Product Change Notification

TE Connectivity

Product Change Notification: P-22-023270 **PCN Date:** 26-AUG-22

TE would like to inform you of the following change(s) to the listed TE Connectivity Product. In case of any further questions about this change(s), please contact your TE Connectivity Sales Engineer. Affected part, drawing and/or specification numbers are listed on the attached sheet(s).

General Product Description:
High Precision Metal Film Leaded Resistor - Type UPF Series

Description of Changes
Change to Ammo pack dimensions. No change to product performance or physical appearance. Datasheet updated to cover this change **Other attachments:** Old Data sheet New Data sheet

Reason for Changes:	
Document clarification.Change to Ammo pack dimensions. No change to product performance or physical appearance. Datasheet updated to cover this change	
Estimated Dates:	
Last Order Date (Obsolete Parts Only):	**First Date To Ship** (Changed Parts Only):
	30-SEP-2022
Last Ship Date (Obsolete Parts Only):	**Last Date for Mixed Shipments:** (Changed Parts Only):
	31-DEC-2022

Part Number(s) being Modified:

Part Number	Part Discontinued per PCN	Customer Drawing	Customer Part Number	Alias Part Number(s)	Substitute Part Number	Substitute Alias Part Number(s)	Description Of Difference
1-2176163-5	NO			"UPF50B500RV"			
2176162-5	NO			"UPF25B120RV"			
2176162-7	NO			"UPF25B250RV"			
2176163-2	NO			"UPF50B100RV"			
2176163-4	NO			"UPF50B10RV"			
2176163-6	NO			"UPF50B1K0V"			
2176163-9	NO			"UPF50B20RV"			

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2176163-4	NO			"UPF50B10RV"			
2176163-6	NO			"UPF50B1K0V"			
2176163-9	NO			"UPF50B20RV"			

Type UPF Series

Key Features

High precision

Tolerance down to ±0.02%

TCR down to ±5PPM/℃

Excellent stability

The TE Connectivity High Precision Metal Film Leaded Resistor is available in two sizes with resistance tolerance down to 0.02% and TCR 5% as standard. This high precision, coupled with excellent stability makes it ideal for applications such as precision measurement equipment

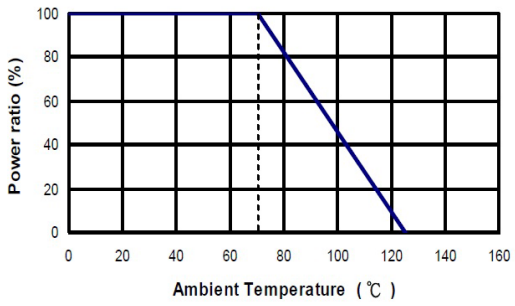
Characteristics – Electrical

Type	Power Rating @70°c	Max. Operating Voltage	Max. Overload Voltage	Resistance Range			TCR (PPM/°C)
				±0.02%	±0.05%	±0.1%	
UPF25	1/4W	250V	500V	10Ω -500KΩ			±5
				10Ω 1M Ω			±10
							±15
							±25
UPF50	1/2W	300V	600V	10Ω -500KΩ			±5
				10Ω 1M Ω			±10
							±15
							±25

Operating Voltage V=√(P*R)

Operating Temperature range -55 ~ 125°C

Derating



Dimensions in millimetres unless otherwise specified

Dimensions Shown for reference purposes only. Specifications subject to change

For Email, phone or live chat, go to: www.te.com/help

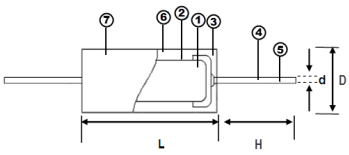
Environmental Characteristics

Item	Requirement	Test Method
Temperature Coefficientof Resistance (T.C.R.)	As Spec.	Resistance value at room temperature and room temperature+60°C
Short Time Overload	±(0.05%+0.05Ω)	**JIS-C-5201-1 5.5** RCWV*2.5 or Max. overload voltage for 5 seconds
Insulation Resistance	> 1,000MΩ	**MIL-STD-202F Method 302** Apply 500V_{DC} for 1 minute
Endurance	±(0.2%+0.05Ω)	**MIL-STD-202F Method 108A** 70±2℃, RCWV for 1000 hrs with 1.5 hrs "ON"and 0.5 hrs "OFF"
Damp Heat with Load	±(0.2%+0.05Ω)	**MIL-STD-202F Method 103B** 40□2□C, 90~95% R.H. Max. working voltage for 1000 hrs with 1.5 hrs "ON" and 0.5 hrs "OFF"
Solderability	95% min. Coverage	**MIL-STD-202F Method 208H** 245±5℃ for 5 seconds
Resistance to Soldering Heat	±(0.05%+0.01Ω)	350±10°C for 3 seconds or 260±5°C for 10 seconds
Terminal Strength	Tensile: ≧2.5kg	Tensile strength: for 10 sec. Torsional strength: Rotated through 360˚,5 rotations.
Pulse Overload	±(0.1%+0.01Ω)	**JIS-C-5201-1 5.8** 4 times RCWV for 10000 cycles with 1second "ON" and 25 seconds "OFF"
Temperature Cycle	±(0.05%+0.05Ω)	-25℃(30min)/+85℃(30min), 5 cycles
Resistance to Solvent	No deterioration of coatings and markings	**JIS-C-5201-1 6.9** Trichroethane for 3 min. with ultrasonic

RCWV (Rated continuous working voltage)= √(P*R) or Max. Operating voltage whichever is lower

Storage Temperature: 15~28°C; Humidity < 80%RH

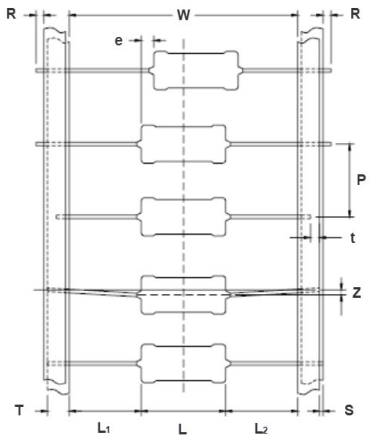
Construction and Dimensions



① Ceramic Core (Alumina ceramic)	⑤ Lead Wire (Tinned annealed copper wire)
② Resistor Element (Nickel alloy)	⑥ Molding (Expose)
③ Terminal (Tinned iron cap)	⑦ Marking (expose based ink)
④ Connection	

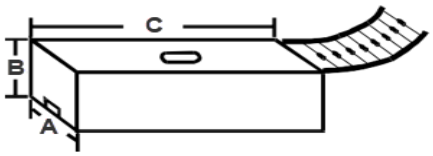
Type	**L**	**D**	**H**	**d**	**Weight (g) (1000pcs)**
UPF25	7.0±0.3	2.7±0.4	26±3	0.6±0.05	230
UPF50	10.2±0.3	4.0±0.4	25±3	0.6±0.05	430

Taping Specification



Type	L	W	P	L1-L2 Max.	T	Z Max.	R Max.	t Max.	e Max.	S Max.
UPF25	7.0±0.3	52±1	5±0.3	1.0	6±0.5	0.8	0	2.5	0.5	0.5
UPF50	10.2±0.3	52±1	5±0.3	1.0	6±0.5	0.8	0	2.5	0.5	0.5

Ammo Packing



Type	A	B	C	Pack Qty
UPF25	79	53	258	2,000
UPF50	79	53	258	1,000

How To Order

UPF	50	B	500R	V	
Product Type	**Power Rating**	**Tolerance**	**Resistance**	**TCR**	**Packing**
UPF	25: ¼ W 50 : ½ W	B: ±0.1%	10R 10Ω 100R : 100Ω 1K0 : 1,000Ω 100K : 100KΩ	V: ±5PPM B – 10ppm Y – 15ppm D – 25ppm	T: AMMO : BULK

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Type UPF Series

Key Features

High precision

Tolerance down to ±0.02%

TCR down to ±5PPM/℃

Excellent stability

The TE Connectivity High Precision Metal Film Leaded Resistor is available in two sizes with resistance tolerance down to 0.02% and TCR 5% as standard. This high precision, coupled with excellent stability makes it ideal for applications such as precision measurement equipment

Applications

Precision Equipment

Measurement Equipment

Characteristics – Electrical

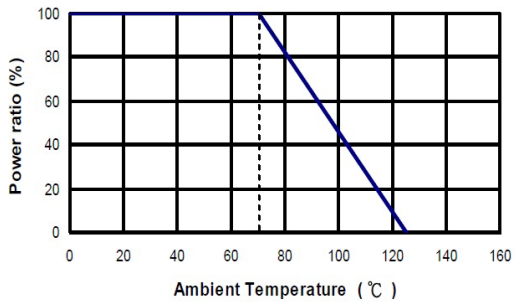
Type	Power Rating @70°c	Max. Operating Voltage	Max. Overload Voltage	Resistance Range			TCR (PPM/°C)
				±0.02%	±0.05%	±0.1%	
UPF25	1/4W	250V	500V	10Ω -500KΩ			±5
				10Ω 1M Ω			±10
							±15
							±25
UPF50	1/2W	300V	600V	10Ω -500KΩ			±5
				10Ω 1M Ω			±10
							±15
							±25

Operating Voltage=√(P*R) or Max. operating voltage listed above, whichever is lower.

Overload Voltage=2.5*√(P*R) or Max. overload voltage listed above, whichever is lower.

Operating Temperature range -55 ~ 125°C

Derating



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Environmental Characteristics

Item	Requirement	Test Method
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Short Time Overload	±(0.05%+0.05Ω)	**JIS-C-5201-1 5.5** RCWV*2.5 or Max. overload voltage for 5 seconds
Insulation Resistance	> 1,000MΩ	**MIL-STD-202F Method 302** Apply 500V_{DC} for 1 minute
Endurance	±(0.2%+0.05Ω)	**MIL-STD-202F Method 108A** 70±2℃, RCWV for 1000 hrs with 1.5 hrs "ON"and 0.5 hrs "OFF"
Damp Heat with Load	±(0.2%+0.05Ω)	**MIL-STD-202F Method 103B** 40±2°C, 90~95% R.H. Max. working voltage for 1000 hrs with 1.5 hrs "ON" and 0.5 hrs "OFF"
Solderability	95% min. Coverage	**MIL-STD-202F Method 208H** 245±5℃ for 5 seconds
Resistance to Soldering Heat	±(0.05%+0.01Ω)	350±10°C for 3 seconds or 260±5°C for 10 seconds
Terminal Strength	Tensile: ≧2.5kg	Tensile strength: for 10 sec. Torsional strength: Rotated through 360˚,5 rotations.
Pulse Overload	±(0.1%+0.01Ω)	**JIS-C-5201-1 5.8** 4 times RCWV for 10000 cycles with 1second "ON" and 25 seconds "OFF"
Temperature Cycle	±(0.05%+0.05Ω)	-25℃(30min)/+85℃(30min), 5 cycles
Resistance to Solvent	No deterioration of coatings and markings	**JIS-C-5201-1 6.9** Trichroethane for 3 min. with ultrasonic

RCWV (Rated continuous working voltage)= √(P*R) or Max. Operating voltage whichever is lower

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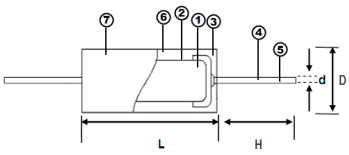
Construction and Dimensions



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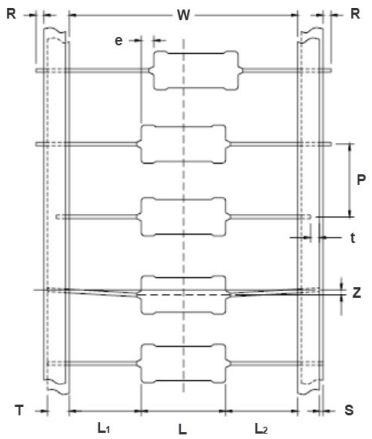

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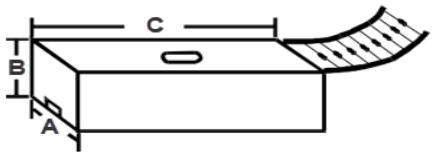
UPF25	7.0±0.3	52±1	5±0.3	1.0	6±0.5	0.8	0	2.5	0.5	0.5
UPF50	10.2±0.3	52±1	5±0.3	1.0	6±0.5	0.8	0	2.5	0.5	0.5

Ammo Packing



Type	A	B	C	Pack Qty
UPF25	85±1	78±1	260±1	2,000
UPF50	85±1	78±1	260±1	1,000

How To Order

UPF	50	B	500R	V	
Product Type	**Power Rating**	**Tolerance**	**Resistance**	**TCR**	**Packing**
UPF	25: ¼ W 50 : ½ W	B: ±0.1%	10R 10Ω 100R : 100Ω 1K0 : 1,000Ω 100K : 100KΩ	V: ±5PPM B – 10ppm Y – 15ppm D – 25ppm	T: AMMO : BULK

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