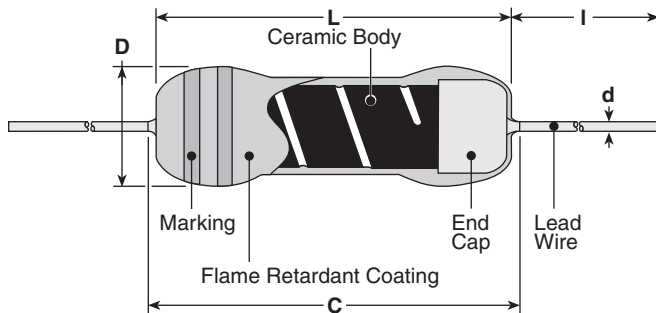


### features

- Flameproof silicone coating equivalent to (UL94V0)
- Suitable for automatic machine insertion
- High reliability for performance
- Products with lead-free terminations meet EU RoHS and China RoHS requirements

### dimensions and construction



Type	Dimensions inches (mm)				
	L	C (max.)	D	d (nom.)	I*
MO1/2 MOX1/2	.354±.039 (9.0±1.0)	.437 (11.1)	.126±.02 (3.2±0.5)	.028 (0.7)	.945 Min. (24.0 Min.)
MO1 MOX1	.472±.039 (12.0±1.0)	.59 (15.0)	.157±.02 (4.0±0.5)	.031 (0.8)	
MO2 MOX2	.610±.039 (15.5±1.0)	.709 (18.0)	.236±.039 (6.0±1.0)		
MO3 MOX3	.965±.039 (24.5±1.0)	1.10 (28.0)	.354±.039 (9.0±1.0)		1.18±.118 (30.0±3.0)
					1.50±.118 (38.0±3.0)

\* Lead length changes depending on taping and forming type.

### ordering information

MO	1	C	T52	A	473	J
Type	Power Rating	Termination Material	Taping and Forming	Packaging	Nominal Resistance	Tolerance
MO MOX	1/2: 0.5W 1: 1W 2: 2W 3: 3W	C: SnCu	Axial: T52, T521, T631 Stand-off Axial: L52, L521, L631 (MO3/MOX3 bulk packaging only)	A: Ammo R: Reel	2 significant figures + 1 multiplier "R" indicates decimal on value <10Ω	G: ±2% J: ±5%

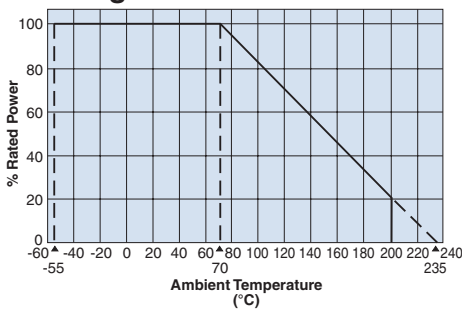
For further information on packaging, please refer to Appendix C.

## applications and ratings

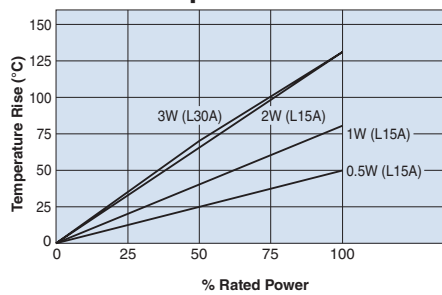
Part Designation	Power Rating @ 70°C	Minimum Dielectric Withstanding Voltage	T.C.R. (ppm/°C) Max.	Resistance Range E-24 (G±2%)	Resistance Range E-24 (J±5%)	Absolute Maximum Working Voltage	Absolute Maximum Overload Voltage	Operating Temperature Range
MO1/2	0.5W	400V	±200	10Ω - 47kΩ	10Ω - 47kΩ	$E = \sqrt{P \times R}$	400V	-55°C to +200°C
MO1	1.0W	500V		10Ω - 100kΩ	10Ω - 120kΩ	350V	600V	
MO2	2.0W						800V	
MO3	3.0W	500V		5.1Ω - 9.1Ω	0.2Ω - 9.1Ω	$E = \sqrt{P \times R}$	E x 2.5	
MOX1/2	0.5W							
MOX1	1.0W							
MOX2	2.0W							
MOX3	3.0W							

## environmental applications

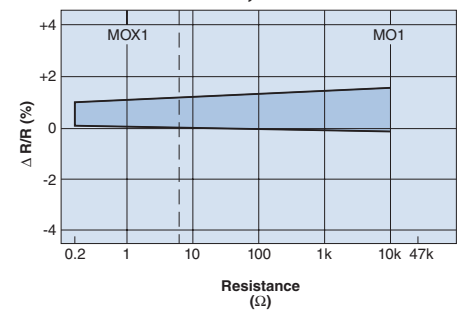
### Derating Curve



### Surface Temperature Rise



### Load Life @ 70°C, 1000 Hr



## Performance Characteristics

Parameter	Requirement Δ R ±(% + 0.05Ω)		Test Method
	Limit	Typical	
Resistance	Within specified tolerance	—	Measuring points are at 10mm ±1mm from the end cap.
T.C.R.	Within specified T.C.R.	—	+25°C/+125°C
Overload (Short time)	±1%	±0.5%	Rated voltage x 2.5 or max. overload voltage for 5 seconds, whichever is lower
Resistance to Solder Heat	±1%	±0.5%	260°C ±5°C, 10 seconds ± 1 second
Terminal Strength	No lead-coming off and loose terminals	—	Twist 360°C, 5 times
Rapid Change of Temperature	±1%	±0.5%	-55°C (30 minutes), +155°C (30 minutes), 5 cycles
Moisture Resistance	±(5%+0.1Ω)	±2%	40°C ± 2°C, 90 - 95% RH, 1000 hours, 1.5 hr ON, 0.5 hr OFF cycle
Endurance at 70°C	±(5%+0.1Ω)	±2%	70°C ± 2°C, 1000 hours, 1.5 hr ON, 0.5 hr OFF cycle
Resistance to Solvent	No abnormality in appearance. Marking shall be easily legible	—	Ultrasonic washing with isopropyl alcohol for 2 minutes. Power: 0.3W/cm³, f: 28kHz, Temp: 35°C ±5°C
Flame Retardant	No evidence of flaming or self-flaming	—	Flame test: the test flame shall be applied and removed for each 15 seconds respectively to repeat the cycle 5 times. Overload flame retardant: power (AC) corresponding to 2, 4, 8, 16 and 32 times the power rating shall be applied for each 1 minute until disconnection occurs. However the applied voltage shall not exceed the value of 4 times of the maximum operating voltage

# Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

## KOA Speer:

[MO1LT52R101J](#) [MOX1LR10J](#) [MOX1L2R7J](#) [MO1LT52R563J](#) [MO2L681J](#) [MO2CT631R100J](#) [MO2L683J](#)  
[MO1L563J](#) [MO1L273J](#) [MO1L272J](#) [MO2L361J](#) [MOX2LT631R4R7J](#) [MOX2LT631R3R0J](#) [MO2LT631R563J](#)  
[MO2CT521R513J](#) [MO2LT631R560J](#) [MO2CT631R510J](#) [MO2LT631R680J](#) [MO1LT52R393J](#) [MOX2LT631R1R2J](#)  
[MOX2LT631R1R0J](#) [MO1LT52R392J](#) [MO1LT52R390J](#) [MO2LT631R683J](#) [MOX1L1R0J](#) [MO2LT631R681J](#)  
[MO1LT52R273J](#) [MO1LT52R272G](#) [MO1LT52R150J](#) [MO1LT52R272J](#) [MO1LT52R271J](#) [MOX2LT631RR10J](#)  
[MOX2LT631R2R7J](#) [MOX2LT631R2R0J](#) [MOX1LT52RR75J](#) [MOX2LT631RR18J](#) [MO2L433J](#) [MOX2L6R2J](#)  
[MOX1LT52RR10J](#) [MO2L151J](#) [MO2LT631R242J](#) [MO2LT631R241J](#) [MO2LT631R240J](#) [MOX1L3R0J](#) [MO1LT52R270J](#)  
[MO2L154J](#) [MO1L391J](#) [MO2L153J](#) [MO2L152J](#) [MO2L150J](#) [MOX1L5R6J](#) [MOX1L3R6J](#) [MOX1L3R3J](#)  
[MO1LT52R470J](#) [MO1LT52R511J](#) [MO1LT52R472J](#) [MO1LT52R510J](#) [MO2L331J](#) [MO2L333J](#) [MOX1LR51J](#)  
[MOX1LT52RR47J](#) [MO1L681J](#) [MO1L512J](#) [MOX1LT52RR56J](#) [MOX1LT52RR51J](#) [MO2L103J](#) [MO2L101J](#)  
[MO2LT631R271J](#) [MO2L102J](#) [MO1L183J](#) [MO2LT631R273J](#) [MO1L181J](#) [MO1L182J](#) [MO1L221J](#) [MO1LT52R200J](#)  
[MOX1LT52R6R8J](#) [MO2L180J](#) [MO2L104J](#) [MO1L223J](#) [MO1L220J](#) [MO2L100J](#) [MO1L100J](#) [MO1L101J](#) [MO1L103J](#)  
[MO1L102J](#) [MO1L222J](#) [MO2L181J](#) [MO1L104J](#) [MOX2LR33J](#) [MO2L121J](#) [MO1L121J](#) [MO1C122J](#) [MO1C131J](#)  
[MO1C132J](#) [MO1C150J](#) [MO1C151J](#) [MO1C152J](#) [MO1C153J](#) [MO1C161J](#) [MO1C181J](#)