

UNI-ROYAL
厚聲集團

DATA SHEET

Product Name Metal Glaze Capped Ceramic Rod

Part Name MGC/MGD Series

File No. DIP-SP-078

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1. Scope

- 1.1 This specification for approve relates to the Metal Glaze Capped Ceramic Rod manufactured by UNI-ROYAL.
- 1.2 Good performance against Humidity environment.
- 1.3 Wide IRV range, can be sorted accurately.
- 1.4 Best choice for Anti-surge product.

2. Explanation of Part No. System

The standard Part No. includes 14 digits with the following explanation:

- 2.1 The 1st to 2nd digits are to indicate the product type .

Example: MG= Metal Glaze

- 2.2 The 3th digit is the type.

Example: C= Capped Filming Rod ; D= Uncapped Filming Rod

- 2.3 The 4th digit is the Alumina Content.

Example: 1= Alumina 70% ; 2= Alumina 80% ; 3= Alumina 85%

- 2.4 The 8th to 11th digits is to denote the Size of Rod.

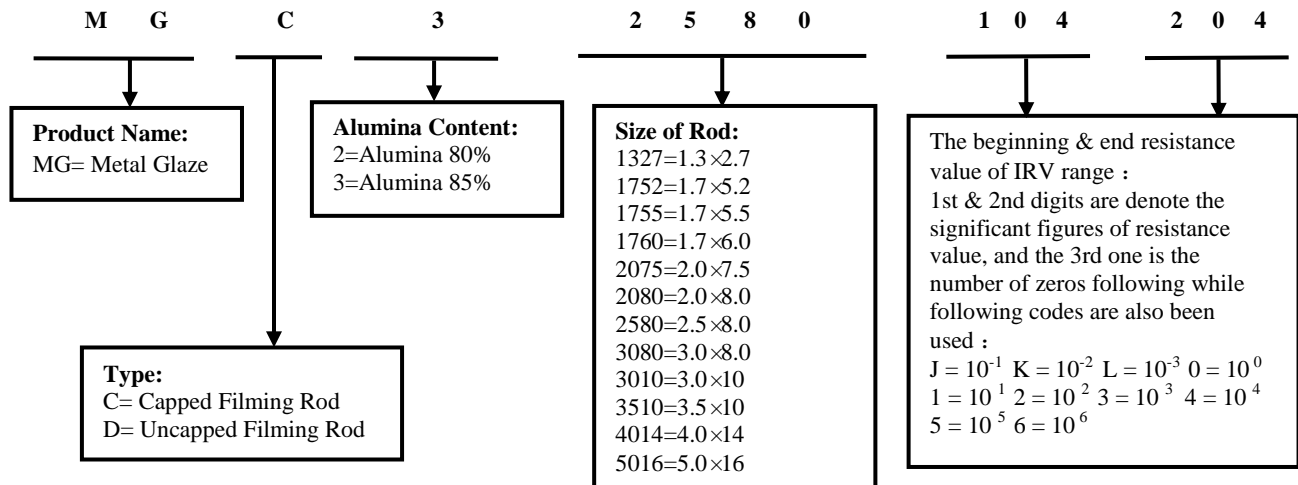
Example: 1327=1.3×2.7 ; 1752=1.7×5.2 ; 1755=1.7×5.5 ; 1760=1.7×6.0 ; 2075=2.0×7.5 ; 2080=2.0×8.0 ; 2580=2.5×8.0 ;
3080=3.0×8.0 ; 3010=3.0×10 ; 3510=3.5×10 ; 4014=4.0×14 ; 5016=5.0×16

- 2.5 The 9th to 14th digits is to denote the beginning & end resistance value of IRV range

1st & 2nd digits are denote the significant figures of resistance value, and the 3rd one is the number of zeros following while following codes are also been used:

J = 10^{-1} K = 10^{-2} L = 10^{-3} 0 = 10^0 1 = 10^1 2 = 10^2 3 = 10^3 4 = 10^4 5 = 10^5 6 = 10^6

3. Ordering Procedure: (Example: MG 85% 2.5×8.0 100-200K Ω)



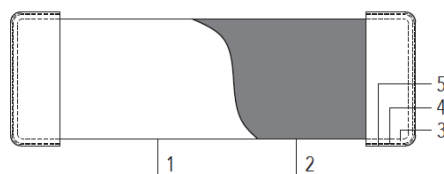
4. Material:

- (1) Ceramic rod's main ingredient: AL₂O₃ 80%、AL₂O₃85% tolerance: ±3 % (mark alumina content 80%、85%)

or customer requirement.

- (2) Iron cap main material: Iron

Plating of iron cap main ingredient: pure Cu and pure Sn

5. Dimension

1. Ceramic
2. Film
3. Cap (iron)
4. Cap (copper)
5. Cap (tin)

Unit: mm

NO	Size	Uncapped Filming Rod		Capped Filming Rod		MIN PULLING FORCE (KG)
		D	L	D	L	
1	1.3x2.7	1.30±0.02	2.7±0.1	1.54~1.67	2.86~3.16	2
2	1.7x5.2	1.70±0.03	5.2 ^{+0.1} _{-0.2}	2.03~2.18	5.36~5.76	3
3	1.7x5.5	1.70±0.03	5.5±0.2	2.03~2.18	5.66~6.16	3
4	1.7x6.0	1.70±0.03	6.0±0.2	2.03~2.18	6.16~6.66	3
5	2.0x7.5	2.00 ^{+0.04} _{-0.03}	7.5±0.2	2.33~2.73	7.66~8.27	5
6	2.0x8.0	2.00±0.03	8.0±0.2	2.33~2.60	8.16~8.77	5
7	2.5x8.0	2.50±0.04	8.0±0.2	2.82~3.11	8.16~8.77	6
8	3.0x8.0	3.00±0.04	8.0±0.2	3.32~3.60	8.16~8.77	6
9	3.0x10	3.00±0.04	10.0±0.3	3.32~3.60	10.06~10.89	6
10	3.5x10	3.50 ^{+0.04} _{-0.05}	10.0±0.3	3.81~4.10	10.06~10.89	6
11	4.0x14	4.00±0.05	14.0±0.3	4.31~4.67	14.06~14.89	6
12	5.0x16	5.00±0.05	16.0±0.3	5.41~5.62	16.16~16.89	6

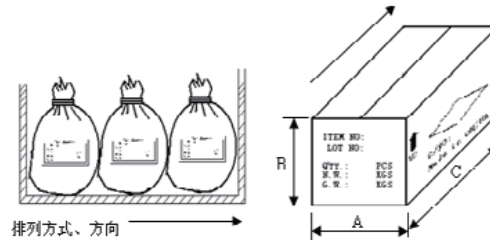
6. IRV (Initial Resistance Value) Range

Code	Initial value range	Code	Initial value range	Code	Initial value range
R01	15Ω-25Ω	R14	600 Ω -900 Ω	R27	30K Ω -60K Ω
R02	20Ω-30Ω	R15	800 Ω -1.3K Ω	R28	40K Ω -80K Ω
R03	30Ω-50Ω	R16	1K Ω -2K Ω	R29	50K Ω -100K Ω
R04	40Ω-60Ω	R17	1.5K Ω -2.5K Ω	R30	60K Ω -120K Ω
R05	50Ω-80Ω	R18	2K Ω -4K Ω	R31	80K Ω -160K Ω
R06	60Ω-100Ω	R19	3K Ω -5K Ω	R32	100K Ω -200K Ω
R07	80Ω-130Ω	R20	4K Ω -7K Ω	R33	150K Ω -300K Ω
R08	100Ω-200Ω	R21	5K Ω -10K Ω	R34	200K Ω -400K Ω
R09	150Ω-250Ω	R22	6K Ω -12K Ω	R35	300K Ω -500K Ω
R10	200Ω-400Ω	R23	8K Ω -16K Ω	R36	400K Ω -700K Ω
R11	300Ω-500Ω	R24	10K Ω -20K Ω	R37	500K Ω -800K Ω
R12	400Ω-600Ω	R25	15K Ω -30K Ω	R38	600K Ω -900K Ω
R13	500Ω-800Ω	R26	20K Ω -40K Ω	R39	800K Ω -1.3M Ω

7. Standard for testing:

- (1) Appearance: Inspect appearance with eyes and sense of touch
- ① Film layer without film bubble、rods pitted、uneven film distribution、protective film spots、protective film too thin、uneven film color etc
 - ② May promise range of initial resistance value : reference to initial resistance value specification list.
 - ③ Temperature coefficient resistor : according to customer order
- (2) Size: Measure it with vernier caliper and micrometer

9. Packing



No.	Type	Size (mm)			Quantity (KPCS)	
		A	B	C	Pouch	Box
1	1.3x2.7	25	20	45	600	1800
2	1.7x5.2	25	20	45	200	600
3	1.7x5.5	25	20	45	200	600
4	1.7x6.0	25	20	45	200	600
5	2.0x7.5	25	20	45	100	300
6	2.0x8.0	25	20	45	100	300
7	2.5x8.0	25	20	45	60	180
8	3.0x8.0	25	20	45	40	120
9	3.0x10	25	20	45	40	120
10	3.5x10	25	20	45	25	75
11	4.0x14	25	20	45	12.5	37.5
12	5.0x16	25	20	45	7.5	22.5

11. Note

11.1 UNI-ROYAL recommend the storage condition temperature: 15℃~35℃, humidity :25%~75%

(Put condition for individual product)

Even under UNI-ROYAL recommended storage condition, solderability of products over 1 year old (Put condition for each product) may be degraded.

11.2 Store / transport cartons in the correct direction, which is indicated on a carton as a symbol.

Otherwise bent leads may occur due to excessive stress applied when dropping of a carton.

11.3 Product performance and soldered connections may deteriorate if the products are stored in the following places:

- a. Storage in high Electrostatic
- b. Storage in direct sunshine、rain and snow or condensation
- c. Where the products are exposed to sea winds or corrosive gases, including Cl₂, H₂S₃, NH₃, SO₂, NO₂.

12. Record

Version	Description of amendment	Page	Date	Amended by	Checked by
1	First issue of this specification	1~7	Jun.12,2018	Chen Haiyan	Chen Nana