

EIA STANDARD

Resistors, Thin Film Rectangular SMD on Ceramic

EIA-576-C (Revision of EIA-576-B)

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Electronic Components Industry Association

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(From Standards Proposal No. 5446, formulated under the cognizance of the P-1 Committee on EIA Resistive Devices Standards).

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RESISTORS, THIN FILM RECTANGULAR SMD ON CERAMIC

(From Standards Proposal No. 5446, formulated under the cognizance of the EIA P-1 Subcommittee on Resistive Devices.)

1.0 SCOPE

This standard covers thin film precision rectangular leadless discrete fixed resistors with temperature coefficients of ± 50 PPM/ $^{\circ}$ C and tighter and resistance tolerances of 1%, 0.5%, 0.25%, 0.1% and 0.05% for use in surface mounting applications using soldering techniques. If the supplier chooses, it may include in the qualification test plan one of the test condition options of ANSI/EIA-977 *Test Method - Electronic Passive Components Exposure to Atmospheric Sulfur* to qualify the product family as resistant to the known effects of environmental sulfur on silver.

1.1 Typical Construction Characteristics

The termination shall include a leach-resistant barrier layer, made of nickel or an equivalent material. The barrier layer shall be covered with a layer of solderable material.

1.2 Classification

The type designation shall be as follows:

PRC3216	C	1003	D
Style	Characteristic	Resistance	Tolerance
(1.2.1)	(1.2.2)	(1.2.3)	(1.2.4)

1.2.1 Style

The style is identified by three letters describing the type of surface mount component (Precision Resistor Chip) followed by four digits giving the resistor's nominal length and width in millimeters per Table I.

1.2.2 Characteristics

The characteristic is identified by a single letter in accordance with Table II. Individual part requirements shall be specified in Table II and the test paragraphs.

1.2.3 Resistance

The nominal resistance expressed in ohms is identified by four digits; the first three digits represent significant figures and the last digit represents the number of zeros to follow.

When the value of resistance is less than 1000, the letter “R” shall be substituted for one of the significant digits to represent the decimal point.

When the letter “R” is used, succeeding digits of the group represent significant figures. The resistance value designations are shown in Table III. Zero ohm jumper chip resistors are identified by three zeros.

1.2.3.1 Standard Values

The standard values for every decade shall follow the sequence of IEC 60063 *Preferred number series for resistors and capacitors*. Refer to Table IV.

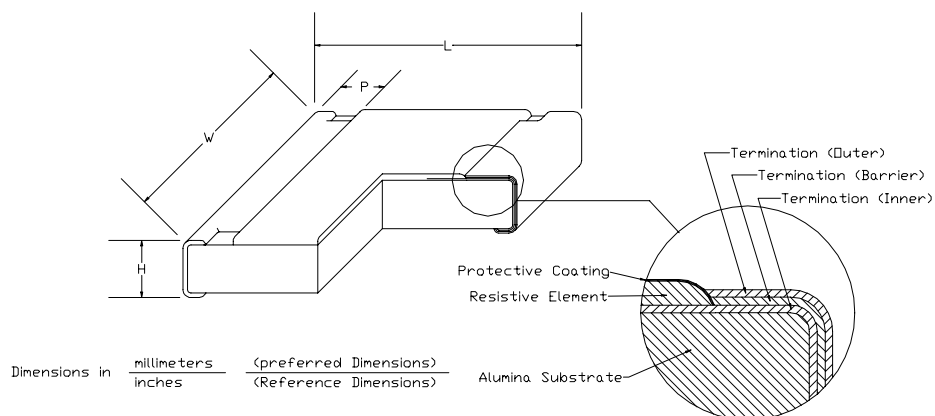
1.2.4 Resistance Tolerance

The resistance tolerance is identified by a single letter: “F” for 1%, “D” for 0.5%, “C” for 0.25%, “B” for 0.1%, and “A” for 0.05%.

1.2.5 Resistance Range

The resistance range applicable to this standard is 10 ohms to 1 megohm, inclusive. Characteristics for nominal resistance values less than 10 ohms or greater than 1 megohm may differ from those specified in Table II.

Table I



TYPE	BODY LENGTH (L)	BODY WIDTH(W)	BODY (*) THICKNESS(H)	TERM WIDTH(P)	RATED POWER mW	MAX CWV	INCH SIZE (REF)
PRC0603	0.6 ± 0.03	0.3 ± 0.03	0.25 ± 0.05	0.10 ± 0.05	50	25	0201
	$.024 \pm .001$	$.012 \pm .001$	$.010 \pm .002$	$.004 \pm .002$			
PRC1005	1.0 ± 0.10	0.5 ± 0.10	0.30 ± 0.10	0.20 ± 0.10	62.5	25	0402
	$.039 \pm .004$	$.020 \pm .004$	$.012 \pm .004$	$.008 \pm .004$			
PRC1608	1.60 ± 0.10	0.80 ± 0.10	0.50 ± 0.10	0.20 ± 0.10	62.5	50	0603
	$.063 \pm .004$	$.031 \pm .004$	$.020 \pm .004$	$.008 \pm .004$			
PRC2012	2.00 ± 0.15	1.25 ± 0.15	0.50 ± 0.15	0.40 ± 0.25	100	100	0805
	$.079 \pm .006$	$.049 \pm .006$	$.020 \pm .006$	$.016 \pm .010$			
PRC3216	3.20 ± 0.15	1.60 ± 0.15	0.56 ± 0.15	0.50 ± 0.25	125	200	1206
	$.126 \pm .006$	$.063 \pm .006$	$.022 \pm .006$	$.020 \pm .010$			
PRC3225	3.20 ± 0.15	2.50 ± 0.15	0.56 ± 0.15	0.50 ± 0.25	250	200	1210
	$.126 \pm .006$	$.098 \pm .006$	$.022 \pm .006$	$.020 \pm .010$			
PRC5025	5.00 ± 0.15	2.50 ± 0.15	0.56 ± 0.15	0.60 ± 0.25	500	225	2010
	$.197 \pm .006$	$.098 \pm .006$	$.022 \pm .006$	$.024 \pm .010$			
PRC6332	6.30 ± 0.15	3.20 ± 0.15	0.56 ± 0.15	0.60 ± 0.25	1000	250	2512
	$.248 \pm .006$	$.126 \pm .006$	$.022 \pm .006$	$.024 \pm .010$			

Reference: EIA PDP-100

* Dimension H includes termination solder finish