

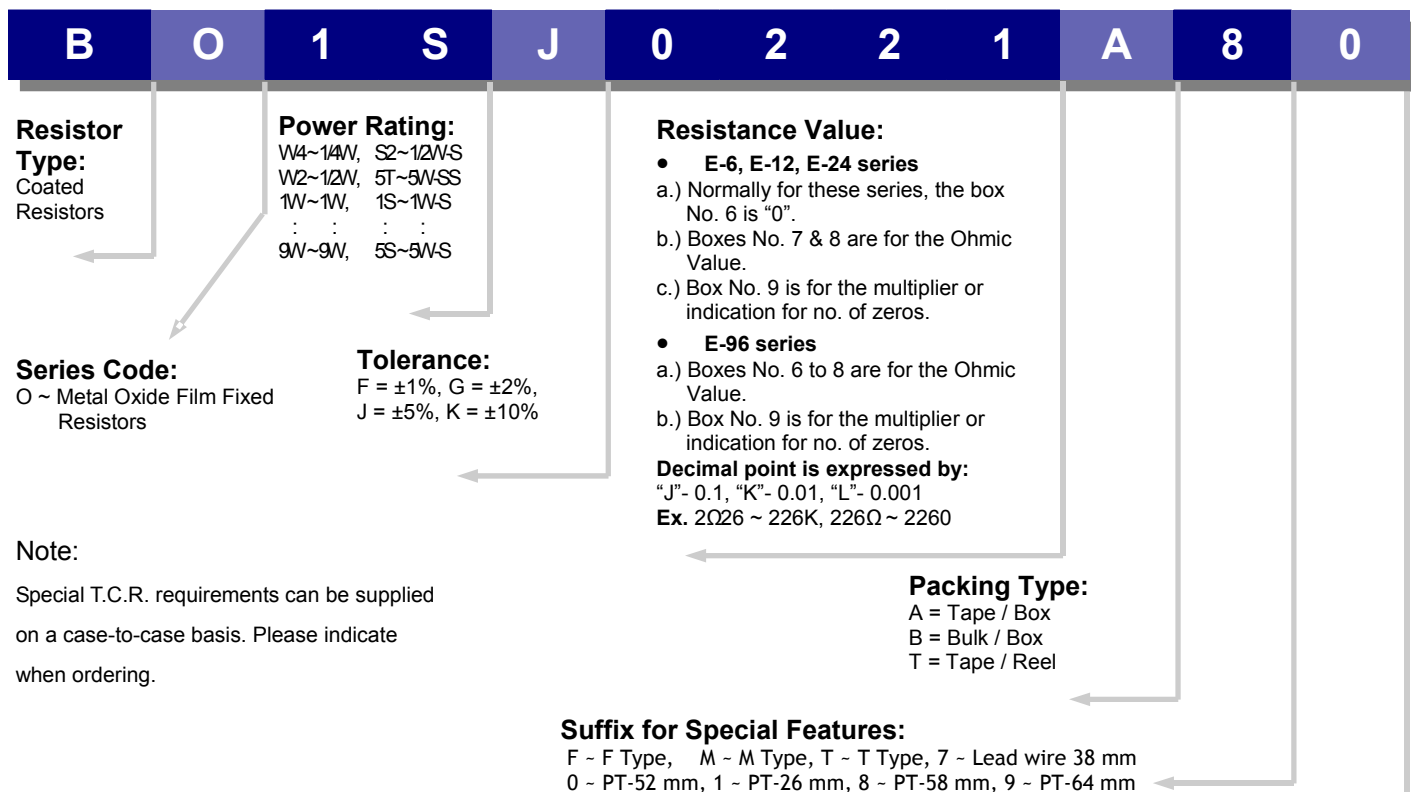
METAL OXIDE FILM FIXED RESISTOR

Features

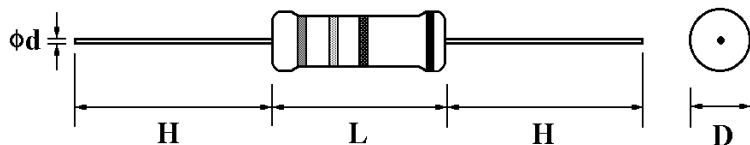
- High safety standard, high purity ceramic core
- Excellent non-flaming coating, non-inductive type available
- Stable performance in diverse environments, Meet EIAJ-RC2655A requirements
- Too low or too high ohmic value can be supplied on a case-to-case basis



Explanation of Part Number & Ordering Procedure:



Dimension (mm)



Assistance Code:
Usually is "0"
As: F(3) Type = 3
AVI(2) = 2 etc.

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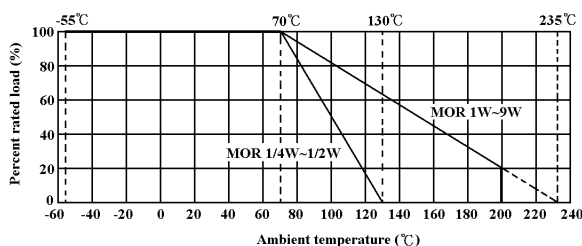
Normal Size

Part No.	Style	Power Rating at 70°C	Dimension (mm)				Max. Working Voltage	Max. Overload Voltage	Dielectric Withstanding Voltage	Resistance Range
			D±1	L Max.	H±3	d ^{+0.02} / _{-0.05}				
BOW4	MOR-25	1/4W (0.25W)	2.5	7.5	28	0.6	250V	400V	250V	0.3Ω ~ 50KΩ
BOW2	MOR-50	1/2W (0.5W)	3.5	10.0	28	0.6	250V	400V	250V	0.3Ω ~ 50KΩ
BO1W	MOR-100	1W	5.0	12.0	28	0.8	350V	600V	350V	0.3Ω ~ 50KΩ
BO2W	MOR-200	2W	5.5	16.0	28	0.8	350V	600V	350V	0.3Ω ~ 50KΩ
BO3W	MOR-300	3W	6.5	17.5	28	0.8	500V	800V	500V	5Ω ~ 100KΩ
BO5W	MOR-500	5W	8.5	26.0	38	0.8	750V	1000V	750V	5Ω ~ 150KΩ
BO7W	MOR-700	7W	8.5	32.0	38	0.8	750V	1000V	750V	20Ω ~ 150KΩ
BO8W	MOR-800	8W	8.5	41.0	38	0.8	750V	1000V	750V	30Ω ~ 200KΩ
BO9W	MOR-900	9W	8.5	54.0	38	0.8	750V	1000V	750V	50Ω ~ 200KΩ

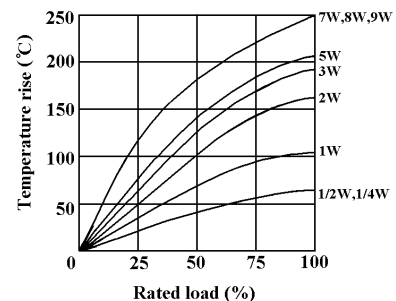
Small Size

Part No.	Style	Power Rating at 70°C	Dimension (mm)				Max. Working Voltage	Max. Overload Voltage	Dielectric Withstanding Voltage	Resistance Range
			D±1	L Max.	H±3	d ^{+0.02} / _{-0.05}				
BOS2	MOR-50-S	1/2W (0.5W)	2.5	7.5	28	0.6	250V	400V	250V	0.3Ω ~ 50KΩ
BO1S	MOR-100-S	1W	4.0	10.0	28	0.8	350V	600V	350V	0.3Ω ~ 50KΩ
BO2S	MOR-200-S	2W	5.0	12.0	28	0.8	350V	600V	350V	0.3Ω ~ 50KΩ
BO3S	MOR-300-S	3W	5.5	16.0	28	0.8	350V	600V	350V	0.3Ω ~ 50KΩ
BO5T	MOR-500-SS	5W	6.5	17.5	28	0.8	500V	800V	500V	5Ω ~ 100KΩ
BO5S	MOR-500-S	5W	8.0	25.0	38	0.8	500V	800V	500V	5Ω ~ 150KΩ

Derating Curve



Heat Rise Chart



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Performance Specifications:

Characteristics	Test Methods	Limits
Temperature coefficient JIS - C - 5202 5.2	Natural resistance change per temp. degree centigrade $\frac{R_2 - R_1}{R_1 (t_2 - t_1)} \times 10^6 \text{ (PPM / } ^\circ\text{C)}$ R ₁ : Resistance value at room temperature (t ₁) R ₂ : Resistance value at room temp. plus 100°C (t ₂)	± 350PPM / °C
Short - time overload JIS - C - 5202 5.5	Permanent resistance change after the application of a potential of 2.5 times RCWV or the max. overload voltage respectively specified in the above list, whichever less for 5 seconds.	Resistance change rate is N: ± (1% + 0.05 Ω) S: ± (2% + 0.05 Ω) No evidence of mechanical damage
Dielectric withstanding voltage JIS - C - 5202 5.7	Resistors shall be clamped in the trough of a 90 ° metallic V- block and shall be tested at AC potential respectively specified in the above list for 60 + 10 / -0 seconds.	No evidence of flashover mechanical damage, arcing or insulation break down.
Pulse overload JIS - C - 5202 5.8	Resistance change after 10,000 cycles (1 second "on", 25 seconds "off") at 4 times RCWV or the max. pulse overload voltage.	Resistance change rate is N: ± (2% + 0.05 Ω) S: ± (5% + 0.05 Ω) No evidence of mechanical damage
Terminal strength JIS - C - 5202 6.1	Direct load: Resistance to a 2.5 kgs. direct load for 10 seconds in the direction of the longitudinal axis of the terminal leads. Twist test: Terminal leads shall be bent through 90° at a point of about 6mm from the body of the resistor and shall be rotated through 360° about the original axis of the bent terminal in alternating direction for a total of 3 rotations.	No evidence of mechanical damage.
Resistance to Soldering Heat JIS - C - 5202 6.4	Permanent resistance change when leads immersed to 3.2 mm to 4.8 mm from the body in 350°C ± 10°C solder for 3 ± 0.5 seconds	Resistance change rate is ± (1.0%+0.05 Ω) No evidence of mechanical damage.
Solderability JIS - C - 5202 6.5	The area covered with a new, smooth, clean, shiny and continuous surface free from concentrated pinholes. Test temp. of solder: 235°C ± 5°C Dwell time in solder: 3 +0.5/ -0 seconds	95% coverage Min.
Resistance to solvent JIS - C - 5202 6.9	Specimens shall be immersed in a bath of trichroethane completely for 3 mins. with ultrasonic.	No deterioration of protective coating and markings.

* RCWV = Rated Continuous Working Voltage = $\sqrt{\text{Rated Power} \times \text{Resistance Value}}$

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Performance Specifications:

Characteristics	Test Methods	Limits															
Temperature cycling JIS-C-5202 7.4	Resistance change after continuous five cycles for duty cycle specified below: <table border="1" style="margin-top: 10px;"> <thead> <tr> <th>Step</th> <th>Temperature</th> <th>Time</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>-55°C±3°C</td> <td>30 mins.</td> </tr> <tr> <td>2</td> <td>Room temp.</td> <td>10 – 15 mins.</td> </tr> <tr> <td>3</td> <td>+155°C±2°C</td> <td>30 mins.</td> </tr> <tr> <td>4</td> <td>Room temp.</td> <td>10 – 15 mins.</td> </tr> </tbody> </table>	Step	Temperature	Time	1	-55°C±3°C	30 mins.	2	Room temp.	10 – 15 mins.	3	+155°C±2°C	30 mins.	4	Room temp.	10 – 15 mins.	Resistance change rate is ± (2.0%+0.05 Ω) No evidence of mechanical damage.
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2	Room temp.	10 – 15 mins.															
3	+155°C±2°C	30 mins.															
4	Room temp.	10 – 15 mins.															
Load life in humidity JIS - C - 5202 7.9	Resistance change after 1,000 hours operating at RCWV with duty cycle of (1.5 hours "on", 0.5 hour "off") in a humidity test chamber controlled at 40°C ± 2°C and 90 to 95% relative humidity.	<table border="1" style="width: 100%;"> <thead> <tr> <th>Resistance Value</th> <th>ΔR/R</th> </tr> </thead> <tbody> <tr> <td>Less than 100KΩ</td> <td>± 5%</td> </tr> <tr> <td>100KΩ or more</td> <td>± 10%</td> </tr> </tbody> </table>	Resistance Value	ΔR/R	Less than 100KΩ	± 5%	100KΩ or more	± 10%									
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Load life JIS - C - 5202 7.10	Permanent resistance change after 1,000 hours operating at RCWV with duty cycle of (1.5 hours "on", 0.5 hour "off") at 70° C ± 2°C ambient.	<table border="1" style="width: 100%;"> <thead> <tr> <th>Resistance Value</th> <th>ΔR/R</th> </tr> </thead> <tbody> <tr> <td>Less than 100KΩ</td> <td>± 5%</td> </tr> <tr> <td>100KΩ or more</td> <td>± 10%</td> </tr> </tbody> </table>	Resistance Value	ΔR/R	Less than 100KΩ	± 5%	100KΩ or more	± 10%									
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Non-Flame JIS - C - 5202 7.12	Resistors shall resist flaming or arcing when overloaded up to 16 times RCWV.	No evidence of flaming or arcing.															

* RCWV = Rated Continuous Working Voltage = $\sqrt{\text{Rated Power} \times \text{Resistance Value}}$