0.011258	95.65%	
		Glass	65997-18-4	0.000512	4.35%	
3	Termination Inner (C2)	Silver	7440-22-4	0.005765	86.96%	
		Glass	65997-18-4	0.000865	13.04%	
4	Termination Inner (C3)	Nickel	7440-02-0	0.000056	80%	
		Chromium	7440-47-3	0.000014	20%	
5	Resistive Element	Ruthenium Oxide	12036-10-1	0.000160	5.00%	RoHS Exemption No.: 7(c)-I (Pb in glass of electronic components)
		Silver	7440-22-4	0.000800	25.00%	
		Palladium	7440-05-3	0.000320	10.00%	
		Glass	65997-18-4	0.001920	60.00%	
6	Protective Coating (G1)	Glass	65997-18-4	0.002023	67%	
		Ethyl Cellulose	9004-57-3	0.000091	3%	
		Turpentine Alcoholize	10482-56-1	0.000906	30%	
7	Protective Coating (G2)	Resin	25068-38-6	0.002803	48.00%	
		Color Pigment	68186-91-4	0.000778	13.33%	
		Silicon Dioxide	60676-86-0	0.001946	33.33%	
		Talc	14807-96-6	0.000312	5.34%	
8	Termination Between	Nickel	7440-02-0	0.035600	100%	
9	Termination Outer	Tin	7440-31-5	0.035040	100%	
<b>TOTAL</b>				<b>0.532660</b>		



**RM06 (0603)**

NO.	BREAKDOWN OF COMPONENT	MATERIAL NAME	CAS NO.	SUBSTANCE MASS (mg/pc)	PERCENTAGE OF HOMOGENEOUS MATERIAL	REMARK
1	Substrate	Aluminium Trioxide	1344-28-1	1.715136	96%	
		Silicon Dioxide	14808-60-7	0.035732	2%	
		Magnesium Oxide	1309-48-4	0.035732	2%	
2	Termination Inner (C1)	Silver	7440-22-4	0.032140	95.65%	
		Glass	65997-18-4	0.001460	4.35%	
3	Termination Inner (C2)	Silver	7440-22-4	0.019310	86.96%	
		Glass	65997-18-4	0.002890	13.04%	
4	Termination Inner (C3)	Nickel	7440-02-0	0.017440	80%	
		Chromium	7440-47-3	0.004360	20%	
5	Resistive Element	Ruthenium Oxide	12036-10-1	0.000500	5.00%	RoHS Exemption No.: 7(c)-I (Pb in glass of electronic components)
		Silver	7440-22-4	0.002500	25.00%	
		Palladium	7440-05-3	0.001000	10.00%	
		Glass	65997-18-4	0.006000	60.00%	
6	Protective Coating (G1)	Glass	65997-18-4	0.012730	67%	
		Ethyl Cellulose	9004-57-3	0.000570	3%	
		Turpentine Alcoholize	10482-56-1	0.005700	30%	
7	Protective Coating (G2)	Resin	25068-38-6	0.016128	48.00%	
		Color Pigment	68186-91-4	0.004479	13.33%	
		Silicon Dioxide	60676-86-0	0.011199	33.33%	
		Talc	14807-96-6	0.001794	5.34%	
8	Termination Between	Nickel	7440-02-0	0.074800	100%	
9	Termination Outer	Tin	7440-31-5	0.073600	100%	
10	Marking	Epoxy Resin	25085-99-8	0.001105	52.63%	
		Barium Sulfate	7727-43-7	0.000332	15.79%	
		Titanium Dioxide	13463-67-7	0.000663	31.58%	
<b>TOTAL</b>				<b>2.077300</b>		

# MATERIAL DECLARATION

RM SERIES

 **RM10 (0805)**

NO.	BREAKDOWN OF COMPONENT	MATERIAL NAME	CAS NO.	SUBSTANCE MASS (mg/pc)	PERCENTAGE OF HOMOGENEOUS MATERIAL	REMARK
1	Substrate	Aluminium Trioxide	1344-28-1	4.012454	96%	
		Silicon Dioxide	14808-60-7	0.083593	2%	
		Magnesium Oxide	1309-48-4	0.083593	2%	
2	Termination Inner (C1)	Silver	7440-22-4	0.056462	95.65%	
		Glass	65997-18-4	0.002568	4.35%	
3	Termination Inner (C2)	Silver	7440-22-4	0.033897	86.96%	
		Glass	65997-18-4	0.005083	13.04%	
4	Termination Inner (C3)	Nickel	7440-02-0	0.020640	80%	
		Chromium	7440-47-3	0.005160	20%	
5	Resistive Element	Ruthenium Oxide	12036-10-1	0.001350	5.00%	RoHS Exemption No.: 7(c)-1 (Pb in glass of electronic components)
		Silver	7440-22-4	0.006750	25.00%	
		Palladium	7440-05-3	0.002700	10.00%	
		Glass	65997-18-4	0.016199	60.00%	
6	Protective Coating (G1)	Glass	65997-18-4	0.026311	67%	
		Ethyl Cellulose	9004-57-3	0.001178	3%	
		Turpentine Alcoholize	10482-56-1	0.011781	30%	
7	Protective Coating (G2)	Resin	25068-38-6	0.033418	48.00%	
		Color Pigment	68186-91-4	0.009280	13.33%	
		Silicon Dioxide	60676-86-0	0.023204	33.33%	
		Talc	14807-96-6	0.003718	5.34%	
8	Termination Between	Nickel	7440-02-0	0.150190	100%	
9	Termination Outer	Tin	7440-31-5	0.147830	100%	
10	Marking	Epoxy Resin	25085-99-8	0.002295	52.63%	
		Barium Sulfate	7727-43-7	0.000688	15.79%	
		Titanium Dioxide	13463-67-7	0.001377	31.58%	
<b>TOTAL</b>				<b>4.74172</b>		




**RM12 (1206)**

NO.	BREAKDOWN OF COMPONENT	MATERIAL NAME	CAS NO.	SUBSTANCE MASS (mg/pc)	PERCENTAGE OF HOMOGENEOUS MATERIAL	REMARK
1	Substrate	Aluminium Trioxide	1344-28-1	7.379366	96%	
		Silicon Dioxide	14808-60-7	0.153737	2%	
		Magnesium Oxide	1309-48-4	0.153737	2%	
2	Termination Inner (C1)	Silver	7440-22-4	0.100126	95.65%	
		Glass	65997-18-4	0.004554	4.35%	
3	Termination Inner (C2)	Silver	7440-22-4	0.060109	86.96%	
		Glass	65997-18-4	0.009014	13.04%	
4	Termination Inner (C3)	Nickel	7440-02-0	0.018000	80%	
		Chromium	7440-47-3	0.004500	20%	
5	Resistive Element	Ruthenium Oxide	12036-10-1	0.002600	5.00%	RoHS Exemption No.: 7(c)-I (Pb in glass of electronic components)
		Silver	7440-22-4	0.013000	25.00%	
		Palladium	7440-05-3	0.005200	10.00%	
		Glass	65997-18-4	0.031200	60.00%	
6	Protective Coating (G1)	Glass	65997-18-4	0.031174	67%	
		Ethyl Cellulose	9004-57-3	0.001396	3%	
		Turpentine Alcoholize	10482-56-1	0.013958	30%	
7	Protective Coating (G2)	Resin	25068-38-6	0.039601	48.00%	
		Color Pigment	68186-91-4	0.010997	13.33%	
		Silicon Dioxide	60676-86-0	0.027498	33.33%	
		Talc	14807-96-6	0.004406	5.34%	
8	Termination Between	Nickel	7440-02-0	0.200030	100%	
9	Termination Outer	Tin	7440-31-5	0.196880	100%	
10	Marking	Epoxy Resin	25085-99-8	0.002716	52.63%	
		Barium Sulfate	7727-43-7	0.000815	15.79%	
		Titanium Dioxide	13463-67-7	0.001630	31.58%	
<b>TOTAL</b>				<b>8.46624</b>		

# MATERIAL DECLARATION

RM SERIES

 **RM14 (1210)**

NO.	BREAKDOWN OF COMPONENT	MATERIAL NAME	CAS NO.	SUBSTANCE MASS (mg/pc)	PERCENTAGE OF HOMOGENEOUS MATERIAL	REMARK
1	Substrate	Aluminium Trioxide	1344-28-1	14.087846	96%	
		Silicon Dioxide	14808-60-7	0.293497	2%	
		Magnesium Oxide	1309-48-4	0.293497	2%	
2	Termination Inner (C1)	Silver	7440-22-4	0.158425	95.65%	
		Glass	65997-18-4	0.007205	4.35%	
3	Termination Inner (C2)	Silver	7440-22-4	0.095108	86.96%	
		Glass	65997-18-4	0.014262	13.04%	
4	Termination Inner (C3)	Nickel	7440-02-0	0.088800	80%	
		Chromium	7440-47-3	0.022200	20%	
5	Resistive Element	Ruthenium Oxide	12036-10-1	0.003100	5.00%	RoHS Exemption No.: 7(c)-1 (Pb in glass of electronic components)
		Silver	7440-22-4	0.015500	25.00%	
		Palladium	7440-05-3	0.006200	10.00%	
		Glass	65997-18-4	0.037200	60.00%	
6	Protective Coating (G1)	Glass	65997-18-4	0.067891	67%	
		Ethyl Cellulose	9004-57-3	0.003040	3%	
		Turpentine Alcoholize	10482-56-1	0.030399	30%	
7	Protective Coating (G2)	Resin	25068-38-6	0.086242	48.00%	
		Color Pigment	68186-91-4	0.023950	13.33%	
		Silicon Dioxide	60676-86-0	0.059884	33.33%	
		Talc	14807-96-6	0.009594	5.34%	
8	Termination Between	Nickel	7440-02-0	0.358670	100%	
9	Termination Outer	Tin	7440-31-5	0.353028	100%	
10	Marking	Epoxy Resin	25085-99-8	0.002716	52.63%	
		Barium Sulfate	7727-43-7	0.000815	15.79%	
		Titanium Dioxide	13463-67-7	0.001630	31.58%	
<b>TOTAL</b>				<b>16.12070</b>		



**RM20 (2010)**

NO.	BREAKDOWN OF COMPONENT	MATERIAL NAME	CAS NO.	SUBSTANCE MASS (mg/pc)	PERCENTAGE OF HOMOGENEOUS MATERIAL	REMARK
1	Substrate	Aluminium Trioxide	1344-28-1	21.808800	96%	
		Silicon Dioxide	14808-60-7	0.454350	2%	
		Magnesium Oxide	1309-48-4	0.454350	2%	
2	Termination Inner (C1)	Silver	7440-22-4	0.163036	95.65%	
		Glass	65997-18-4	0.007415	4.35%	
3	Termination Inner (C2)	Silver	7440-22-4	0.097873	86.96%	
		Glass	65997-18-4	0.014677	13.04%	
4	Termination Inner (C3)	Nickel	7440-02-0	0.081440	80%	
		Chromium	7440-47-3	0.020360	20%	
5	Resistive Element	Ruthenium Oxide	12036-10-1	0.008841	5.00%	RoHS Exemption No.: 7(c)-I (Pb in glass of electronic components)
		Silver	7440-22-4	0.044203	25.00%	
		Palladium	7440-05-3	0.017681	10.00%	
		Glass	65997-18-4	0.106086	60.00%	
6	Protective Coating (G1)	Glass	65997-18-4	0.186722	67%	
		Ethyl Cellulose	9004-57-3	0.008361	3%	
		Turpentine Alcoholize	10482-56-1	0.083607	30%	
7	Protective Coating (G2)	Resin	25068-38-6	0.237197	48.00%	
		Color Pigment	68186-91-4	0.065872	13.33%	
		Silicon Dioxide	60676-86-0	0.164704	33.33%	
		Talc	14807-96-6	0.026388	5.34%	
8	Termination Between	Nickel	7440-02-0	0.367125	100%	
9	Termination Outer	Tin	7440-31-5	0.361350	100%	
10	Marking	Epoxy Resin	25085-99-8	0.012894	52.63%	
		Barium Sulfate	7727-43-7	0.003869	15.79%	
		Titanium Dioxide	13463-67-7	0.007737	31.58%	
<b>TOTAL</b>				<b>24.80494</b>		

# MATERIAL DECLARATION

RM SERIES

## RM25 (2512)

NO.	BREAKDOWN OF COMPONENT	MATERIAL NAME	CAS NO.	SUBSTANCE MASS (mg/pc)	PERCENTAGE OF HOMOGENEOUS MATERIAL	REMARK
1	Substrate	Aluminium Trioxide	1344-28-1	39.212938	96%	
		Silicon Dioxide	14808-60-7	0.816936	2%	
		Magnesium Oxide	1309-48-4	0.816936	2%	
2	Termination Inner (C1)	Silver	7440-22-4	0.226407	95.65%	
		Glass	65997-18-4	0.010297	4.35%	
3	Termination Inner (C2)	Silver	7440-22-4	0.135918	86.96%	
		Glass	65997-18-4	0.020382	13.04%	
4	Termination Inner (C3)	Nickel	7440-02-0	0.107120	80%	
		Chromium	7440-47-3	0.026780	20%	
5	Resistive Element	Ruthenium Oxide	12036-10-1	0.015625	5.00%	RoHS Exemption No.: 7(c)-I (Pb in glass of electronic components)
		Silver	7440-22-4	0.078125	25.00%	
		Palladium	7440-05-3	0.031250	10.00%	
		Glass	65997-18-4	0.187500	60.00%	
6	Protective Coating (G1)	Glass	65997-18-4	0.420629	67%	
		Ethyl Cellulose	9004-57-3	0.018834	3%	
		Turpentine Alcoholize	10482-56-1	0.188341	30%	
7	Protective Coating (G2)	Resin	25068-38-6	0.534334	48.00%	
		Color Pigment	68186-91-4	0.148389	13.33%	
		Silicon Dioxide	60676-86-0	0.371028	33.33%	
		Talc	14807-96-6	0.059445	5.34%	
8	Termination Between	Nickel	7440-02-0	0.469920	100%	
9	Termination Outer	Tin	7440-31-5	0.462528	100%	
10	Marking	Epoxy Resin	25085-99-8	0.029046	52.63%	
		Barium Sulfate	7727-43-7	0.008715	15.79%	
		Titanium Dioxide	13463-67-7	0.017429	31.58%	
<b>TOTAL</b>				<b>44.41485</b>		



# MATERIAL DECLARATION

RM SERIES

## RM25-U (3 WATT)

NO.	BREAKDOWN OF COMPONENT	MATERIAL NAME	CAS NO.	SUBSTANCE MASS (mg/pc)	PERCENTAGE OF HOMOGENEOUS MATERIAL	REMARK
1	Substrate	Aluminium Trioxide	1344-28-1	58.1007360	96%	
		Silicon Dioxide	14808-60-7	1.5130400	3%	
		Magnesium Oxide	1309-48-4	0.9078240	2%	
2	Termination Inner (C1)	Silver	7440-22-4	2.4407125	91%	
		Palladium	7440-05-3	0.0168325	1%	
		Glass	65997-18-4	0.0673300	3%	
		Ethyl Cellulose	9004-57-3	0.0673300	3%	
		Acrylic Resin	26044-94-0	0.1009950	4%	
3	Termination Inner (C2)	Silver	7440-22-4	0.8533600	40%	
		Glass	65997-18-4	0.1920060	9%	
		Ethyl Cellulose	9004-57-3	0.2133400	10%	
		Terpineol	8000-41-7	0.8746940	41%	
4	Termination Inner (C3)	Nickel	7440-02-0	0.1573600	80%	
		Chromium	7440-47-3	0.0393400	20%	
5	Resistive Element	Ruthenium Oxide	12036-10-1	0.1373100	5%	RoHS Exemption No.: 7(c)-I (Pb in glass of electronic components)
		Silver	7440-22-4	0.6865500	25%	
		Palladium	7440-05-3	0.2746200	10%	
		Glass	65997-18-4	1.6477200	60%	
6	Protective Coating (G1)	Glass	65997-18-4	0.4257850	67%	
		Ethyl Cellulose	9004-57-3	0.0190650	3%	
		Turpentine Alcoholize	10482-56-1	0.1906500	30%	
7	Protective Coating (G2)	Resin	25068-38-6	0.9768000	48%	
		Color Pigment	68186-91-4	0.2712655	13.33%	
		Silicon Dioxide	60676-86-0	0.6782655	33.33%	
		Talc	14807-96-6	0.1086690	5.34%	
8	Termination Between	Nickel	7440-02-0	2.2469000	100%	
9	Termination Outer	Tin	7440-31-5	2.2090000	100%	
10	Marking	Epoxy Resin	25085-99-8	0.1234174	52.63%	
		Barium Sulfate	7727-43-7	0.0370276	15.79%	
		Titanium Dioxide	13463-67-7	0.0740551	31.58%	
TOTAL				75.652000		