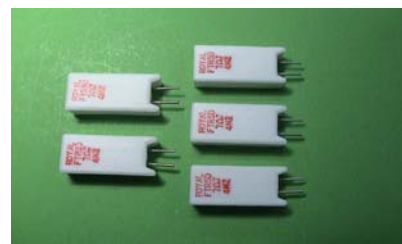


CEMENT THERMAL FUSIBLE RESISTORS

Features

- Self extinguishing
- Excellent flame and moisture resistance
- Extremely small and mechanically safe
- Provides outstanding feature against surges
- Too low or too high ohmic values on Wire-wound & Power Film type can be supplied on a case to case basis



Ordering Procedure: (Ex.: FTR-5G 2.8W, +/-5%, 1.5Ω, 2A, B/B)

P	F	5	G	2	8	J	W	1	5	J	B	0	2		
Resistor Type: PF2 = FTR2; PF3 = FTR3; PF5 = FTR5; PF7 = FTR7; PFA = FTR10				Wattage: 14=1.4W; 15=1.5W; 16=1.6W; 17=1.7W; 18=1.8W; 19=1.9W; 20=2.0W; 21=2.1W; 22=2.2W; 23=2.3W; 24=2.4W; 25=2.5W; 26=2.6W; 27=2.7W; 28=2.8W; 30=3.0W; 31=3.1W; 32=3.2W; 33=3.3W; 34=3.4W; 36=3.6W; 38=3.8W; 40=4.0W; 44=4.4W; 46=4.6W; 52=5.2W;				Resistance Value: E-24 series: the 1 st digit to denote production type of the product: W=Wire wound type The 2 nd & 3 rd digits are for the significant figures of the resistance and the 4 th digit denotes number of zeros: "J" - 0.1, "K" - 0.01, "L" - 0.001 Ex. 4Ω7 ~ W47J							
Fusing Temperature: A = 95°C / 96°C B = 109°C C = 119°C D = 126°C E = 130°C / 129°C F = 139°C G = 145°C H = 152°C I = 169°C J = 188°C K = 227°C				Tolerance: J = ±5% K = ±10%				Packing Type: B = Bulk / Box							
<i>* More explanation on part no, please see details on pages 79-80.</i>															

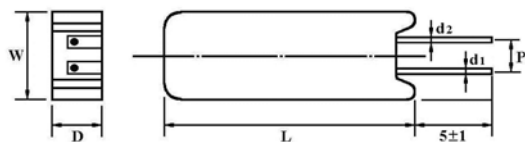
Performance Specifications

Temperature coefficient	< 20Ω: ±400PPM/°C; ≥ 20Ω: ±350PPM/°C
Short-time overload	$\Delta R/R \leq \pm(5.0\% + 0.05\Omega)$, with no evidence of mechanical damage.
Dielectric withstanding voltage	No evidence of flashover, mechanical damage, arcing or insulation breakdown.
Terminal strength	No evidence of mechanical damage.
Solderability	Min. 95% coverage
Temperature cycling	$\Delta R/R \leq \pm(2.0\% + 0.05\Omega)$, with no evidence of mechanical damage.
Humidity (Steady State)	$\Delta R/R \leq \pm(5.0\% + 0.05\Omega)$, with no evidence of mechanical damage.
Load life in humidity	For Wire-wound range, the $\Delta R/R$ is ±5% For Power film range, <100KΩ, the $\Delta R/R$ is ±5% For Power film range, ≥100KΩ, the $\Delta R/R$ is ±10%
Load life	For Wire-wound range, the $\Delta R/R$ is ±5% For Power film range, <100KΩ, the $\Delta R/R$ is ±5% For Power film range, ≥100KΩ, the $\Delta R/R$ is ±10%
Resistance to soldering heat	$\Delta R/R \leq \pm(1.0\% + 0.05\Omega)$, with no evidence of mechanical damage.

** More details, please see pages 77-78.*

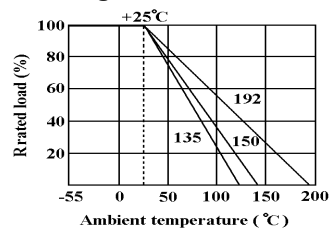
CEMENT THERMAL FUSIBLE RESISTORS

Dimension:



* FTR 7W: Lead not centered

Derating Curve:



Type	Dimension (mm)						Current Rating	Voltage Rating	Fusing Temperature Code					Resistance Range (E-24 series) +/-5%, +/-10%
	W ± 1	D ± 1	L ± 1	P ± 1	d1	d2 ± 0.05			A	C	D	E	G	
									95°C	119°C	126°C	130°C	145°C	
FTR2	12	7	21	5	0.6	0.75	2A	250V	1.4W	1.6W	1.9W	2.0W	2.0W	0.22Ω~270Ω
FTR3	12	8	26	5	0.6	0.75			1.5W	1.7W	2.0W	2.1W	2.3W	0.27Ω~680Ω
FTR5	13	9	26	5	0.6	0.75			1.7W	1.9W	2.3W	2.4W	2.8W	0.27Ω~680Ω
FTR7	13	9	38.5	5	0.6	0.75			2.0W	2.2W	2.7W	2.8W	3.2W	0.68Ω~1.2KΩ
FTR10	16	13	35	7.5	0.6	0.75			2.4W	2.6W	3.2W	3.3W	3.8W	1Ω~1.8KΩ

Type	Dimension (mm)						Current Rating	Voltage Rating
	W ± 1	D ± 1	L ± 1	P ± 1	d1	d2 ± 0.05		
FTR2	12	7	21	5	1.0	0.75	10A	250V
FTR3	12	8	26	5	1.0	0.75		
FTR5	13	9	26	5	1.0	0.75		
FTR7	13	9	38.5	5	1.0	0.75		
FTR10	16	13	35	7.5	1.0	0.75		

Type	Fusing Temperature Code									Resistance Range (E-24 series) +/-5%, +/-10%
	A	B	C	E	F	H	I	J	K	
	96°C	109°C	119°C	129°C	139°C	152°C	169°C	188°C	227°C	
FTR2	1.4W	1.6W	1.8W	2.0W	2.0W	2.0W	2.0W	2.0W	2.0W	0.22Ω ~ 270Ω
FTR3	1.5W	1.7W	1.9W	2.1W	2.2W	2.5W	2.8W	3.0W	3.0W	0.27Ω ~ 680Ω
FTR5	1.7W	1.9W	2.2W	2.4W	2.6W	3.1W	3.3W	3.8W	3.8W	0.27Ω ~ 680Ω
FTR7	2.0W	2.2W	2.5W	2.8W	3.0W	3.4W	3.8W	4.4W	4.4W	0.68Ω ~ 1.2KΩ
FTR10	2.4W	2.6W	3.0W	3.3W	3.6W	4.0W	4.6W	5.2W	5.2W	1Ω ~ 1.8KΩ