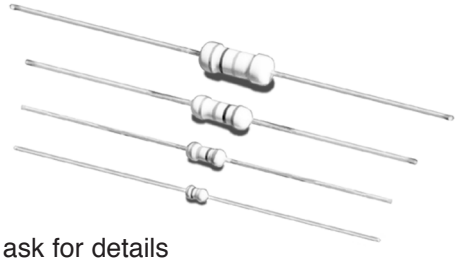
Carbon Film Fixed Resistors (RoHS Compliant) CF-RC Series

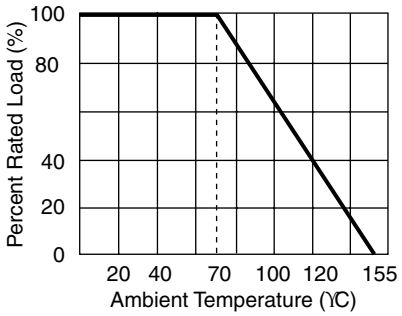
FEATURES

- Temperature Range -55°C ~ +155°C
- ±5% tolerance
- High quality performance at economical prices
- Compatible with automatic insertion equipment
- Flame retardant type available
- Tin coated annealed copper wire
- Value Range below 1Ω or above 10MΩ are available by special request, please ask for details

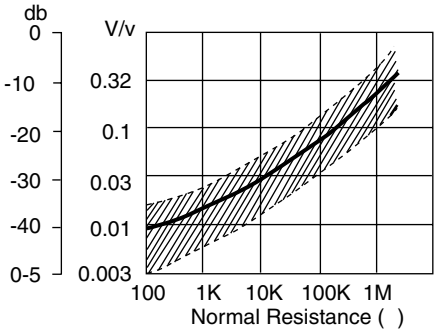
RoHS Compliant



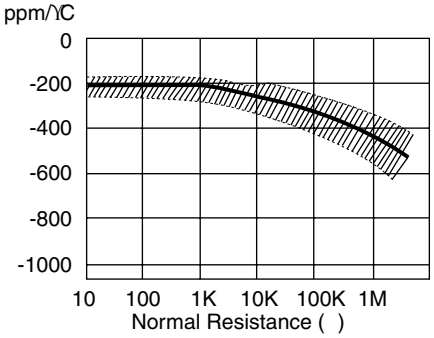
DERATING CURVE



CURRENT NOISE



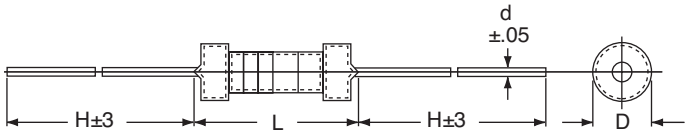
TEMPERATURE COEFFICIENT



PART NUMBERING SYSTEM

2	9	1	–	1	0	K	/	R	E	E	L	-	R	C
Series				Value				Package					Suffix (RoHS Compliant)	

SERIES, SIZE, WATTAGE, VOLTAGE, DIMENSIONS, AND AVAILABLE PACKAGING



Code:	Package:
	Bulk
/REEL	Tape and Reel
/AP	Ammo Pack

Series	Size	Watts	Voltage (V) (max.)		Dimensions (mm)				Standard Quantities Available		
			W.V.	O.V.	L max.	D max.	H	d	Bulk	Tape and Reel	Ammo Pack
291	Standard	1/4	250	500	6.8	2.5	28	0.54	1,000	5,000	1,000
293	Standard	1/2	350	700	10	3.5	28	0.54	1,000	3,000	1,000
294	Small	1	500	1,000	12	5.0	28	0.7	1,000	3,000	1,000
299	Standard	1/8	200	400	3.5	1.85	28	0.45	1,000	5,000	2,000

STANDARD VALUES (Ω)

0.5	2.0	4.3	9.1	20	43	91	200	430	910	2K	3.9K	8.2K	18K	39K	82K	180K	390K	820K	1.8M	3.9M	8.2M
1.0	2.2	4.7	10	22	47	100	220	470	1K	2.2K	4.3K	9.1K	20K	43K	91K	200K	430K	910K	2M	4.3M	9.1M
1.1	2.4	5.1	11	24	51	110	240	510	1.1K	2.4K	4.7K	10K	22K	47K	100K	220K	470K	1M	2.2M	4.7M	10M
1.2	2.7	5.6	12	27	56	120	270	560	1.2K	2.7K	5.1K	11K	24 K	51K	110K	240K	510K	1.1M	2.4M	5.1M	15M
1.3	3.0	6.2	13	30	62	130	300	620	1.3K	3K	5.6K	12K	27K	56K	120K	270K	560K	1.2M	2.7M	5.6M	22M
1.5	3.3	6.8	15	33	68	150	330	680	1.5K	3.2K	6.2K	13K	30K	62K	130K	300K	620K	1.3M	3M	6.2M	
1.6	3.6	7.5	16	36	75	160	360	750	1.6K	3.3K	6.8K	15K	33K	68K	150K	330K	680K	1.5M	3.3M	6.8M	
1.8	3.9	8.2	18	39	82	180	390	820	1.8K	3.6K	7.5K	16K	36K	75K	160K	360K	750K	1.6M	3.6M	7.5M	

Specifications are subject to change without notice. No liability or warranty implied by this information. Environmental compliance based on producer documentation.

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CHARACTERISTICS

Characteristics	Limits		Test Methods (JIS C 5201-1)
DC. Resistance	Must be within the specified tolerance.		5.1 The limit of error of measuring apparatus shall not exceed allowable range or 5% of resistance tolerance
Temperature coefficient	Resist. Range	T.C.R. (PPM / °C)	5.2 Natural resistance change per temp. degree centigrade. $\frac{R_2-R_1}{R_1(t_2-t_1)}$ x106 (PPM/°C) R_1: Resistance value at room temperature (t_1) R_2: Resistance value at room temp.plus 100°C (t_2)
	< 10 Ω 11Ω ~ 99K 100K ~ 1M 1.1M ~ 10M	0 ~ ±350 0 ~ -450 0 ~ -700 0 ~ -1500	
Short time overload	Resistance change rate is ± (1 % + 0.05Ω) Max. with no evidence of mechanical damage		5.5 Permanent resistance change after the application of a potential of 2.5 times RCWV for 5 seconds.
Insulation Resistance	Insulation resistance is 10,000 MΩ Min		5.6 Resistors shall be clamped in the trough of a 90° metallic V-block and shall be tested at DC potential respectively specified in the above list for 60 +10/ -0 seconds.
Dielectric withstanding voltage	No evidence of flashover mechanical damage,arcing or insulation break down.		5.7 Resistors shall be clamped in the trough of a 90° metallic V-block and shall be tested at AC potential respectively specified in the table 1 for 60 + 10/-0 seconds.
Terminal strength	No evidence of mechanical damage.		6.1 **Direct load** Resistance to a 2.5 kgs direct load for 10 secs. in the direction of the longitudinal axis of the terminal leads. **Twist test :** Terminal leads shall be bent through 90° at a point of about 6mm from the body of the resistor and shall be rotated through 360° about the original axis of the bent terminal in alternating direction for a total of 3 rotations.
Resistance to soldering heat	Resistance change rate is ± (1% + 0.05Ω) Max. with no evidence of mechanical damage.		6.4 Permanent resistance change when leads immersed to 3.2 to 4.8 mm from the body in 350 °C ± 10°C solder for 3 ± 0.5 seconds
Solderability	95 % coverage Min.		6.5 The area covered with a new , smooth clean , shiny and continuous surface free from concentrated pinholes. Test temp. of solder : 245°C ± 3°C Dwell time in solder : 2 ~ 3 seconds
Temperature cycling	Resistance change rate is ± (1% + 0.05Ω) Max. with no evidence of mechanical damage.		7.4 Resistance change after continuous 5 cycles for duty shown below:

Step	Temperature	Time
1	-55°C ±3°C	30 mins
2	Room temp.	10~15 mins
3	+155°C ±2°C	30 mins
4	Room temp.	10~15 mins

Load life in humidity	Resistance value		ΔR/R
	Normal Type	< than 100KΩ >100KΩ	± 3 % ± 5 %

7.9 Resistance change after 1,000 hours operating at RCWV with duty cycle of (1.5 hours "on", 0.5 hour "off") in a humidity test chamber controlled at 40°C ± 2°C and 90 to 95 % relative humidity

Load life	Resistance value		ΔR/R
	Normal Type	< than 56KΩ > 56KΩ	± 2 % ± 3 %

7.10 Permanent resistance change after 1,000 hours operating at RCWV with duty cycle of (1.5 hours "on", 0.5 hour "off") at 70°C ± 2°C ambient

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Данный компонент на территории Российской Федерации

Вы можете приобрести в компании MosChip.

Для оперативного оформления запроса Вам необходимо перейти по данной ссылке:

http://moschip.ru/get-element

Вы можете разместить у нас заказ для любого Вашего проекта, будь то серийное производство или разработка единичного прибора.

В нашем ассортименте представлены ведущие мировые производители активных и пассивных электронных компонентов.

Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

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