

CRS Series Datasheet

Precision Wirewound Resistors | Axial and SMD Version
Ceramic core | Flame retardant coating

ORDERING CODE - Example

New SAP Part Nr.:

CRS	300	J	T	-	73-	150R	AA
Serie	* Power rating	Tol. D = ±0,5% F = ±1% G = ±2% J = ±5%	Pack-Code T = Tape (ammo pack)	TCR - Base on spec.	Forming type 52- Inner Taping dimension or 73- Inner Taping dimension ZB- Z version	R Value	Special AA = Standard

Historical VTM Part Nr.:

CR254 - 0	5	T	150R
Type	Tol. ±5% = J	Pack-Code T = Tape (ammo pack)	R Value
RZC4 6720	J	K	- 13 150R
Type	Size	Tol.	K = Blister tape reel TC Reel diam. R Value

APPLICATIONS

- Industrial
- Consumer & Electronics
- Computer & Peripherals

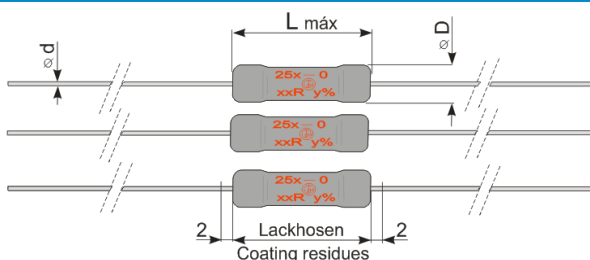
FEATURES

- Flame retardant coating
- Non-inductive type available
- Precision Type
- "Z" preforming ; Other preforming available
- RoHS Compliant

ELECTRICAL SPECIFICATIONS

Type		CRS110	CRS200	CRS250	CRS300	CRS350	CRS400	CRS500	CRS550	CRS720
Historical Part Number	AXIAL	CR251-0	CR252-0	CR253-0	CR254-0	CR255-0	CR256-0	CR257-0	CR258-0	CR259-0
	SMD	RZC1	RZC2	RZC3	RZC4	----	RZC6	----	----	----
Nominal Power Rating	* P ₄₀	1,1	2,0	2,5	3,0	3,5	4,0	5,0	5,5	7,2
	P ₇₀	1,0	1,8	2,3	2,7	3,2	3,6	4,5	5,0	6,5
Resistance Range	[W]	OR01 ... 220R	OR016 ... 470R	OR01 ... 750R	OR01 ... 1K8	OR015 ... 1K	OR02 ... 1K5	OR027 ... 5K1	OR033 ... 6K8	OR047 ... 8K2
	[Ω]	(Other values upon request)								
E-Series (preferred)		E24 (Other upon request)								
Tolerances	±[%]	0,5(D) [R ≥ 1R] ; 1(F) ; 2(G) ; 5(J)								
Temperature Coefficient	±[10 ⁻⁶ K ⁻¹]	Depends on the value, please check the table below								
Working Temperature Range	[°C]	-55 ... +350								
Thermal Resistance	[KW ⁻¹]	280	155	122	104	93	78	62	56	43
Max. Working Voltage	[V] _{RMS}	$\sqrt{P_{70} \times R}$								
Dielectric Withstanding Voltage IEC115-1 clause 4.7 (1[min])	[V] _{RMS}	500								

DIMENSIONS [mm]



Type	Historical P/N:	L max.	∅ D max. *	∅ d ±0,05
CRS110	CR251 - 0	9,0	3,0	0,65
CRS200	CR252 - 0	9,7	4,0	0,80
CRS250	CR253 - 0	14,5	4,5	0,65
CRS300	CR254 - 0	12,6	5,5	0,80
CRS350	CR255 - 0	15,0	8,5	0,80
CRS400	CR256 - 0	17,0	5,5	0,80
CRS500	CR257 - 0	18,0	8,5	0,80
CRS550	CR258 - 0	22,0	8,5	0,80
CRS720	CR259 - 0	27,0	8,5	0,80

*R <10R D max.+1

CRS Series Datasheet

PERFORMANCE DATA

Type		CRS110	CRS200	CRS250	CRS300	CRS350	CRS400	CRS500	CRS550	CRS720
Historical Part Number	AXIAL	CR251-0	CR252-0	CR253-0	CR254-0	CR255-0	CR256-0	CR257-0	CR258-0	CR259-0
	SMD	RZC1	RZC2	RZC3	RZC4	-----	RZC6	-----	-----	-----
Derating Linear	[°C]	70...350 (0W)								
Climatic Category		55/350/56								
Failure Rate <i>(Total, ϑ_o, max, 60[%] cont. lev.)</i>	[10 ⁻⁹ h ⁻¹]	appr. 10 depends on value								
Endurance <i>IEC60115-1 clause 4.25 (P_{70}, @ 70[°C], 1000[h])</i>	±[%]	5,0								
Damp Heat, Steady State <i>IEC60115-1 clause 4.24 (40[°C], 93[% r.h.], 56[d])</i>	±[%]	5,0								
Climatic Sequence <i>IEC60115-1 clause 4.23 (260^{±2}[°C], 10^{±1}[s])</i>	±[%]	2,0								
Resistance to Soldering Heat <i>IEC60115-1 clause 4.18 (260^{±2}[°C], 10^{±1}[s])</i>	±[%]	1,0								
Terminal Strength	±[%]	0,2								
Terminal Tensile Strength	[N]	40	50							
Solderability <i>IEC60068-2-20 (245^{±5}[°C] 3^{±0,5}[s])</i>		Solder bath method (> 95% coverage)								
Marking <i>IEC60062</i>		Printed in clear								

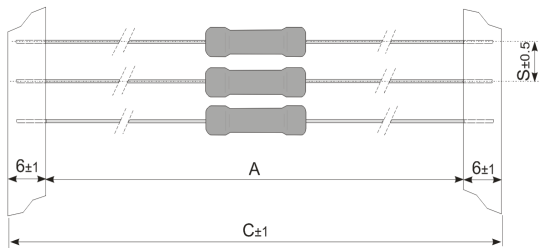
TEMPERATURE COEFFICIENT

New P/Nr. Type	Historical P/N:	Temperature Coefficient (-20°C to 120°C)									
		700 ± 200 ppm/K		400 ± 50 ppm/K		appr. +180 ppm/K		-20 ± 60 ppm/K		0 ± 10 ppm/K	
CRS110	CR251-0	-----	-----	≥ 0R01	≤ 0R024	≥ 0R027	≤ 0R091	≥ 0R1	≤ 15R	≥ 16R	≤ 220R
CRS200	CR252-0	≥ 0R016	≤ 0R02	≥ 0R027	≤ 0R091	-----	-----	≥ 0R1	≥ 68R	≥ 75R	≤ 470R
CRS250	CR253-0	≥ 0R01	≤ 0R02	≥ 0R022	≤ 0R047	≥ 0R051	≤ 0R091	≥ 0R1	≤ 47R	≥ 51R	≤ 750R
CRS300	CR254-0	≥ 0R01	≤ 0R027	≥ 0R03	≤ 0R075	≥ 0R082	≤ 0R091	≥ 0R1	≤ 47R	≥ 51R	≤ 1K8
CRS350	CR255-0	≥ 0R015	≤ 0R024	≥ 0R027	≤ 0R062	≥ 0R068	≤ 0R091	≥ 0R1	≤ 68R	≥ 75R	≤ 1K0
CRS400	CR256-0	≥ 0R02	≤ 0R03	≥ 0R033	≤ 0R062	≥ 0R068	≤ 0R091	≥ 0R1	≤ 130R	≥ 150R	≤ 1K5
CRS500	CR257-0	≥ 0R027	≤ 0R047	≥ 0R051	≤ 0R082	≥ 0R091	≤ 0R13	≥ 0R15	≤ 150R	≥ 160R	≤ 5K1
CRS550	CR258-0	≥ 0R033	≤ 0R062	≥ 0R068	≤ 0R13	≥ 0R15	≤ 0R16	≥ 0R18	≤ 160R	≥ 180R	≤ 6K8
CRS720	CR259-0	≥ 0R047	≤ 0R075	≥ 0R082	≤ 0R15	≥ 0R16	≤ 0R24	≥ 0R27	≤ 180R	≥ 200R	≤ 8K2

CRS Series Datasheet

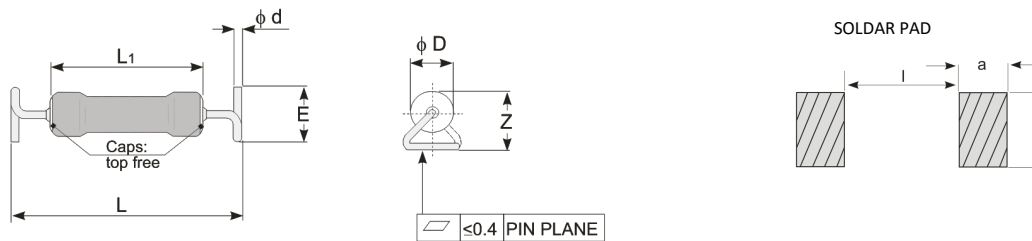
PACKAGING

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

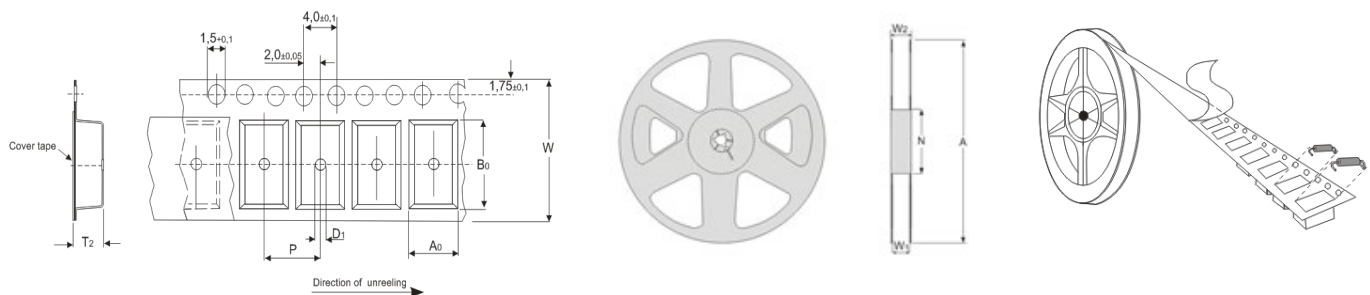


New P/N Type	Historical P/N:	Pack Code	Pieces	Forming Type (Inner Taping dim.)	A	C	S
CRS110	CR251-0	T = Taped Ammo pack	1000	52-	52	65	5
CRS200	CR252-0		1000		52	65	5
CRS250	CR253-0		1000	73-	73	85	10
CRS300	CR254-0		1000		73	85	10
CRS350	CR255-0		500		73	85	10
CRS400	CR256-0		1000		73	85	10
CRS500	CR257-0		500		73	85	10
CRS550	CR258-0		500		73	85	10
CRS720	CR259-0		500	73	85	10	

SMD LEAD CONFIGURATIONS



New P/N Type	Historical P/N	Size	L	L ₁ max.	∅ D max	∅ d ±0,05	E	Z max	l	a	b
CRS110	RZC1	5315	13,4±0,5	9,0	3,0	0,65	5,0±0,5	7,0	10	10	10
CRS200	RZC2	5315		9,7	4,0	0,80					
CRS250	RZC3	6720	17,0±1,0	14,5	4,5	0,65		7,5	14		
CRS300	RZC4	6720		12,6	6,0	0,80					
CRS400	RZC6	8424	20,9±1,0	17,0	6,0	0,80		8,0	16		



Type	A0	B0	W	D1	P	T2
CRS110	5,0	13,7	24	2,0	8	7,2
CRS200						
CRS250	5,7	16,7	24	2,0	8	7,6
CRS300						
CRS400	6,0	21,4	32	2,0	12	8,1

Type	W1	W2	N	A
CRS110	25,4	29,5	90	330
CRS200				
CRS300				
CRS400	33,4	37,4	100	380

Type	Packaging	Pieces
CRS110	13(inch) Blister tape	1000
CRS200		
CRS300		
CRS400	15(inch) Blister tape	

Ordering Code for SMD:


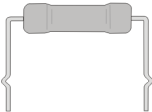

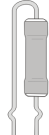
CRS	300	J	K	-	ZB-	150R	AA
Serie	* Power rating	Tol. J = ±5%	Pack-Code K = Blister Tape Reel	TCR - Base on spec.	Forming type ZB- Z version	R Value	Special AA = Standard

CRS Series Datasheet

ALTERNATIVE LEAD CONFIGURATIONS

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

THOUGH HOLE VERSION

			
<p>Axial Goal Post (AG-)</p>	<p>Axial Goal Post Kink (AK-)</p>	<p>Radial (RD-)</p>	<p>Radial 2 Kink (RK-)</p>

Mouser Electronics

Authorized Distributor

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

YAGEO:

[CRS400FT-73-10RAA](#) [CRS300FT-73-100RAA](#) [CRS300FT-73-10RAA](#) [CRS300FT-73-47RAA](#) [CRS400FT-73-100RAA](#) [CRS300JT-73-56RAA](#) [CRS300JT-73-R22AA](#) [CRS200JT-52-27RAA](#) [CRS300JT-73-10RAA](#) [CRP300JK-ZB-22RAA](#) [CRS300JT-73-100RAA](#) [CRS300JT-73-1RAA](#) [CRS300JT-73-22RAA](#) [CRS300JT-73-270RAA](#) [CRS300JT-73-2R2AA](#) [CRS300JT-73-33RAA](#) [CRS300JT-73-3R3AA](#) [CRS300JT-73-47RAA](#) [CRP300JK-ZB-10RAA](#) [CRP300JK-ZB-110RAA](#) [CRS110JT-52-R47AA](#) [CRS300JT-73-470RAA](#) [CRS300JT-73-R1AA](#) [CRS300JT-73-R27AA](#) [CRS300JT-73-R33AA](#) [CRS300JT-73-R47AA](#) [CRS300JT-73-R68AA](#) [CRS500JT-73-6R8AA](#) [CRF110JK-ZB-100RUL](#) [CRF110JK-ZB-10RUL](#) [CRF110JK-ZB-11RUL](#) [CRF110JK-ZB-12RUL](#) [CRF110JK-ZB-13RUL](#) [CRF110JK-ZB-15RUL](#) [CRF110JK-ZB-16RUL](#) [CRF110JK-ZB-18RUL](#) [CRF110JK-ZB-1R1UL](#) [CRF110JK-ZB-1R2UL](#) [CRF110JK-ZB-1R3UL](#) [CRF110JK-ZB-1R5UL](#) [CRF110JK-ZB-1R6UL](#) [CRF110JK-ZB-1R8UL](#) [CRF110JK-ZB-1RUL](#) [CRF110JK-ZB-22RUL](#) [CRF110JK-ZB-24RUL](#) [CRF110JK-ZB-27RUL](#) [CRF110JK-ZB-2R2UL](#) [CRF110JK-ZB-2R4UL](#) [CRF110JK-ZB-2R7UL](#) [CRF110JK-ZB-2RUL](#) [CRF110JK-ZB-30RUL](#) [CRF110JK-ZB-33RUL](#) [CRF110JK-ZB-36RUL](#) [CRF110JK-ZB-39RUL](#) [CRF110JK-ZB-3R3UL](#) [CRF110JK-ZB-3R6UL](#) [CRF110JK-ZB-3R9UL](#) [CRF110JK-ZB-3RUL](#) [CRF110JK-ZB-43RUL](#) [CRF110JK-ZB-47RUL](#) [CRF110JK-ZB-4R3UL](#) [CRF110JK-ZB-51RUL](#) [CRF110JK-ZB-56RUL](#) [CRF110JK-ZB-5R1UL](#) [CRF110JK-ZB-5R6UL](#) [CRF110JK-ZB-62RUL](#) [CRF110JK-ZB-6R2UL](#) [CRF110JK-ZB-6R8UL](#) [CRF110JK-ZB-75RUL](#) [CRF110JK-ZB-7R5UL](#) [CRF110JK-ZB-82RUL](#) [CRF110JK-ZB-8R2UL](#) [CRF110JK-ZB-91RUL](#) [CRF110JK-ZB-9R1UL](#) [CRF200JK-ZB-100RUL](#) [CRF200JK-ZB-10RUL](#) [CRF200JK-ZB-110RUL](#) [CRF200JK-ZB-11RUL](#) [CRF200JK-ZB-120RUL](#) [CRF200JK-ZB-12RUL](#) [CRF200JK-ZB-130RUL](#) [CRF200JK-ZB-13RUL](#) [CRF200JK-ZB-150RUL](#) [CRF200JK-ZB-15RUL](#) [CRF200JK-ZB-160RUL](#) [CRF200JK-ZB-16RUL](#) [CRF200JK-ZB-180RUL](#) [CRF200JK-ZB-18RUL](#) [CRF200JK-ZB-1R1UL](#) [CRF200JK-ZB-1R2UL](#) [CRF200JK-ZB-1R3UL](#) [CRF200JK-ZB-1R5UL](#) [CRF200JK-ZB-1R6UL](#) [CRF200JK-ZB-1R8UL](#) [CRF200JK-ZB-1RUL](#) [CRF200JK-ZB-200RUL](#) [CRF200JK-ZB-220RUL](#) [CRF200JK-ZB-22RUL](#) [CRF200JK-ZB-240RUL](#) [CRF200JK-ZB-24RUL](#)