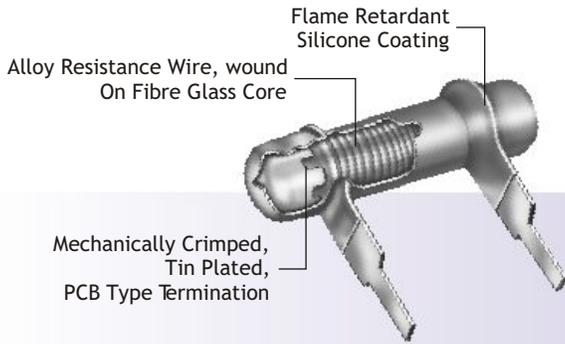




HFP SERIES

FIBRE GLASS SUBSTRATE Silicone Coated Wire Wound Resistors Plug In Style

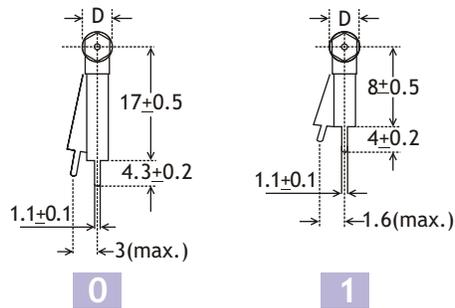
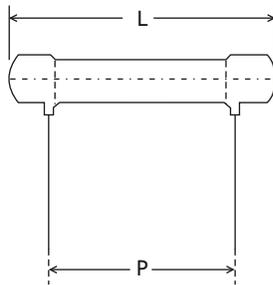


- Choice of terminals which are suitable for wave soldering.

APPLICABLE STANDARDS

IS 8909 and - IEC - Pub 266

PHYSICAL CONFIGURATION



CHOICE OF TERMINALS

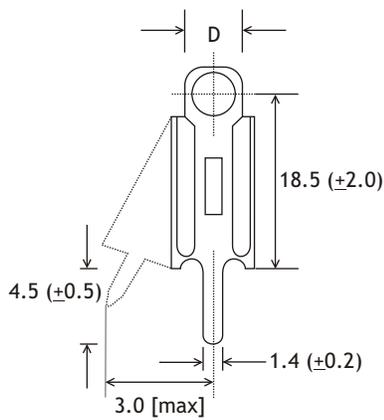
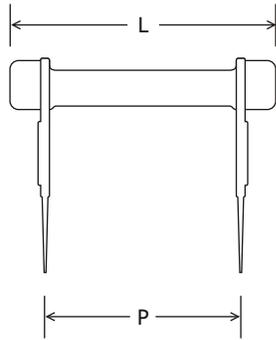
HTR TYPE	POWER RATING at 70°C	DIMENSIONS (mm)			RESISTANCE RANGE		TYPICAL WT. PER PC '0' TERMINAL (gms)	TYPICAL WT. PER PC '1' TERMINAL (gms)
		L +2/-1	D ±1	P ±1.0	min	max		
F-2P	2.5W	18.2	5.0	10.2	R10	10K	1.38	1.05
F-4P	4W	23.3	5.0	15.2	R10	15K	1.70	1.25
F-5P	5W	33.4	5.0	25.4	R10	27K	2.10	1.90
F-7P	6.5W	43.5	5.0	35.4	R10	39K	2.80	2.50
F-8P	8W	53.7	5.0	45.7	R10	56K	3.10	2.91

If the longer stand-off terminal is required, suffix the type with '0'. e.g. F-2 P-0 to F-8 P-0.

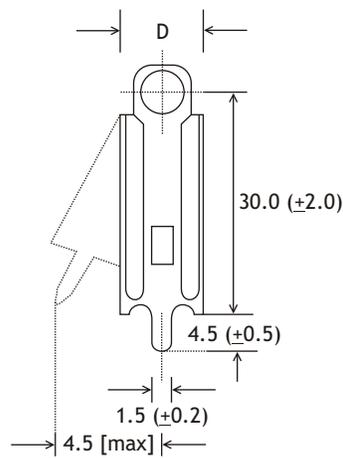
If the shorter stand-off terminal is required, suffix the type with '1' e.g. F-2 P-1 to F-8 P-1.

The resistance range given is applicable to the standard HFP series resistors. **Pulse type resistors available.** Please consult factory.

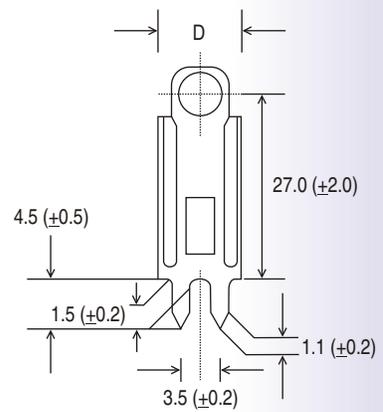
PHYSICAL CONFIGURATION



C



CA



*Max. displacement of alignment 4.5mm

CZ

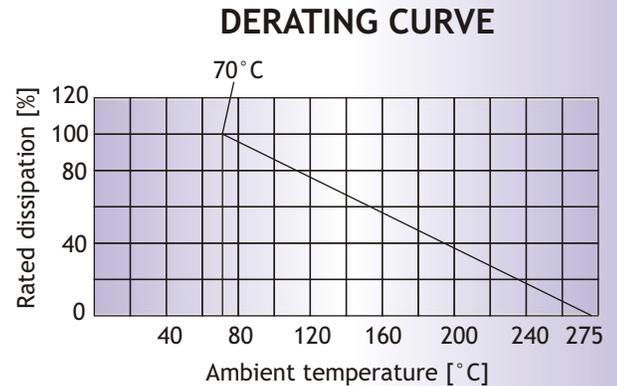
HTR TYPE	POWER RATING at 70°C	DIMENSIONS (mm)			RESISTANCE RANGE		TYPICAL WT. PER PC (gms)		
		L +2/-1	D ±1	P ±1.0	min	max	'C' terminal	'CA' terminal	'CZ' terminal
F-4P	4W	23.3	5.0	15.2	R10	15K	1.8	2.2	1.8
F-5P	5W	33.4	5.0	25.4	R10	27K	2.2	2.4	2.2
F-7P	6.5W	43.5	5.0	35.4	R10	39K	2.9	3.0	2.8
F-8P	8W	53.7	5.0	45.7	R10	56K	3.15	3.2	3.15

CHOICE OF TERMINALS

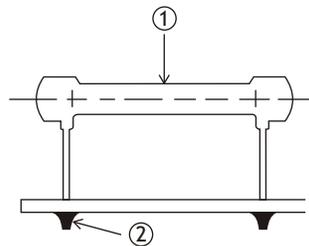
- If the “C” type stand-off terminal is required, suffix the type with “C”. e.g. F-4P-C to F-8P-C
- If the “CA” type stand-off terminal is required, suffix the type with “CA”. e.g. F-4P-CA to F-8P-CA
- If the “CZ” type stand-off terminal is required, suffix the type with “CZ”. e.g. F-4P-CZ to F-8P-CZ

ELECTRICAL AND ENVIRONMENTAL CHARACTERISTICS / DATA

Test	Performance Requirements
Resistance tolerance	$\pm 10\%$ [K]; $\pm 5\%$ [J] [< 1R0 \pm R05]
Rated ambient temperature [see derating curve]	at 70°C full power dissipation linearly derated to zero at 275°C
Temperature co-efficient	± 100 ppm/ °C [> 10R] ± 100 ppm/ °C [< 10R] ± 450 ppm/ °C [< 1R0]
Short time overload	Max R_{\pm} [2%+R05]
Moisture resistance	Max R_{\pm} [5%+R05]
Load life	Max R_{\pm} [5%+R05]
Ambient operating temperature range.	-40°C to +155°C



TEMPERATURE RISE



- (1) Body Temperature Measuring Point.
- (2) Solder Joint Measuring Point.

TYPE	Temperature At Full Power Dissipation						
	Measuring Point 1		Measuring Point 2				
	High Resistance Range	Low Resistance Range	'0' Type Terminal	'1' Type Terminal	'C' Type Terminal	'CA' Type Terminal	'CZ' Type Terminal
F2P	230°C	180°C	50°C	70°C			
F4P	285°C	235°C	83°C	98°C	55°C	52°C	49°C
F5P	285°C	240°C	50°C	85°C	57°C	57°C	58°C
F7P	292°C	260°C	45°C	85°C	62°C	55°C	55°C
F8P	290°C	246°C	55°C	80°C	57°C	55°C	55°C

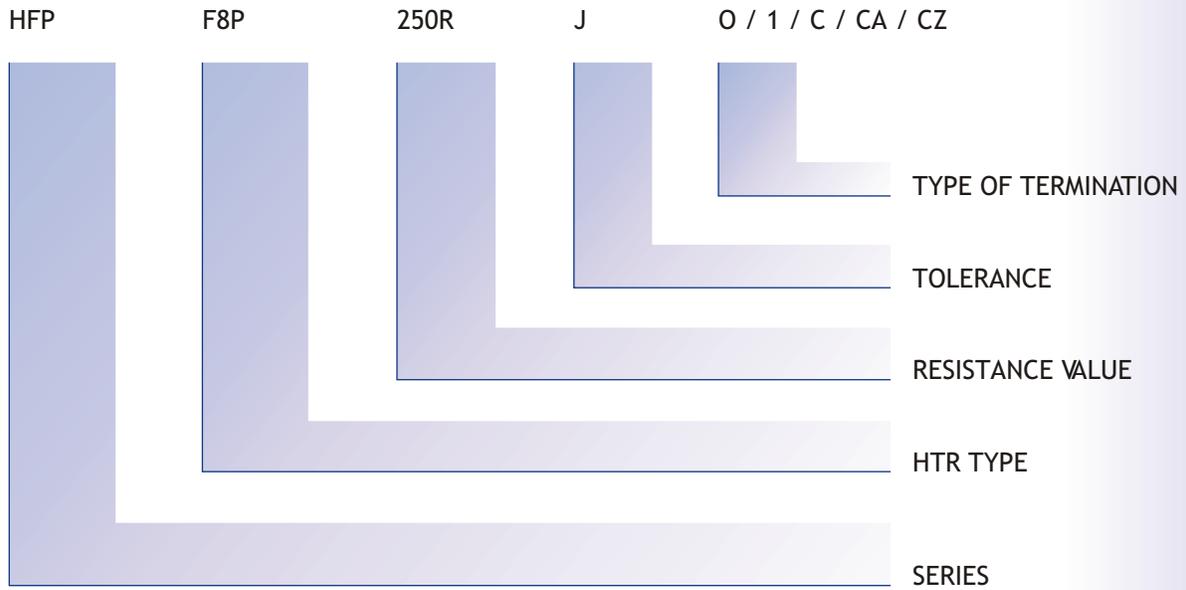
TYPICAL APPLICATIONS

The HFP series was evolved in order to provide a low cost but reliable alternative to those OEM's who have automated assembly facilities including wave soldering. Due to their design, these resistors have merely to be plugged into the PCB and wave soldered.

These fibre glass substrate resistors are shatterproof owing to their construction and are coated with a special silicone cement which cannot drip even at high overloads.



ORDERING INFORMATION



Note: In this series there is a choice of terminal standoff heights available; please refer "PHYSICAL CONFIGURATION" for selection.

The Words - "Applicable Standards" do not necessarily signify certification to that standard, however the tests mentioned are carried out on the broad based guidelines set out in these standards.