

PRECISION ELECTRONIC COMPONENTS MFG. CO.

WIREWOUND RESISTORS/DATA SHEET

PJR SERIES	SILICONE COATED. RADIAL.
PBA SERIES	CERAMIC CASED. AXIAL.
PBR SERIES	CERAMIC CASED. RADIAL. PCB MOUNT.



COMMITTED TO QUALITY

EQUIVALENT TO JAPANESE STYLES.

The PJR, PBA and PBR Series from PEC are sturdy one-to-one replacements for Japanese style wirewound resistors.

The PJR type is a PCB mount version in 5, 7 and 10 watt ratings. It has a better overload withstand capacity than PEC's PGR Series.

The PBA Series consists of axial resistors enclosed in ceramic cases and are available in 2, 3, 5, 7, 10, 15 and 20 watt ratings. The elements are continuously wound on filaments of fiberglass. In relation to PEC's PCA Series, the PBA Series has similar properties, but, different mechanical dimensions.

The PBR type is a ceramic cased direct PCB mount style in 3, 5, 7 and 10 watt ratings; for higher ratings of 15, 20, 25, 30 and 40 watts, it is Bracket mounted. In these higher ratings, brackets for horizontal

or vertical mounting can be supplied. Also, in these ratings, the PBR Series has screw-mountable terminals and can be mounted on PCBs, Transformers or independently with the help of a standard bracket.

In the TV industry the PBA and PBR Series resistors are referred to sometimes as fusible resistors. Also, being ceramic cased, they are occasionally called cement resistors. The sealing is generally of a non-combustible material.

TABLE 1: SUMMARY OF PJR, PBA AND PBR SERIES WITH MOUNTING STYLES

RATING	PEC T TYPE	PEC T TYPE	PEC T TYPE	PBR - PCB	MOUNTING STYLES BRACKET HZL ¹ VTL ²			
2W	-	PBA	-	-	-	-	-	-
3W	-	PBA	PBR	YES	-	-	-	-
5W	PJR	PBA	PBR	YES	-	-	-	-
7W	PJR	PBA	PBR	YES	-	-	-	-
10W	PJR	PBA	PBR	YES	-	-	-	-
15W	-	PBA	PBR	-	YES	YES	YES	YES
20W	-	PBA	PBR	-	YES	YES	YES	-
25W	-	-	PBR	-	YES	YES	YES	-
30W	-	-	PBR	-	YES	YES	YES	YES
40W	-	-	PBR	-	YES	YES	YES	-

NOTE:

1. HORIZONTAL STYLE

2. VERTICAL STYLE 1 3. VERTICAL STYLE 2

SPECIFICATIONS

TOLERANCE	: FOR VALUES > 1R0 - $\pm 10\%$ FOR VALUES $\leq 1R0$ - $\pm 10\%$, $\pm 0R05$ $\pm 5\%$ AVAILABLE IN ALL VALUES ON REQUEST
TEMP. COEFF.	: $\pm 200 \text{ PPM}/^\circ\text{C}$ - HOWEVER, IN PBA AND PBR OF RESISTANCE SERIES, HIGHER TCR WIRES MAY BE USED IN [TCR] RATINGS UP TO 15 W. PLEASE REQUEST TCR DATA FOR SPECIFIC VALUES.
LOAD LIFE	
STABILITY	: $\Delta R < 5\%$ AT RATED POWER FOR 500V DC
POWER RATING	: RATED @ 40°C AMBIENT AND DERATED LINEARLY TO ZERO POWER AT 275°C .
MAX. SURFACE TEMP.	: 275°C [HOT SPOT]
DIELECTRIC WITHSTAND	
VOLTAGE	: 1KV FOR 1 MINUTE (INSULATED VOLTAGE STYLE)
INSULATION RESISTANCE	: 20 MOHM AT 500V DC
SHORT-TERM OVERLOAD	: $\Delta R < 2\%$ @ 10 TIMES RATED POWER FOR 5 SECS.
EFFECT OF SOLDERING	: $\Delta R < 2\%$ @ 350°C FOR 3 SECONDS
BODY STRENGTH	: > 10KG. FOR 10 SECONDS
TERMINAL STRENGTH	: > 4.5KG.
VIBRATION	: $\Delta R < 1\%$ @ 10-55Hz AND 1.5MM IN 3 DIRECTIONS - TOTAL 6 HOURS

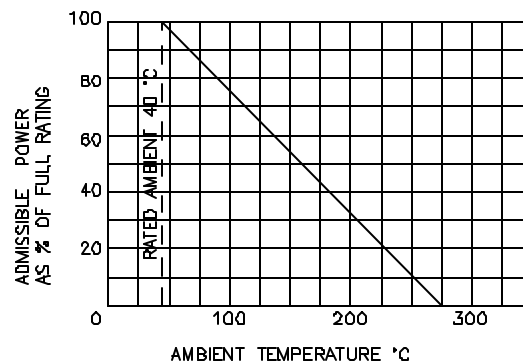


Fig. 1

08908R/RHDS/DS/1

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DO NOT SCALE DRAWINGS.

DIMENSIONS IN MM UNLESS OTHERWISE SPECIFIED.

SPECIFICATIONS SUBJECT TO CHANGE.

TABLE 2 : PJR SERIES - DIMENSION DETAILS
[FIG.2]

PEC TYPE	RATING	DIMENSIONS IN MM (IN)			RESISTANCE RANGE	
		L	P	d	OHMS	
		± 1.00 [± 0.039]	± 0.50 [± 0.020]	± 0.50 [± 0.020]	M _{IN}	M _{AX}
J5	5W	24.0 [0.94]	15.0 [0.59]	8.5 [0.33]	0R1	400R
J7	7W	32.0 [1.26]	23.0 [0.91]	8.5 [0.33]	0R1	600R
J10	10W	52.0 [2.05]	43.0 [1.69]	8.5 [0.33]	0R5	1K

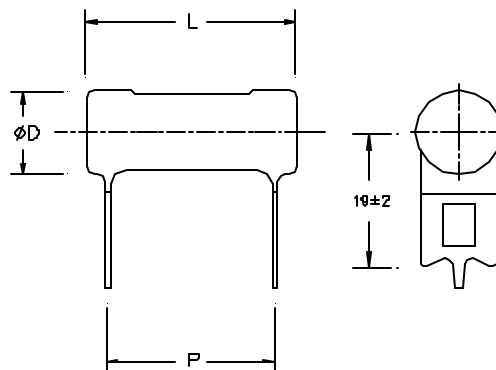


FIG.2-TABLE 2

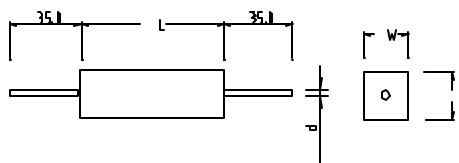


FIG.3-TABLE3

TABLE 3 : PBA S SERIES - DIMENSION DETAILS - RESISTANCE RANGE
[FIG.3]

PEC TYPE	RATING	DIMENSIONS IN MM (IN)				RESISTANCE RANGE	
		L	W	H	d	OHMS	
		± 1.00 [± 0.039]	± 1.00 [± 0.039]	± 1.00 [± 0.039]	± 0.10 [± 0.004]	M _{IN}	M _{AX}
BA2	2W	18.0 [0.71]	7.0 [0.28]	7.0 [0.28]	0.8 [0.03]	0R1	150R
BA3	3W	22.0 [0.87]	8.0 [0.31]	8.0 [0.31]	0.8 [0.03]	0R1	300R
BA5	5W	22.0 [0.87]	9.5 [0.37]	9.5 [0.37]	0.8 [0.03]	0R1	300R
BA7	7W	35.0 [1.38]	9.5 [0.37]	9.5 [0.37]	0.8 [0.03]	0R5	500R
BA10	10W	48.0 [1.89]	9.5 [0.37]	9.5 [0.37]	0.8 [0.03]	0R5	680R
BA15	15W	50.0 [1.97]	12.5 [0.49]	12.5 [0.49]	1.0 [0.04]	0R5	700R
BA20	20W	63.0 [2.48]	12.5 [0.49]	12.5 [0.49]	1.0 [0.04]	1R	1K

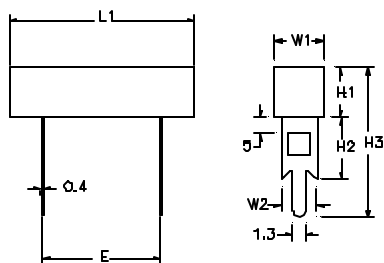


FIG.4-TABLE4

TABLE 4 [FIG.4] : PBR - PCB MOUNTING STYLE - DIMENSION DETAILS - RESISTANCE RANGE

PEC TYPE	RATING	RESISTOR DIMENSIONS IN MM [IN]							RESISTANCE RANGE	
		L1	W1	W2	H1	H2	H3	E	OHMS	
		± 2.00 [± 0.079]	± 0.50 [± 0.020]	± 0.50 [± 0.020]	± 0.50 [± 0.020]	± 1.00 [± 0.039]	± 2.00 [± 0.079]	± 0.50 [± 0.020]	M _{IN}	M _{AX}
BR3	3W	22.0 [0.87]	8.0 [0.31]	7.0 [0.28]	8.0 [0.31]	24.0 [0.94]	37.5 [1.48]	10.2 [0.40]	0R1	300R
BR5	5W	22.0 [0.87]	9.5 [0.37]	7.0 [0.28]	9.5 [0.37]	24.0 [0.94]	39.0 [1.53]	10.2 [0.40]	0R1	300R
BR7	7W	35.0 [1.38]	9.5 [0.37]	7.0 [0.28]	9.5 [0.37]	24.0 [0.94]	39.0 [1.53]	22.5 [0.89]	0R5	500R
BR10	10W	48.0 [1.89]	9.5 [0.37]	7.0 [0.28]	9.5 [0.37]	24.0 [0.94]	39.0 [1.53]	35.0 [1.38]	0R5	680R

TABLE 5 [FIG.5] : PBR - B RACKET MOUNTING STYLE - DIMENSION DETAILS - RESISTANCE RANGE

PEC TYPE	RATING RESISTANCE RANGE	RESISTOR DIMENSIONS IN MM [IN]												OHMS	
		L1	L2	L3	W1	W2	H1	H2	H3	P1	E	G1	d		
		±2.00 [±0.082]	±1.00 [±0.039]	±1.00 [±0.039]	±0.50 [±0.020]	±0.50 [±0.020]	±0.50 [±0.020]	±1.00 [±0.039]	±2.00 [±0.079]	±0.50 [±0.020]	±0.50 [±0.020]	±0.50 [±0.020]	±0.10 [±0.004]	MIN	MAX
BR15	15W	48.0 [1.89]	25.0 [0.98]	7.0 [0.28]	14.0 [0.55]	6.0 [0.24]	14.0 [0.55]	7.5 [0.29]	21.0 [0.83]	3.0 [0.12]	35.0 [1.38]	6.5 [0.26]	2.50 [0.1]	0R5	2K0
BR20	20W	63.5 [2.50]	25.0 [0.98]	7.0 [0.28]	14.0 [0.55]	6.0 [0.24]	14.0 [0.55]	7.5 [0.29]	21.0 [0.83]	3.0 [0.12]	49.5 [1.95]	6.5 [0.26]	2.5 [0.1]	1R0	3K0
BR25	25W	63.5 [2.50]	25.0 [0.98]	8.0 [0.31]	16.0 [0.63]	7.5 [0.29]	16.0 [0.63]	12.0 [0.47]	29.0 [1.14]	3.5 [0.14]	46.5 [1.83]	8.0 [0.31]	3.0 [0.12]	1R0	3K6
BR30	30W	75.0 [2.95]	40.0 [1.57]	10.0 [0.39]	19.0 [0.75]	7.5 [0.29]	19.0 [0.75]	10.0 [0.39]	30.0 [1.18]	3.5 [0.14]	56.0 [2.20]	9.0 [0.35]	3.0 [0.12]	1R0	4K3
BR40	40W	90.0 [3.54]	40.0 [1.57]	10.0 [0.39]	19.0 [0.75]	7.5 [0.29]	19.0 [0.75]	10.0 [0.39]	30.0 [1.18]	3.5 [0.14]	71.0 [2.79]	9.0 [0.35]	3.0 [0.12]	1R8	5K6

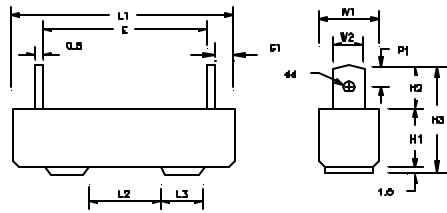


FIG.5-TABLE5

PJR SERIES SILICONE COATED, RADIAL.
PBA SERIES CERAMIC CASED, AXIAL.
PBR SERIES CERAMIC CASED, RADIAL, PCB MOUNT.

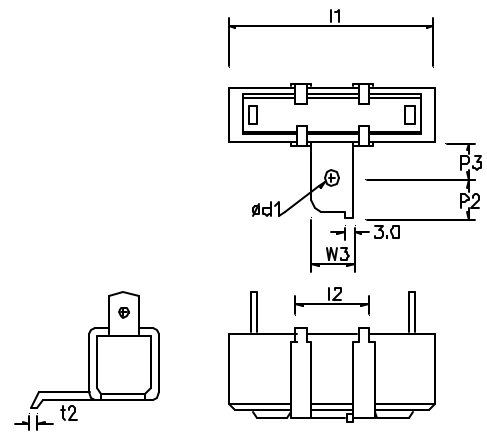


FIG.6-TABLE6

TABLE 6 [FIG.6] : PBR - B RACKET MOUNTING/HORIZONTAL STYLE - DIMENSION DETAILS

PEC TYPE	RATING	RESISTOR DIMENSIONS IN MM [IN]							
		L1	L2	W3	P2	P3	t2	d1	G1
		±2.00 [±0.079]	±2.00 [±0.079]	±0.50 [±0.020]	±0.50 [±0.020]	±0.50 [±0.020]	±0.10 [±0.004]	±0.20 [±0.008]	±0.50 [±0.020]
BR15H	15W	48.0 [1.89]	25.0 [0.98]	12.0 [0.47]	6.0 [0.24]	8.0 [0.31]	0.8 [0.03]	4.0 [0.16]	6.5 [0.26]
BR20H	20W	63.5 [2.50]	25.0 [0.98]	12.0 [0.47]	6.0 [0.24]	8.0 [0.31]	0.8 [0.03]	4.0 [0.16]	6.5 [0.26]
BR25H	25W	63.5 [2.50]	25.0 [0.98]	12.0 [0.47]	6.0 [0.24]	10.0 [0.39]	0.8 [0.03]	4.0 [0.16]	8.00 [0.31]
BR30H	30W	75.0 [2.95]	40.0 [1.57]	18.0 [0.71]	8.0 [0.31]	10.0 [0.39]	0.8 [0.03]	5.0 [0.20]	9.0 [0.35]
BR40H	40W	90.0 [3.54]	40.0 [1.57]	18.0 [0.71]	8.0 [0.31]	10.0 [0.39]	0.8 [0.03]	5.0 [0.120]	9.0 [0.35]

TABLE 7[FIGS.7/8] : PBR - B RACKET MOUNTING /VERTICAL STYLE 1 - DIMENSION DETAILS

PEC TYPE	RATING	RESISTOR DIMENSIONS IN MM [IN]								
		l1	l3	W 3	P2	P3	P4	t2	d1	G1
		±2.00 [±0.079]	±2.00 [±0.079]	±0.50 [±0.020]	±0.50 [±0.020]	±0.50 [±0.020]	±1.00 [±0.039]	±0.10 [±0.004]	±0.20 [±0.008]	±0.50 [±0.020]
BR15V1 15W		48.0 [1.89]	36.0 [1.42]	12.0 [0.47]	6.0 [0.24]	8.0 [0.31]	28.0 [1.10]	0.8 [0.03]	4.0 [0.16]	6.5 [0.26]
BR20V1 20W		63.5 [2.50]	44.0 [1.73]	12.0 [0.47]	6.0 [0.24]	8.0 [0.31]	28.0 [1.10]	0.8 [0.03]	4.0 [0.16]	6.5 [0.26]
BR25V1 25W		63.5 [2.50]	44.0 [1.73]	12.0 [0.47]	6.0 [0.24]	10.0 [0.39]	38.0 [1.50]	0.8 [0.03]	4.0 [0.16]	8.0 [0.31]
BR30V1 30W		75.0 [2.95]	57.5 [2.26]	18.0 [0.71]	8.0 [0.31]	10.0 [0.39]	39.0 [1.53]	0.8 [0.03]	5.0 [0.20]	9.0 [0.35]
BR40V1 40W		90.0 [3.54]	65.0 [2.56]	18.0 [0.71]	8.0 [0.31]	10.0 [0.39]	39.0 [1.53]	0.8 [0.03]	5.0 [0.20]	9.0 [0.35]

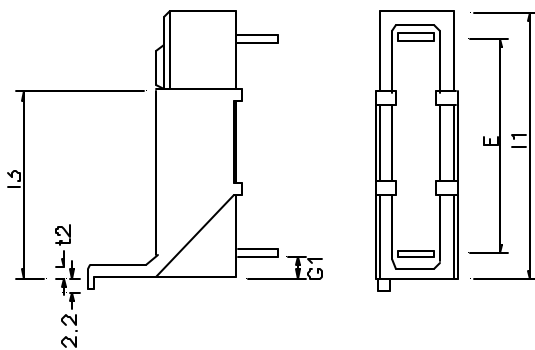


FIG.7-TABLE7

PJR SERIES SILICONE COATED. RADIAL.
PBA SERIES CERAMIC CASED. AXIAL.
PBR SERIES CERAMIC CASED. RADIAL. PCB MOUNT.

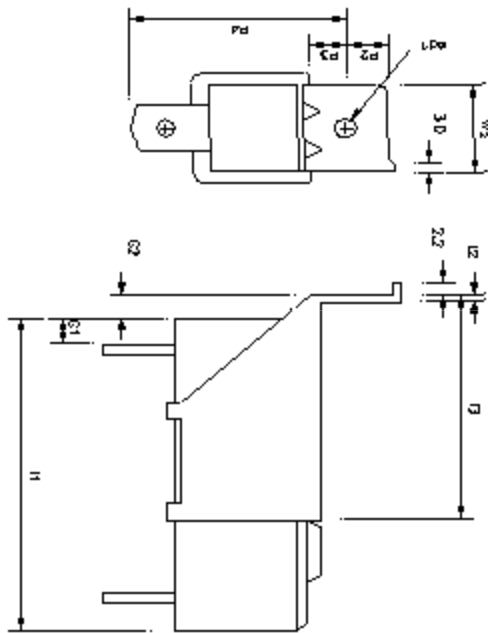


FIG.8-TABLE8

TABLE 8 [FIGS8/7] : PBR - B RACKET MOUNTING /VERTICAL STYLE 2 - DIMENSION DETAILS

PEC TYPE	RATING	RESISTOR DIMENSIONS IN MM [IN]									
		l1	l3	W 3	P2	P3	P4	t2	d1	G1	G2
		±2.00 [±0.079]	±2.00 [±0.079]	±0.50 [±0.020]	±0.50 [±0.020]	±0.50 [±0.020]	±1.00 [±0.039]	±0.10 [±0.004]	±0.20 [±0.008]	±0.50 [±0.020]	±1.00 [±0.039]
BR15V2 15W		48.0 [1.89]	44.0 [1.73]	12.0 [0.47]	6.0 [0.24]	8.0 [0.31]	28.0 [1.10]	0.8 [0.03]	4.0 [0.16]	6.5 [0.26]	8.0 [0.31]
BR30V2 30W		75.0 [2.95]	65.0 [2.56]	18.0 [0.71]	8.0 [0.31]	10.0 [0.39]	39.0 [1.53]	0.8 [0.03]	5.0 [0.20]	9.0 [0.35]	7.5 [0.29]