

**Power Metal Oxide Film Resistors**  
**Flameproof coating, UL 94 - V0**  
**General Propose**



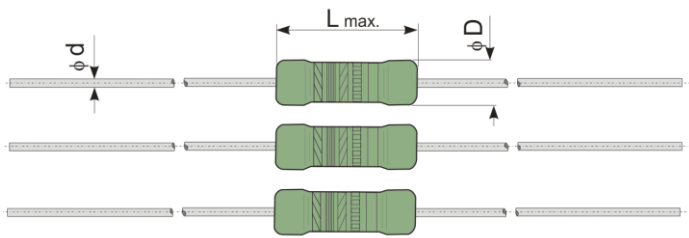
## ELECTRICAL SPECIFICATIONS

Type		PO595-0	PO594-0	PO593-0	PO590-0	PO591-0
Style		0207	0410	0414	0617	0922
Nominal Power rating $P_{70}$	[W]	1	2	3	4	
Resistance range	[ $\Omega$ ]	0R1...10M	0R1...10M	0R22...10M	0R22...560K	0R22...100K
E-Series		E24,E96		E24,E48	E24,E96	
Tolerances	[%]	$\pm 1, \pm 5$			$\pm 2, \pm 5$	
Temperature coefficient	[ $10^{-6} \cdot K^{-1}$ ]	SEE NEXT PAGE				
Temperature range	[ $^{\circ}C$ ]	-55...+200	-55...+235		-55...+250	
Thermal resistance	[ $KW^{-1}$ ]	125	80	80	60	45
Insulation voltage (1min.) <i>IEC115-1 clause 2.2.17</i>	[V]			500		

## PERFORMANCE DATA

Max. working voltage <i>IEC115-1 clause 2.2.16</i>	[V] <sub>RMS</sub>	500	750
Derating linear <i>IEC115-1 clause 2.2.24</i>	[ $^{\circ}C$ ]	SEE NEXT PAGE	
Climatic category <i>IEC68-1</i>		55/200/56	
Failure Rate <i>(Total, <math>\vartheta_0</math>, max, 60% cont. lev.)</i>	[ $10^{-9} h^{-1}$ ]	<10	
Endurance <i>(<math>P_{70}</math> 70<math>^{\circ}C</math>, 1000h) <i>IEC115-1 clause 4.25</i></i>	[ $\Delta R/R$ ] %	$\pm 2,0$	$\pm 1,5$
Damp heat, steady state <i>(40<math>^{\circ}C</math>, 93% r.h., 56d) <i>IEC115-1 clause 4.24</i></i>	[ $\Delta R/R$ ] %	$\pm 2,0$	$\pm 1,5$
Climatic sequence <i>IEC115-1 clause 4.23</i>	[ $\Delta R/R$ ] %		$\pm 1,0$
Terminal strength	[ $\Delta R/R$ ] %		$\pm 0,3$
Terminal Tensile Strength	[N]		40
Resistance to soldering heat <i>(260<math>^{\circ}C</math>, 3,5s) <i>IEC115-1 clause 4.12</i></i>	[ $\Delta R/R$ ] %		$\pm 0,25$
Solderability <i>IEC 60068-2-20-T</i>	[s]	2,5 Flowtime; solderglobule test	
Current noise <i>IEC 195</i>	[db]	R <15K: -15 R>: 15 +10 /decade	
Nonlinearity <i>IEC 440</i>	[db]	R <15K: 110 R> 15 K: 110 -20 /decade	
Marking		colour code, 4/5/6 bands	printed in clear

**DIMENSIONS [mm]**

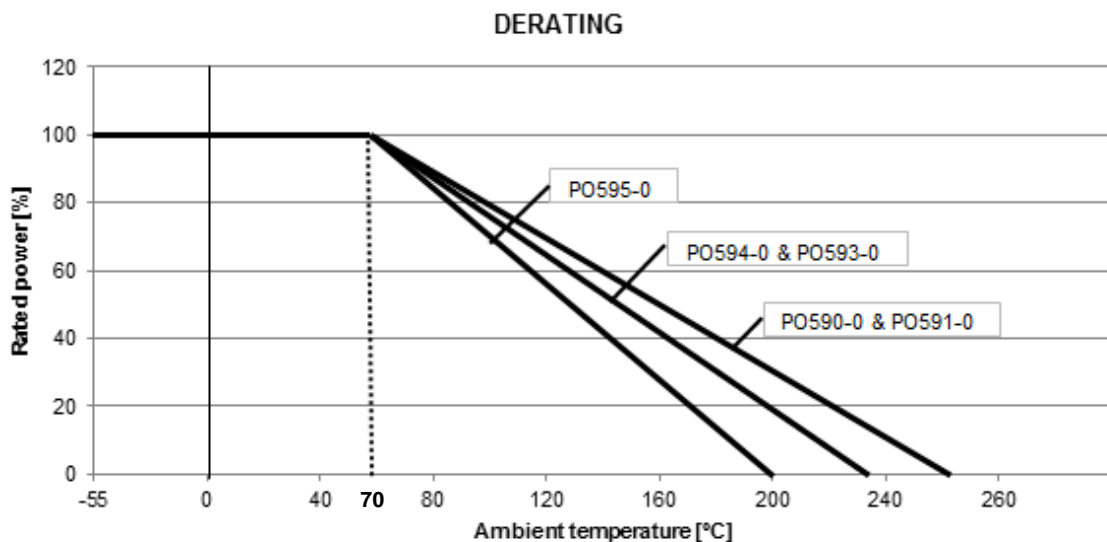


Type	L max	$\phi D$ max	$\phi d$
PO595-0	6,3 ±0,5	2,4 ±0,2	0,6 -0,1
PO594-0	9,0 ±0,5	3,9 ±0,3	0,6 -0,1
PO593-0	11,5 ±1,0	4,5 ±0,5	0,8 ±0,05
PO590-0	16,5 -1,5	6,0 -0,5	0,8 ±0,05
PO591-0	20,0 -1	9,0 -0,5	0,8 ±0,05

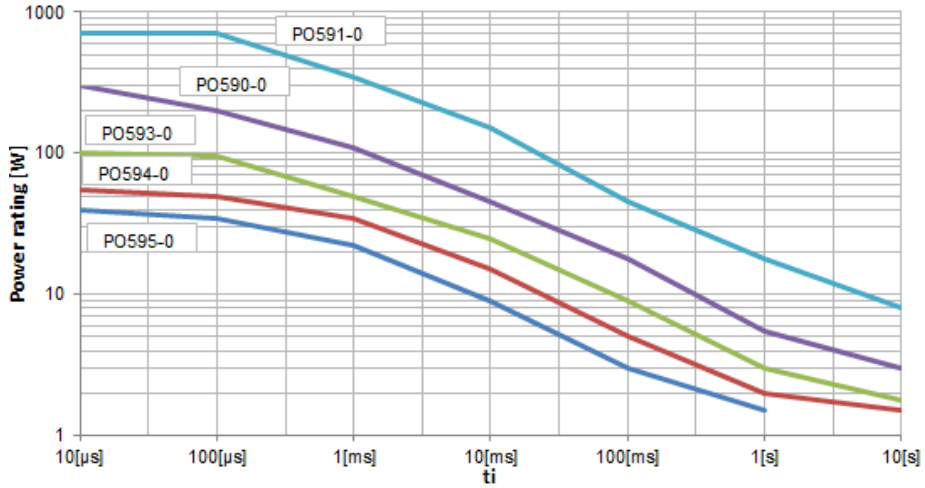
**TEMPERATURE COEFICIENT**

PO595-0 R-Value	PO594-0 R-Value	PO593-0 R-Value	PO590-0 R-Value	PO591-0 R-Value	E-series	Tolerance	TC [10 <sup>-6</sup> K <sup>-1</sup> ]
-----	-----	0R22 ... 10M	0R22 ... 560K	0R22 ... 100K	E 24	± 5%	± 200
0R1 ... 10M	0R1 ... 10M	-----	-----	-----	E 24	± 5%	± 100
-----	-----	1R ... 1M	1R ... 100K	1R ... 68K	E 24 / E 48	± 2%	± 200
1R ... 10M	1R ... 10M	-----	-----	-----	E 24 / E 96	± 1%	± 50

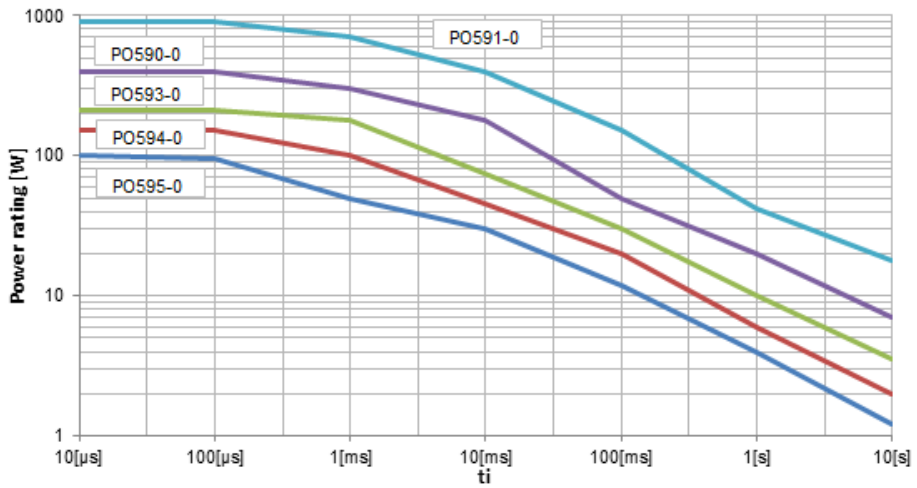
**PERFORMANCE GRAPH's**



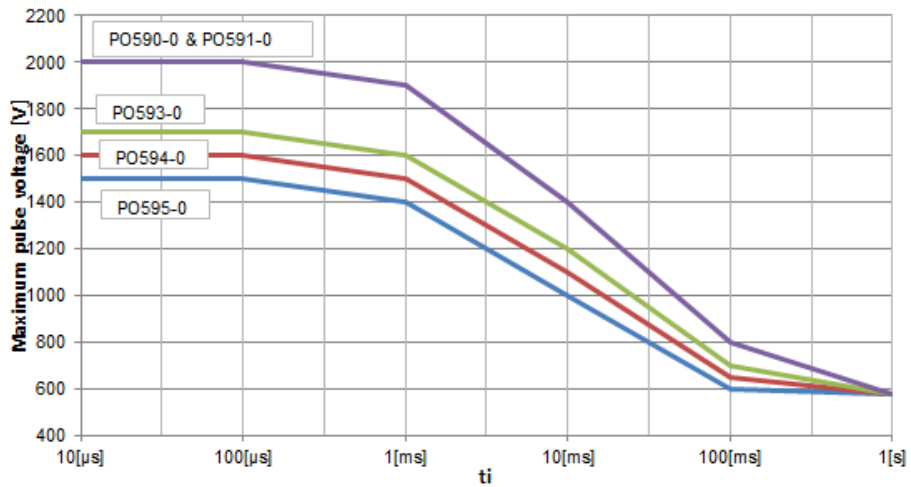
**PULSE RATING  $P \leq P70$  ( $R \geq 10[\Omega]$ )**



**PULSE RATING  $P \rightarrow 0$  ( $R \geq 10[\Omega]$ )**

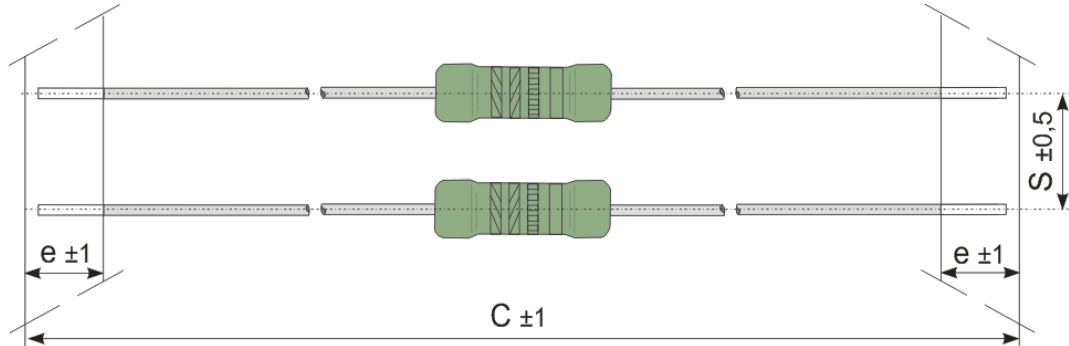


**MAXIMUM PULSE VOLTAGE**



**PACKAGING**

The standard packaging for PO in axial type is taped, dimensions below.



Type	Packaging	C	S	e	Pieces
PO595-0	Taped/Ammopack (T)	65	5	6	5000
PO594-0	Taped/Ammopack (T)	65	5	6	1000
PO593-0	Taped/Ammopack (T)	85	5	6	1000
PO590-0	Taped/Ammopack (T)	95	10	9	1000
PO591-0	Taped/Ammopack (T)	95	10	9	500

Dimensions in [mm]

**ALTERNATIVE LEAD CONFIGURATIONS**

This type PO, is also available in a different pre-forming, as shown below, other's upon request.

SMD – Z Form	Radial	Radial Kink	Axial	Axial Kink

\*For horizontal and vertical pre-forming please consult your local sales contact.

**ORDERING EXAMPLE**

PO595-0	5	T	150R
Type	Tolerance	Pack-Code	R-Value