Metal Oxide Film Resistors

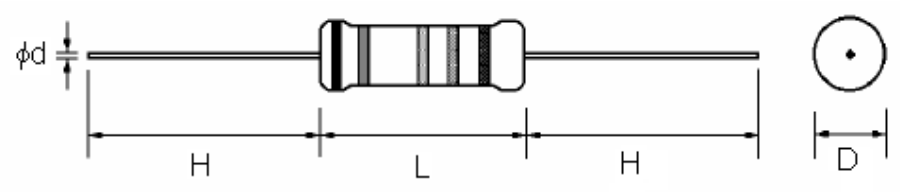
Features:

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

Performance Specifications:

Temperature coefficient	: ±350PPM/°C.
Short-time overload	: Normal size : ΔR/R ≤ ±(1.0% +0.05Ω), with no evidence of mechanical damage. Small size : ΔR/R ≤ ±(2.0% +0.05Ω), with no evidence of mechanical damage.
Dielectric withstanding voltage	: No evidence of flashover, mechanical damage, arcing or insulation breakdown.
Pulse overload	: Normal size : ΔR/R ≤ ±(2.0% +0.05Ω), with no evidence of mechanical damage.
Terminal strength	: No evidence of mechanical damage.
Resistance to soldering heat	: ΔR/R ≤ ±(1.0% +0.05Ω), with no evidence of mechanical damage.
Minimum solderability	: 95% coverage.
Resistance to solvent	: No deterioration of protective coating and markings.
Temperature cycling	: ΔR/R ≤ ±(2.0% +0.05Ω), with no evidence of mechanical damage.
Humidity (steady state)	: ΔR/R ≤ ±(2.0% +0.05Ω), with no evidence of mechanical damage.
Load life in humidity	: ΔR/R ≤ ±5% for 100KΩ; 10% for ≥ ±100kΩ.
Load life	: ΔR/R ≤ ±5% for 100KΩ; 10% for ≥ ±100kΩ.
Non-Flame	: No evidence of flaming or arcing.

Dimension:



Dimensions : Millimetres

Specification Table

Type	Style	Power Rating at 70°C (W)	Dimension			
			D Maximum	L Maximum	H ±3	d ±0.05
MOR0S2	MOR-50-S	0.5	2.5	7.5	28	0.54
MOR01S	MOR-100-S	1	3.5	10.0	28	0.54
MOR03S	MOR-300-S	3	5.5	16.0	28	0.70
MOR07W	MOR-700	7	8.5	32.0	38	0.75

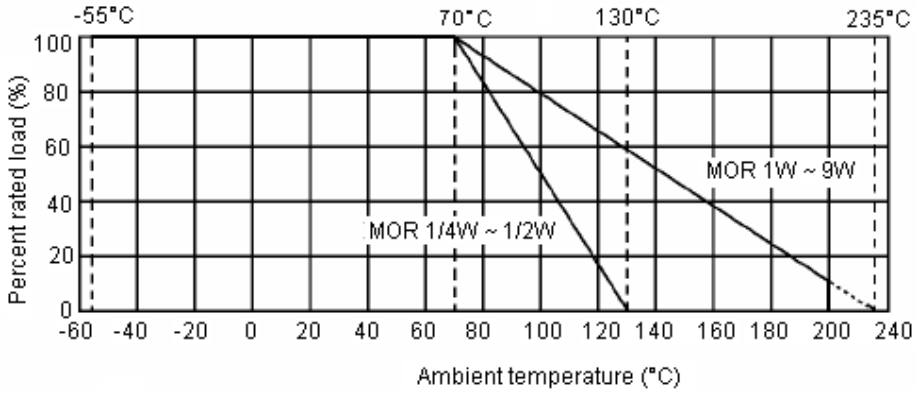
Dimensions : Millimetres

Power Rating

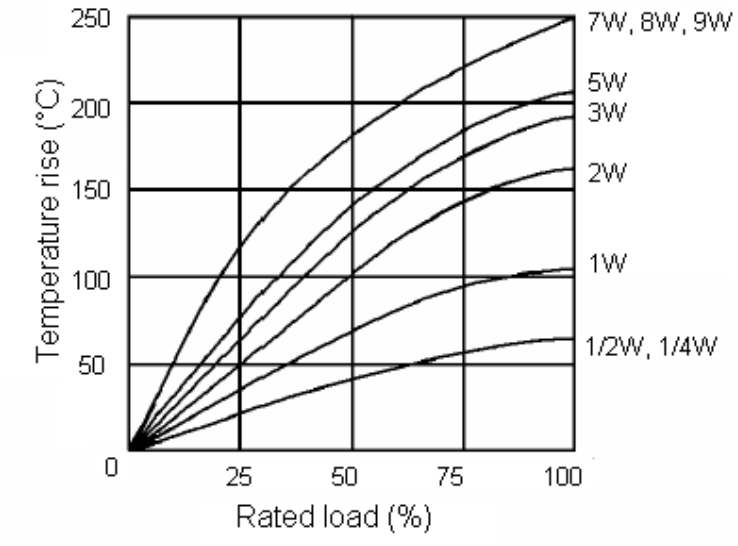
Style	Maximum Working Voltage (V)	Maximum Overload Voltage (V)	Dielectric Withstanding Voltage (V)	Resistance Range (Ω)
MOR-50-S	250	400	250	0.3 ~ 50K
MOR-100-S	350	600	350	
MOR-300-S				
MOR-700	750	1000	750	20 ~ 150K

Note:
- Standard E-24 series values in ±5% tolerance.
- Standard grey base colour for normal size product; sea blue color for small size product.
- Standard Non-flammable coating.
- Non-Inductive type available on a case to case basis.

Derating Curve



Heat Rise Chart



Resistance Preferred Value Range

E6	E12	E24	E96	E6	E12	E24	E96	E6	E12	E24	E96
10	10	10	10.0				21.5				46.4
			10.2	22	22	22	22.1	47	47	47	47.5
			10.5				22.6				48.7
			10.7				23.2				49.9
		11	11.0				23.7			51	51.1
			11.3			24	24.3				52.3
			11.5				24.9				53.6
			11.8				25.5				54.9
	12	12	12.1				26.1		56	56	56.2
			12.4				27.7				57.6
			12.7		27	27	27.4				59.0
		13	13.0				28.0				60.4
			13.3				28.7			62	61.9
			13.7				29.4				63.4
			14.0			30	30.1				64.9
			14.3				30.9				66.5
			14.7				31.6	68	68	68	68.1
15	15	15	15.0				32.4				69.8
			15.4	33	33	33	33.2				71.5
			15.8				34.0				73.2
		16	16.2				34.8			75	75.0
			16.5				35.7				76.8
			16.9			36	36.5				78.7
			17.4				37.4				80.6
			17.8				38.3		82	82	82.5
	18	18	18.2		39	39	39.2				84.5
			18.7				40.2				86.6
			19.1				41.2				88.7
			19.6				42.2			91	90.9
		20	20.0			43	43.2				93.1
			20.5				44.2				95.3
			21.0				45.3				97.6

Above values in accordance with IEC Publication 63 (1963) and BS2488

Part Number Table

Resistance Value	Part Number
10R	MOR0S2J0100A50
15R	MOR0S2J0150A50
22R	MOR0S2J0220A50
33R	MOR0S2J0330A50
47R	MOR0S2J0470A50
68R	MOR0S2J0680A50
100R	MOR0S2J0101A50
150R	MOR0S2J0151A50
220R	MOR0S2J0221A50
330R	MOR0S2J0331A50
470R	MOR0S2J0471A50
680R	MOR0S2J0681A50
1K	MOR0S2J0102A50
1K5	MOR0S2J0152A50
2K2	MOR0S2J0222A50
3K3	MOR0S2J0332A50
4K7	MOR0S2J0472A50
6K8	MOR0S2J0682A50
10K	MOR0S2J0103A50
15K	MOR0S2J0153A50
22K	MOR0S2J0223A50
33K	MOR0S2J0333A50
47K	MOR0S2J0473A50
10R	MOR01SJ0100A10
15R	MOR01SJ0150A10
22R	MOR01SJ0220A10
33R	MOR01SJ0330A10
47R	MOR01SJ0470A10
68R	MOR01SJ0680A10
100R	MOR01SJ0101A10
50R	MOR01SJ0151A10

Part Number Table

Resistance Value	Part Number
220R	MOR01SJ0221A10
330R	MOR01SJ0331A10
470R	MOR01SJ0471A10
680R	MOR01SJ0681A10
1K	MOR01SJ0102A10
1K5	MOR01SJ0152A10
2K2	MOR01SJ0222A10
3K3	MOR01SJ0332A10
4K7	MOR01SJ0472A10
6K8	MOR01SJ0682A10
10K	MOR01SJ0103A10
15K	MOR01SJ0153A10
22K	MOR01SJ0223A10
33K	MOR01SJ0333A10
47K	MOR01SJ0473A10
10R	MOR03SJ0100A10
15R	MOR03SJ0150A10
22R	MOR03SJ0220A10
33R	MOR03SJ0330A10
47R	MOR03SJ0470A10
68R	MOR03SJ0680A10
100R	MOR03SJ0101A10
150R	MOR03SJ0151A10
220R	MOR03SJ0221A10
330R	MOR03SJ0331A10
470R	MOR03SJ0471A10
680R	MOR03SJ0681A10
1K	MOR03SJ0102A10
1K5	MOR03SJ0152A10
2K2	MOR03SJ0222A10
3K3	MOR03SJ0332A10

Part Number Table

Resistance Value	Part Number
4K7	MOR03SJ0472A10
6K8	MOR03SJ0682A10
10K	MOR03SJ0103A10
15K	MOR03SJ0153A10
22K	MOR03SJ0223A10
33K	MOR03SJ0333A10
47K	MOR03SJ0473A10
22R	MOR07WJ0220B09
33R	MOR07WJ0330B09
47R	MOR07WJ0470B09
68R	MOR07WJ0680B09
100R	MOR07WJ0101B09
150R	MOR07WJ0151B09
220R	MOR07WJ0221B09
330R	MOR07WJ0331B09
470R	MOR07WJ0471B09
680R	MOR07WJ0681B09
1K	MOR07WJ0102B09
1K5	MOR07WJ0152B09
2K2	MOR07WJ0222B09
3K3	MOR07WJ0332B09
4K7	MOR07WJ0472B09
6K8	MOR07WJ0682B09
10K	MOR07WJ0103B09
15K	MOR07WJ0153B09
22K	MOR07WJ0223B09
33K	MOR07WJ0333B09
47K	MOR07WJ0473B09
68K	MOR07WJ0683B09
100K	MOR07WJ0104B09
3K3	MOR03SJ0332A10

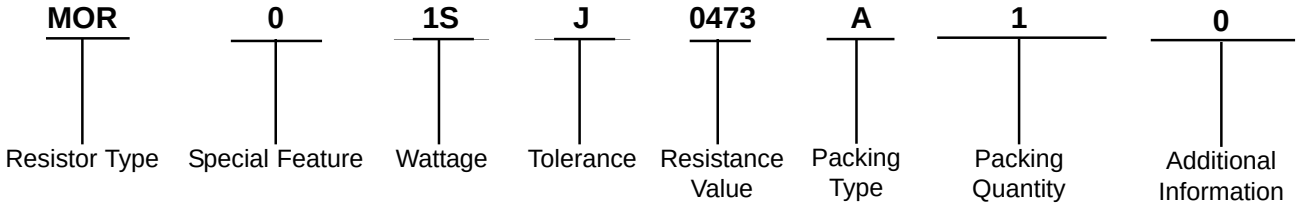
Multiplier Code (for 5% Marking)

Code	A	B	C	D	E	F	G	H	X	Y	Z
Multiplier	10^{0}	10^{1}	10^{2}	10^{3}	10^{4}	10^{5}	10^{6}	10^{7}	10^{-1}	10^{-2}	10^{-3}

Standard E-96 Series Resistance Value Code (for 5% Marking)

Value	Code	Value	Code	Value	Code	Value	Code	Value	Code
100	01	162	21	261	41	422	61	681	81
102	02	165	22	267	42	432	62	698	82
105	03	169	23	274	43	442	63	715	83
107	04	174	24	280	44	453	64	732	84
110	05	178	25	287	45	464	65	750	85
113	06	182	26	294	46	475	66	768	86
115	07	187	27	301	47	487	67	787	87
118	08	191	28	309	48	499	68	806	88
121	09	196	29	316	49	511	69	825	89
124	10	200	30	324	50	523	70	845	90
127	11	205	31	332	51	536	71	866	91
130	12	210	32	340	52	549	72	887	92
133	13	215	33	348	53	562	73	909	93
137	14	221	34	357	54	576	74	931	94
140	15	226	35	365	55	590	75	953	95
143	16	232	36	374	56	604	76	976	96
147	17	237	37	383	57	619	77	-	-
150	18	243	38	392	58	634	78	-	-
154	19	249	39	402	59	649	79	-	-
158	20	255	40	412	60	665	80	-	-

Part Number Explanation



Resistor Type : MOR = Metal oxide film fixed resistors.
Special Feature : 0 = Standard product.
Wattage : Normal size : 7W = 7W
Small size : 1S = 1W-S and 3S = 3W-S.
Tolerance : J = ±5%.
Resistance Value : E-24 series: the 1st digit is "0", the 2nd and 3rd digits are for the significant figures of the resistance and the 4th indicate the number of zeros. "J" ~ 0.1, "K" ~ 0.01. Ex. 4.7 ~ 47J, 4.7KΩ ~ 472.
E-96 series: The 1st to 3rd digits are significant figures of resistance and the 4th one denotes number of zeros. Ex. 1.33 KΩ = 1331.
Packing Type : A = Tape/Box, B = Bulk/Box.
Packing Quantity : 1 = 1000 pieces, 0 = for Bulk/Box packing.
Additional Information : 0 = PT-52mm, NIL for PT-26 and 9 = PT-64mm.

Notes:

International Sales Offices:

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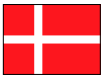

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