



RWS Series Datasheet

SMD | Power Safety Wirewound Resistors | Ceramic core
Flame Retardant | Silicone Encapsulation

ORDERING CODE - Example

New SAP Part Nr.:

RWS	502	J	K	-	13-	100R	AA
Serie	Size	Tol.	Pack-Code	TCR	Package type	R Value	Special
	502 = 5020	J = ±5%	K = Blister Tape	- Base on spec.	13- = 13 inch (Reel diameter)		AA = Standard

Historical VTM Part Nr.:

RWS	5020	J	K	-	13	100R
Type	Size	Tol.	K = Blister tape reel	TC	Reel diam.	R Value

APPLICATIONS

- Computer & Peripherals
- Industrial
- Power & Energy
- Consumer & Electronics

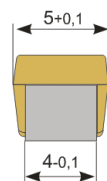
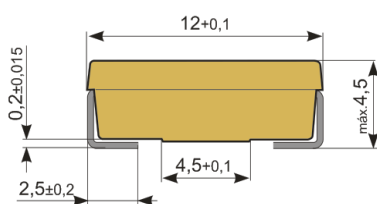
FEATURES

- Suitable for automatic pick and place
- Best in class fail safe resistor (main voltage 230[V])
- All welded construction
- Small package size
- Molded encapsulation
- RoHs Compliant

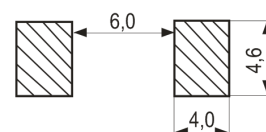
ELECTRICAL SPECIFICATIONS

Type		RWS502	
Historical Part Number		RWS5020	
Nominal Power Rating	P ₂₅	2,2	
	P ₇₀	1,6	
Resistance Range	[Ω]	* 1R ... 100R (Other values upon request)	
E-Series (preferred)		E24 (Other upon request)	
Tolerances	±[%]	J = 5%	
Temperature Coefficient	±[10 ⁻⁶ K ⁻¹]	250 ⁺⁵⁰	
Working Temperature Range	[°C]	-55 ... +200	
Thermal Resistance	[KW ⁻¹]	100	
Max. Working Voltage	[V] _{RMS}	$\sqrt{P_{70} \times R}$	
Dielectric Withstanding Voltage IEC115-1 clause 4.7 (1[min])	[V] _{RMS}	1000	
Insulation Resistance IEC115-1 clause 4.6	[MΩ]	>1000	

DIMENSIONS [mm]



SOLDER PAD



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PERFORMANCE DATA

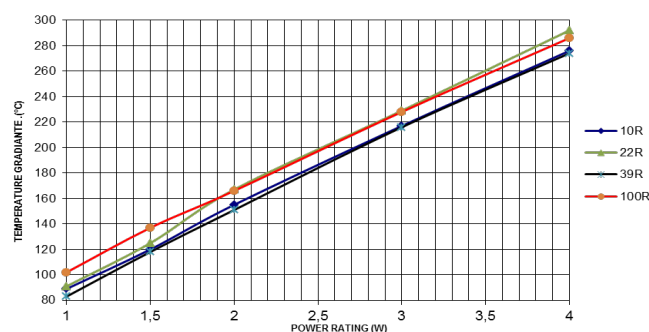
Type		RWS502
Historical Part Number		RWS5020
Derating Linear	[°C]	70...200 (0W)
Climatic Category		55/200/56
Endurance <i>IEC60115-1 clause 4.25</i> <i>(P_{70} @ 70[°C], 1000[h])</i>	±[%]	3,0
Damp Heat, Steady State <i>IEC60115-1 clause 4.24</i> <i>(40[°C], 93[% r.h.], 56[d])</i>	±[%]	2,0
Climatic Sequence <i>IEC60115-1 clause 4.23</i>	±[%]	1,0
Resistance to Soldering Heat <i>IEC60115-1 clause 4.18</i> <i>(260^{±5}[°C], 3,5^{±1}[s])</i>	±[%]	0,25
Short Time Overload <i>IEC60115-1 clause 4.13</i>	±[%]	1,0
Temperature Shock <i>IEC60115-1 clause 4.19</i>	±[%]	0,25
Board-bending Test		No interruption
Solderability <i>IEC60068-2-20</i> <i>(245^{±5}[°C] 3^{±0,5}[s])</i>		Solder bath method (> 95% coverage)
Marking <i>IEC60062</i>		Printed in clear (Type – Value – Tolerance)

FUSE CHARACTERISTICS

New Part Nr.	RWS502	Note: The special construction off resistance values >10R results in an immediate interruption (<1s, 200[ms] typical), when mains voltage (120/230[V] _{RMS}) is applied. No flames, no explosion. After fusing, the resistance value is 100K.
Historical Part Nr.	RWS5020	
Resistance Range	*1R ... 100R	* The interruption mechanism for resistance values <10R and resistance values >max. range is not clearly defined, also for other voltage. Need to be tested in the final application

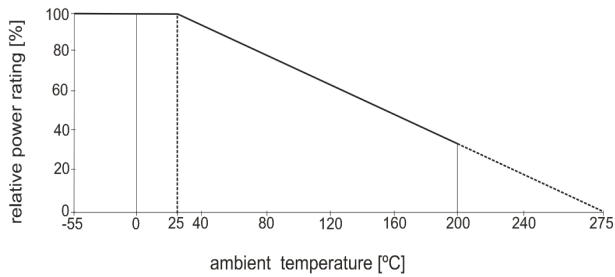
PERFORMANCE GRAPHS

Temperature Rise

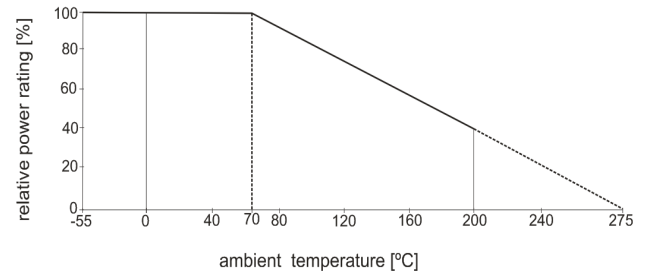


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Derating – P₂₅

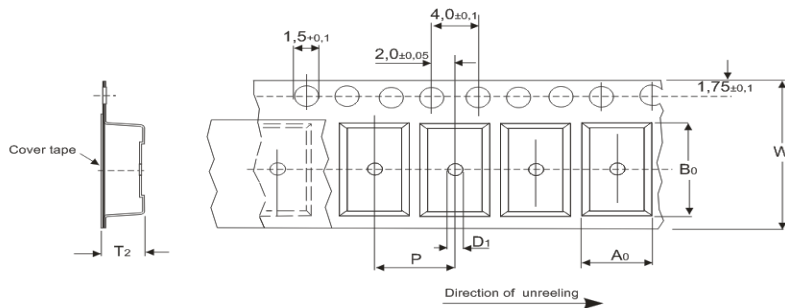


Derating – P₇₀

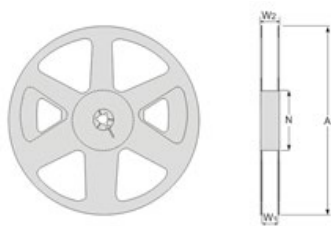


PACKAGING

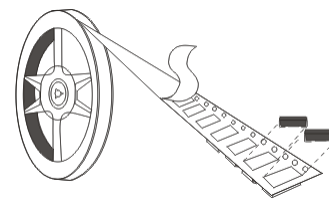
The standard packaging for RWS , dimensions below.



Type	A0	B0	W	D1	P	T2
RWS502	5,4	12,4	24	1,5	8	5



Type	W1	W2	N	A
RWS502	25,4	29,5	90	330



Type	Packaging	Pieces
RWS502	13(inch) Blister tape	1500

Mouser Electronics

Authorized Distributor

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

YAGEO:

[RWS502JK-13-100RAA](#) [RWS502JK-13-39RAA](#) [RWS502JK-13-10RAA](#) [RWS502JK-13-11RAA](#) [RWS502JK-13-12RAA](#) [RWS502JK-13-13RAA](#) [RWS502JK-13-15RAA](#) [RWS502JK-13-16RAA](#) [RWS502JK-13-18RAA](#) [RWS502JK-13-1R1AA](#) [RWS502JK-13-1R2AA](#) [RWS502JK-13-1R3AA](#) [RWS502JK-13-1R5AA](#) [RWS502JK-13-1R6AA](#) [RWS502JK-13-1R8AA](#) [RWS502JK-13-1RAA](#) [RWS502JK-13-20RAA](#) [RWS502JK-13-22RAA](#) [RWS502JK-13-24RAA](#) [RWS502JK-13-27RAA](#) [RWS502JK-13-2R2AA](#) [RWS502JK-13-2R4AA](#) [RWS502JK-13-2R7AA](#) [RWS502JK-13-2RAA](#) [RWS502JK-13-30RAA](#) [RWS502JK-13-33RAA](#) [RWS502JK-13-36RAA](#) [RWS502JK-13-3R3AA](#) [RWS502JK-13-3R6AA](#) [RWS502JK-13-3R9AA](#) [RWS502JK-13-3RAA](#) [RWS502JK-13-43RAA](#) [RWS502JK-13-47RAA](#) [RWS502JK-13-4R3AA](#) [RWS502JK-13-51RAA](#) [RWS502JK-13-56RAA](#) [RWS502JK-13-5R1AA](#) [RWS502JK-13-5R6AA](#) [RWS502JK-13-62RAA](#) [RWS502JK-13-6R2AA](#) [RWS502JK-13-6R8AA](#) [RWS502JK-13-75RAA](#) [RWS502JK-13-7R5AA](#) [RWS502JK-13-82RAA](#) [RWS502JK-13-8R2AA](#) [RWS502JK-13-91RAA](#) [RWS502JK-13-9R1AA](#)