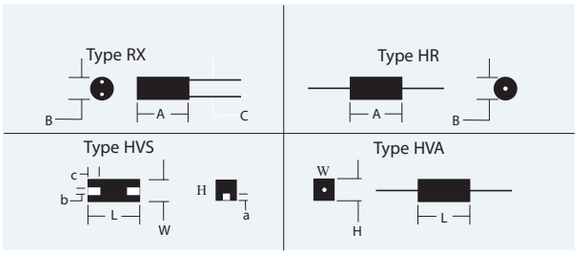
HR/HVA/HVS- ULTRA PRECISION



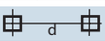
How Can the Ultra-Precision Series Help You?

Values ..... from 0.1Ω thru 10 Megohms
Tolerances ..... ±0.01% (Std.) … to ±0.005%
TCR Char ..... 5ppm (Std.) … to 0±1ppm/°C
Greater Stability ..... to ±0.001%/year
Temperature ..... -65°C to +145°C

ELECTRICAL & PHYSICAL SPECIFICATIONS

PRC Type	Meets or Exceeds Environmental Conditions of: MIL-R-39005	MIL-R-93	Max. Watts 1% Res.Tol.	Max. Volts	(A) Length mm ±1.57	(A) Length (ins) ±.062″	(B) Diameter mm ±.787	(B) Diameter (ins) ±.031″	Standard Space C	(ETP/OFHC) * Tinned Copper Leads Diam. Max.	Tinned Copper Leads Length t (±.125″)	Resistance (Ω) Min.	Max. Standard	Max. Special
PRINTED CIRCUIT														
RX255N	RBR71	RB71	.25W	100V	7.92	(.312”)	6.35	(.250”)	.200”	.025”	1”	0.1	100K	150K
RX258N	———	———	.33W	300V	12.7	(.500”)	6.35	(.250”)	.200”	.025”	1”	0.1	250K	350K
RX378N	———	RB70	.5W	200V	12.7	(.500”)	9.53	(.375”)	.200”	.032”	1”	0.1	301K	500K
AXIAL LEAD														t = 2” Leads on MIL-Styles
HR103	———	———	.1W	50V	5.08	(.200”)	2.54	(.100”)	———	.020”	1.5”	1.0	10K	20K
HR175N	———	———	.2W	100V	7.92	(.312”)	3.96	(.156”)	———	.020”	1.5”	0.1	80K	100K
HR186N	———	———	.2W	150V	9.53	(.375”)	4.75	(.187”)	———	.025”	1.5”	0.1	100K	150K
HR188N	RBR74	———	.25W	150V	12.7	(.500”)	4.9	(.193”)	———	.025”	1.5”	0.1	125K	200K
HR255N	RBR75	———	.25W	150V	7.49	(.295”)	6.35	(.250”)	———	.032”	1.5”	0.1	110K	316K
HR256N	RBR56	RB56	.25W	200V	9.53	(.375”)	6.35	(.250”)	———	.032”	1.5”	0.1	127K	350K
HR258N	RBR55	RB55	.33W	300V	12.7	(.500”)	6.35	(.250”)	———	.032”	1.5”	0.1	226K	500K
HR2512N	RBR54	RB54	.5W	300V	19.05	(.750”)	6.35	(.250”)	———	.032”	1.5”	0.1	511K	1 MEG
HR3114N	RBR76	———	.5W	300V	20.62	(.812”)	7.92	(.312”)	———	.032”	1.5”	0.1	600K	1.5 MEG
HR3712N	RBR53	RB53	.66W	300V	19.05	(.750”)	9.53	(.375”)	———	.032”	1.5”	0.1	750K	2 MEG
HR3716N	RBR52	RB52	1W	600V	25.4	(1.000”)	9.53	(.375”)	———	.032”	1.5”	0.1	1.5 MEG	3 MEG
HR5016N	RBR57	RB57	1.5W	600V	25.4	(1.000”)	12.7	(.500”)	———	.032”	1.5”	0.1	2 MEG	5 MEG
HR5024N	———	RB58	2W	900V	38.1	(1.500”)	12.7	(.500”)	———	.032”	1.5”	0.1	3.01 MEG	7.5 MEG
HR5032N	———	RB59	2.5W	1200V	50.8	(2.000”)	12.7	(.500”)	———	.032”	1.5”	0.1	5.11 MEG	10 MEG

LEAD MOUNTED & SURFACE MOUNTED

PAD LAYOUT 

*Commercially pure copper (electrolytic tough pitch/oxygen-free high conductivity

PRC TYPE AXIAL	PRC TYPE SMD	Max. Watts	Max. Volts	H mm ins.	L mm ins.	W mm ins.	a	b	c	d	Lead Dia. 1″L Min.	Resistance (Ω) Min.	Resistance (Ω) Max.
HVA1	HVS1	0.2W	100V	3.30 / .130”	9.14 / .360”	3.18 / .125”	.075”	.075”	.100”	.260”	.020”	0.1	75K
HVA2	HVS2	0.25W	150V	6.35 / .250”	9.78 / .385”	5.72 / .225”	.125”	.112”	.100”	.310”	.025”	0.1	150K
HVA3	HVS3	0.5W	250V	6.35 / .250”	12.7 / .500”	6.35 / .250”	.100”	.112”	.100”	.425”	.031”	0.1	500K
HVA5	HVS5	1.0W	600V	7.87 / .310”	15.88 / .625”	7.87 / .310”	.075”	.112”	.100”	.551”	.031”	0.1	1MEG

ENGINEERING DATA:

RESISTANCE AND TOLERANCES

You can select any ohmic value or decimal part of an ohm with tolerances to ±0.005% 10Ω min. required for ±0.01% tol.

TCR CHARACTERISTIC

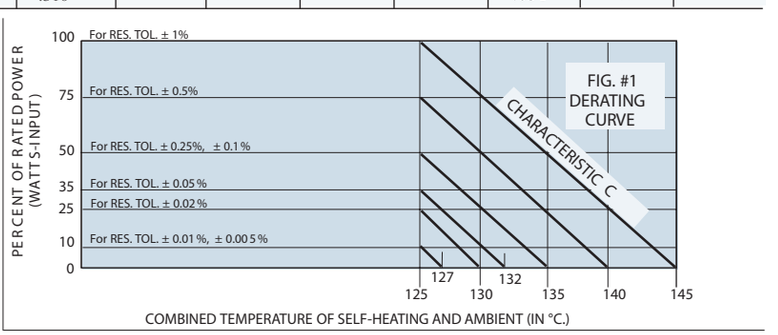
Standard: 0±5ppm/°C (100Ω and above); 0±15ppm/°C. (values below 100Ω) - calculated between +25°C. and +100°C. (Please specify temperature span of operation.)
Special: to 0±1 ppm°C. - matching to 0±0.5 ppm°C.

POWER VS. AMBIENT TEMP.

All Ultra resistors are designed for full load based upon ±1% res. tol. - providing the ambient temp. - plus the temp. rise due to self-heating does not exceed +125°C. Derated to zero power at +145°C. see Fig. 1.

STABILITY

To ±0.001% / yr. at 25°C. (no load).



THERMAL EMF VS. COPPER TERMINALS

< ±3 microvolts per degree C.

INDUCTANCE

Non-inductive balanced reverse pi windings are standard on HR and RX. Special on HVS & HVA.

PROTECTIVE SEAL

Stress free base coat and epoxy case. Solder heat and solvent resistant.

MARKING (Identification)

PRC symbol, type, value and tolerance.

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