

VITROHM
a YAGEO company

CRP Series Datasheet

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

ORDERING CODE - Example

New SAP Part Nr.:

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

Historical VTM Part Nr.:

CR254 – 1	5	T	150R
Type	Tol.	Pack-Code	R Value
	±5% = J	T = Tape (ammo pack)	

RZI4	6720	J	K	-	13	150R
Type	Size	Tol.	K = Blister tape reel	TC	Reel diam.	R Value

APPLICATIONS

- Automotive
- Industrial
- Power & Energy

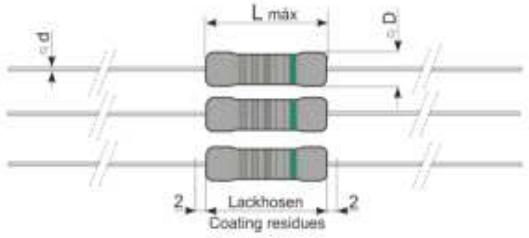
FEATURES

- Flame retardant coating
- High pulse load up to 6[KV]
- "Z" preforming ; Other preforming available
- RoHs Compliant

ELECTRICAL SPECIFICATIONS

Type			CRP110	CRP200	CRP300	CRP400	CRP500	CRP720
Historical Part Number		AXIAL	CRP251-1	CRP252-1	CRP254-1	CRP256-1	CRP257-1	CRP259-1
		SMD	RZI1	RZI2	RZI4	RZI6	-----	-----
Nominal Power Rating	* P_{40}	[W]	1,1	2,0	3,0	4,0	5,0	7,2
	P_{70}		1,0	1,8	2,7	3,6	4,5	6,5
Resistance Range		[Ω]	0R1 … 220R	R051,0R1 … 470R	0R1 … 1K8	0R1 … 1K5	0R1 … 5K1	1R … 22R 24R … 470R (under development)
			(Other values upon request)					
E-Series (preferred)			E24 (Other upon request)					
Tolerances		±[%]	1(F); 2(G); 5(J)					
Temperature Coefficient		±[10^{-6}*K^{-1}]	120 ±50					
Working Temperature Range		[ºC]	-55 … +350					
Thermal Resistance		[KW^{-1}]	280	155	104	78	62	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.*	*Ø D max. **	*Ø d ±0,05*
CRP110	CRP251 - 1	9,0	3,0	0,65
CRP200	CRP252 - 1	9,7	4,0	0,80
CRP300	CRP254 - 1	12,6	5,5	0,80
CRP400	CRP256 - 1	17,0	5,5	0,80
CRP500	CRP257 - 1	18,0	8,5	0,80
CRP720	CRP259 - 1	27,0	8,5	0,80

*R <10R D max.+1

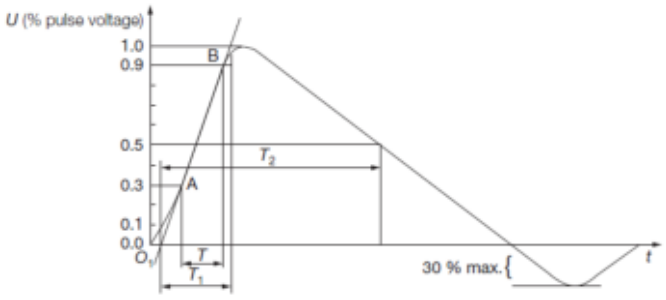
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CRP Series Datasheet

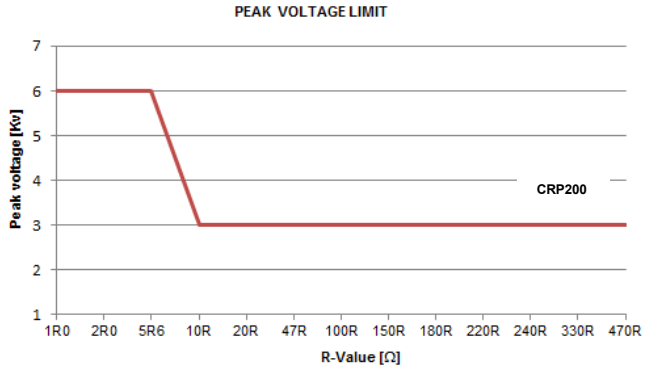
PERFORMANCE DATA

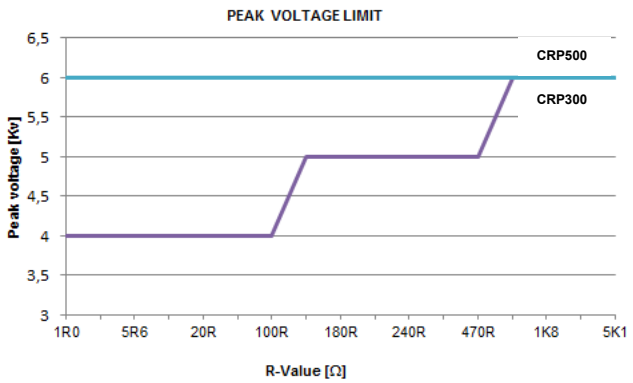
Type		CRP110	CRP200	CRP300	CRP400	CRP500	CRP720
Historical Part Number	AXIAL	CRP251-1	CRP252-1	CRP254-1	CRP256-1	CRP257-1	CRP259-1
	SMD	RZI1	RZI2	RZI4	RZI6	-----	-----
Derating Linear	[ºC]	70…350 (0W)					
Climatic Category		55/200/56					
Failure Rate *(Total, ϑ_0, max, 60[%] cont. lev.)*	[10^{-9} h^{-1}]	appr. 10 depends on value					
Endurance *IEC60115-1 clause 4.25* *(P_{70}, @ 70[°C], 1000[h])*	±[%]	3,0					
Damp Heat, Steady State *IEC60115-1 clause 4.24* *(40[°C], 93[% r.h.], 56[d])*	±[%]	5,0					
Climatic Sequence *IEC60115-1 clause 4.23*	±[%]	2,0					
Resistance to Soldering Heat *IEC60115-1 clause 4.18* *($260^{\pm5}$[°C], $10^{\pm1}$[s])*	±[%]	0,2					
Surge Test *IEC61000-4-5*	±[%]	2,0					
Terminal Strength	±[%]	0,2					
Terminal Tensile Strength	[N]	40	50				
Solderability *IEC60068-2-20* *($245^{\pm5}$[ºC] $3^{\pm0,5}$[s])*		Solder bath method (> 95% coverage)					
Marking *IEC60062*		Color code ((5th band (green) for pulse version)) (Values<0R1 Printed in clear)					

PULSE PERFORMANCE



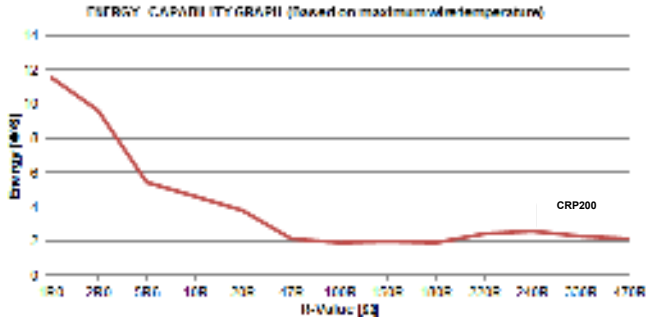
NOTE: The voltage shown in the below table, is the net voltage across the resistor. The generator open voltage will be higher due to the generator's internal impedance (12[Ω]).
Pulse shape – 10 pulses @ 20 [s] interval

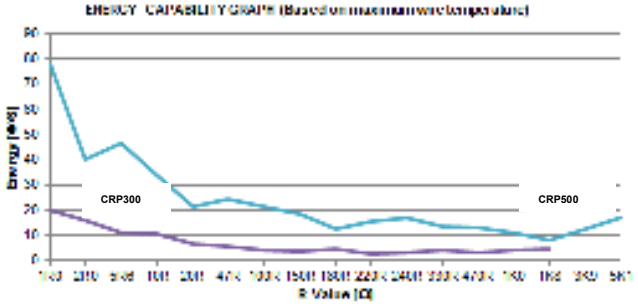


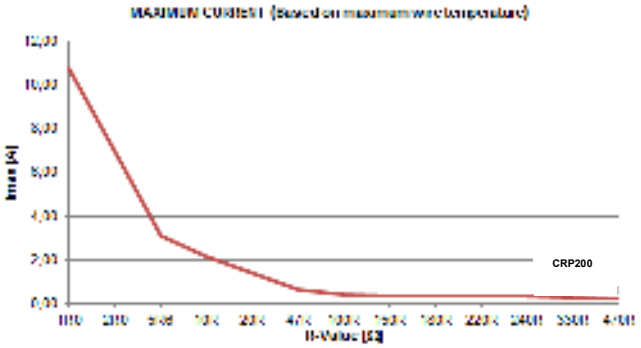


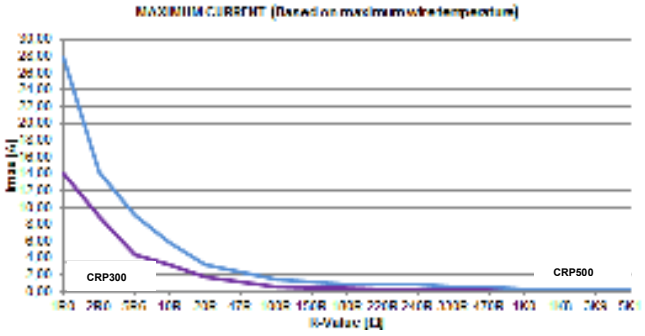
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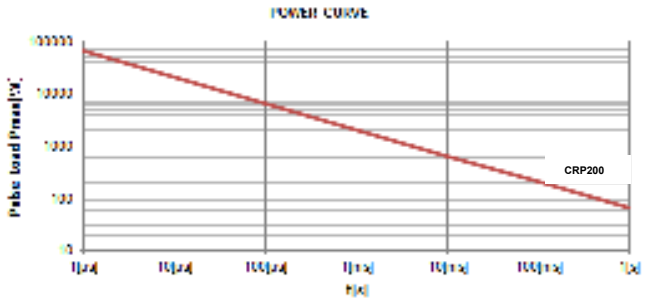
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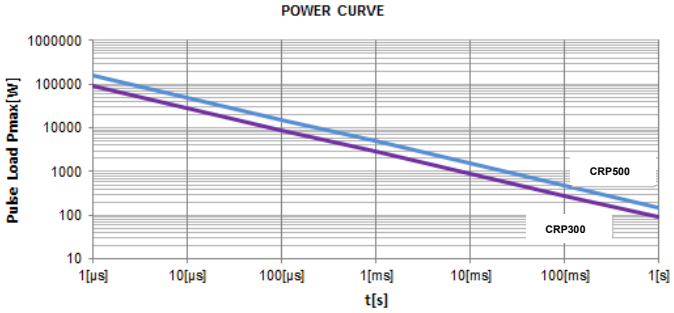






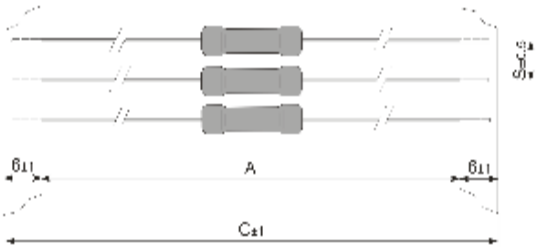






PACKAGING

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

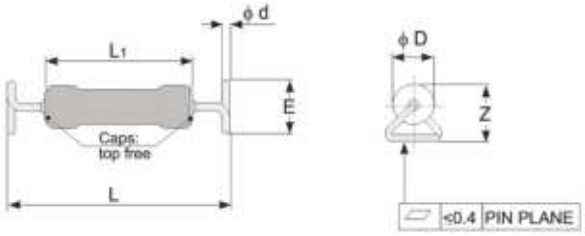


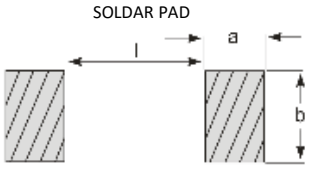
New P/Nr. Type	*Historical P/N:*	***Pack Code***	***Pieces***	***Forming Type*** *(Inner Taping dim.)*	***A***	***C***	***S***
CRP110	CRP251-1	T = Taped Ammo pack	1000	52-	52	65	5
CRP200	CRP252-1		1000		52	65	5
CRP300	CRP254-1		1000	73-	73	85	10
CRP400	CRP256-1		1000		73	85	10
CRP500	CRP257-1		500		73	85	10
CRP720	CRP259-1		500		73	85	10

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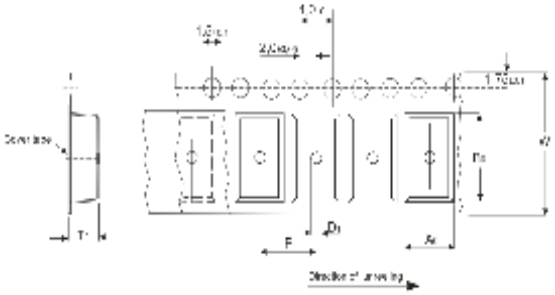
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SMD LEAD CONFIGURATIONS

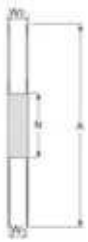


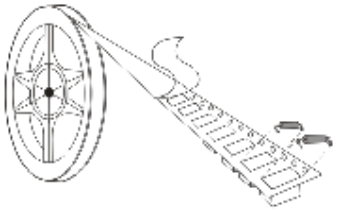


New P/Nr. Type	Historical P/N	Size	L	L_1 max.	Ø D max	Ø d ±0,05	E	Z max	l	a	b
CRP110	RZI1	5315	13,4±0,5	9,0	3,0	0,65	5,0±0,5	7,0	10	10	10
CRP200	RZI2	5315		9,7	4,0	0,80					
CRP300	RZI4	6720	17,0±1,0	12,6	6,0	0,80		7,5	14		
CRP400	RZI6	8424	20,9±1,0	17,0	6,0	0,80		8,0	16		









Type	A0	B0	W	D1	P	T2
CRP110 CRP200	5,0	13,7	24	2,0	8	7,2
CRP300	5,7	16,7	24	2,0	8	7,6
CRP400	6,0	21,4	32	2,0	12	8,1

Type	W1	W2	N	A
CRP110 CRP200	25,4	29,5	90	330
CRP300				
CRP400	33,4	37,4	100	380

Type	Packaging	Pieces
CRP110 CRP200	13(inch) Blister tape	1000
CRP300		
CRP400	15(inch) Blister tape	

Ordering Code for SMD :

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

ALTERNATIVE LEAD CONFIGURATIONS

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

THOUGH HOLE VERSION

			
Axial Goal Post (AG-)	Axial Goal Post Kink (AK-)	Radial (RD-)	Radial 2 Kink (RK-)

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