

STRAP Series



Application

Rechargeable battery packs, Lithium cell and battery packs

Product Features

Low profile, Solid state



Operation Current

FVL Series 1.70A~2.30A ; FVT Series 1.10A~2.40A
FLR Series 1.90A~7.30A ; FSR Series 1.20A~4.20A

Maximum Voltage

12V ~ 30V_{DC}



Temperature Range

-40°C to 85°C

Agency Recognition

AGENCY	AGENCY FILE NUMBER
	UL(E211981)
	C-UL(E211981)
	TÜV (R50004084)



SVHC Compliant

Electrical Characteristics (23°C)

Strap

Part Number	Hold Current	Trip Current	Max. Time to trip	Rated Voltage	Max. Current	Typ. Power	Resistance		
	I _H , A	I _T , A	at 5xI _H , S	V _{MAX} , V _{DC}	I _{MAX} , A	P _d , W	R _{MIN}	R _{MAX}	R _{1MAX}
FVL170F	1.70	4.10	5.0	12	100	1.4	0.018	0.032	0.064
FVL175F	1.75	4.20	5.0	12	100	1.4	0.017	0.031	0.062
FVL230F	2.30	5.00	5.0	12	100	1.4	0.012	0.018	0.036
FVT110F	1.10	2.70	5.0	16	100	0.7	0.038	0.070	0.140
FVT170F	1.70	3.40	5.0	16	100	0.7	0.030	0.052	0.105
FVT175F	1.75	3.60	5.0	16	100	0.8	0.029	0.051	0.102
FVT200F	2.00	4.70	5.0	16	100	0.9	0.022	0.039	0.078
FVT210GF	2.10	4.70	5.0	16	100	1.2	0.018	0.030	0.060
FVT240F	2.40	5.90	5.0	16	100	1.0	0.014	0.026	0.052
FSR120F	1.20	2.70	5.0	15	100	1.2	0.085	0.160	0.220
FSR175F	1.75	3.80	5.0	15	100	1.5	0.050	0.090	0.120
FSR200F	2.00	4.40	4.0	30	100	1.9	0.030	0.060	0.100
FSR350F	3.50	6.30	3.0	30	100	2.5	0.017	0.031	0.050
FSR420F	4.20	7.60	6.0	30	100	2.9	0.012	0.024	0.040
FLR190F	1.90	3.90	5.0	15	100	1.2	0.039	0.072	0.102
FLR260F	2.60	5.80	5.0	15	100	2.5	0.020	0.042	0.063
FLR380F	3.80	8.30	5.0	15	100	2.5	0.013	0.026	0.037
FLR450F	4.50	8.90	5.0	20	100	2.5	0.011	0.020	0.028
FLR550F	5.50	10.50	5.0	20	100	2.8	0.009	0.016	0.022
FLR600F	6.00	11.70	5.0	20	100	2.8	0.007	0.014	0.019
FLR730F	7.30	14.10	5.0	20	100	3.3	0.006	0.012	0.015

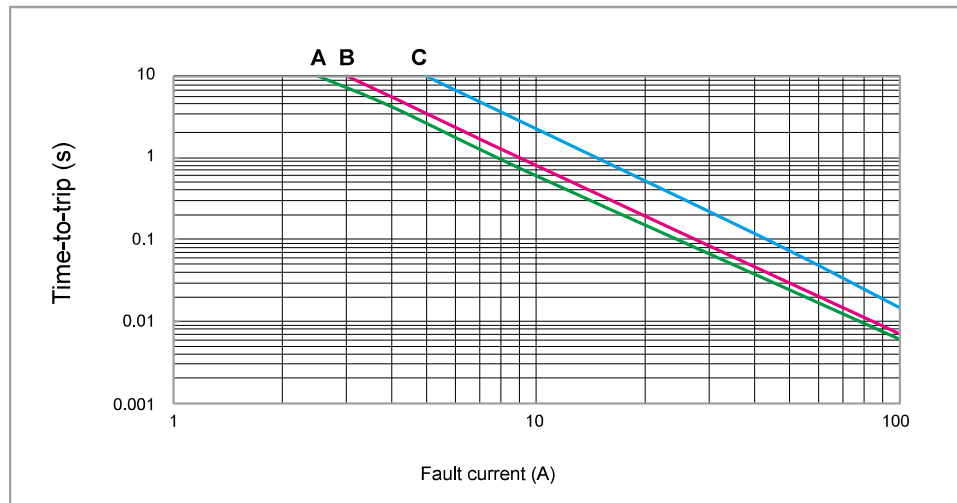
Thermal Derating for PPTC Device at Various Ambient Temperatures

TEMPERATURE	-40°C	-20°C	0°C	23°C	30°C	40°C	50°C	60°C	70°C	85°C
FVL Series	195%	163%	132%	100%	85%	68%	53%	38%	21%	-
FVT Series	172%	149%	124%	100%	90%	78%	65%	53%	41%	23%
FSR Series	152%	135%	118%	100%	90%	82%	74%	65%	56%	42%
FLR Series	147%	132%	117%	100%	94%	86%	80%	71%	61%	52%

Typical Time-To-Trip at 23°C

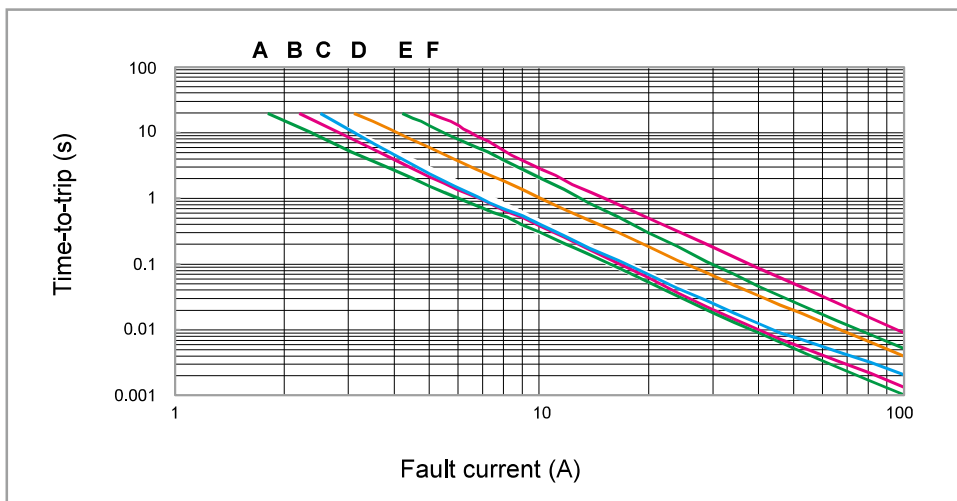
FVL Series

A = FVL170F
B = FVL175F
C = FVL230F



FVT Series

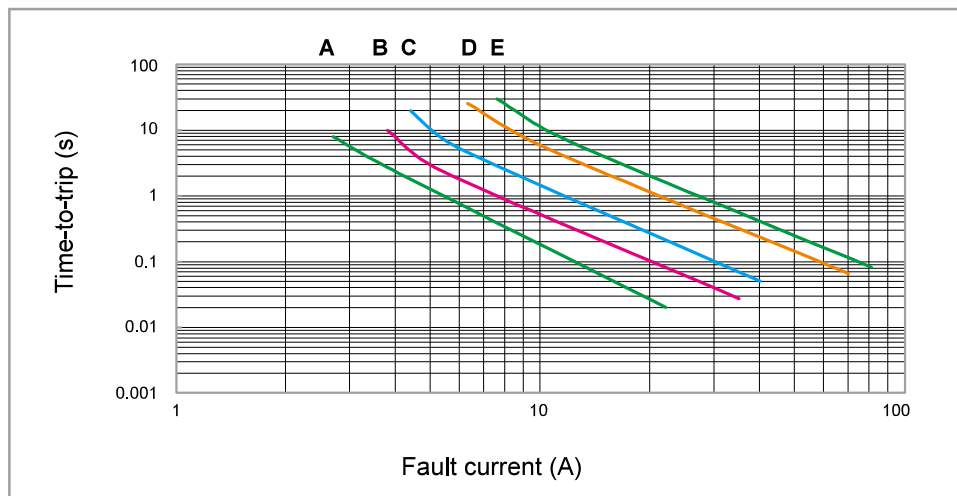
A = FVT110F
B = FVT170F
C = FVT175F
D = FVT200F
E = FVT210F
F = FVT240F



Strap

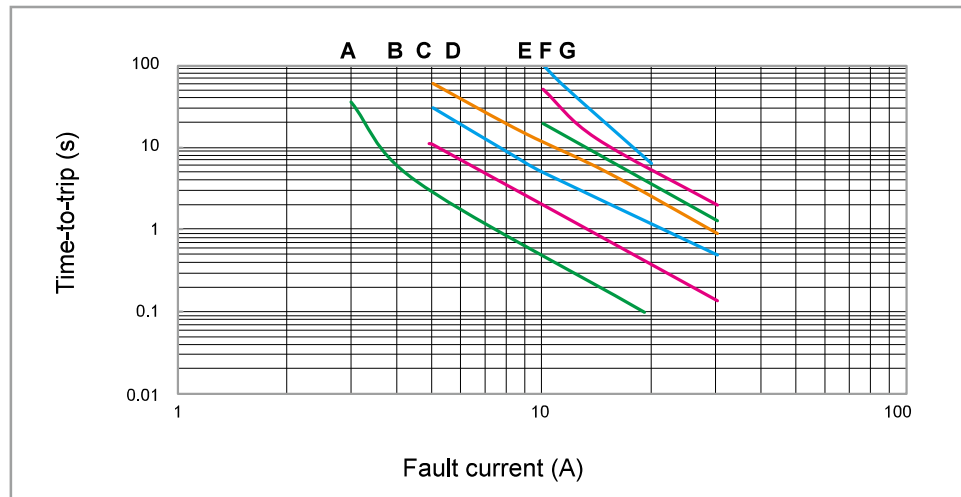
FSR Series

A = FSR120F
B = FSR175F
C = FSR200F
D = FSR350F
E = FSR420F



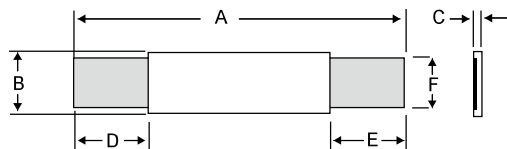
FLR Series

A = FLR190F
B = FLR260F
C = FLR380F
D = FLR450F
E = FLR550F
F = FLR600F
G = FLR730F

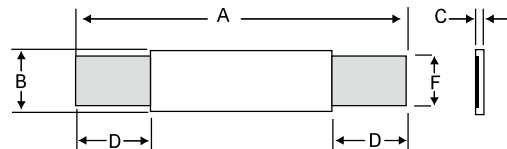


Product Dimensions (mm)

Strap



Top view
Fig.1



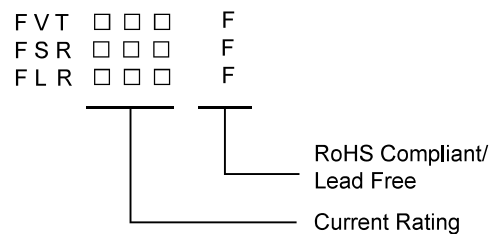
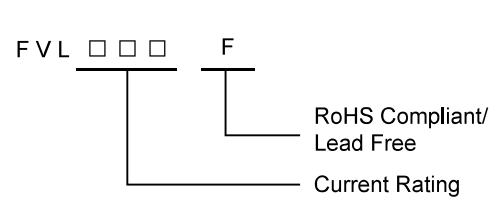
Top view
Fig.2

Part Number	Fig	A		B		C		D		E		F	
		Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
FVL170F	1	20.8	23.2	3.5	3.9	0.5	0.8	4.5	6.5	4.5	6.5	2.4	2.6
FVL175F	1	23.0	24.5	2.9	3.3	0.5	0.8	4.7	7.2	3.8	5.4	2.4	2.6
FVL230F	1	20.9	23.1	4.9	5.3	0.5	0.8	4.1	5.8	4.1	5.8	3.9	4.1
FVT110F	2	23.6	25.6	2.6	2.9	0.5	0.9	7.0	8.0	---	---	2.3	2.5
FVT170F	2	15.4	17.5	7.0	7.4	0.5	0.9	4.0	6.2	---	---	3.9	4.1
FVT175F	2	21.0	23.0	3.5	3.9	0.5	0.9	4.6	6.6	---	---	2.9	3.1
FVT200F	2	21.0	23.0	4.1	4.5	0.5	0.9	3.0	4.8	---	---	2.9	3.1
FVT210GF	2	21.0	23.0	4.9	5.2	0.5	0.9	4.1	5.5	---	---	3.9	4.1
FVT240F	2	23.8	26.0	4.9	5.3	0.5	0.9	3.5	5.5	---	---	3.9	4.1
FSR120F	2	19.9	22.1	4.9	5.2	0.6	1.0	5.5	7.5	---	---	3.9	4.1
FSR175F	2	20.9	23.1	4.9	5.2	0.6	1.0	4.1	5.5	---	---	3.9	4.1
FSR200F	2	21.3	23.4	10.2	11.0	0.5	1.1	5.0	7.6	---	---	4.8	5.4
FSR350F	2	28.4	31.8	13.0	13.5	0.5	1.1	6.3	8.9	---	---	5.9	6.1
FSR420F	2	30.6	32.4	12.9	13.6	0.5	1.1	5.0	7.5	---	---	5.9	6.1
FLR190F	2	19.9	22.1	4.9	5.5	0.6	1.0	5.5	7.5	---	---	3.9	4.1
FLR260F	2	20.9	23.1	4.9	5.5	0.6	1.0	4.1	5.5	---	---	3.9	4.1
FLR380F	2	24.0	26.0	6.9	7.5	0.6	1.0	4.1	5.5	---	---	4.9	5.1
FLR450F	2	24.0	26.0	9.9	10.5	0.6	1.0	5.3	6.7	---	---	5.9	6.1
FLR550F	2	35.0	37.0	6.9	7.5	0.6	1.0	5.3	6.7	---	---	4.9	5.1
FLR600F	2	24.0	26.0	13.9	14.5	0.6	1.0	4.1	5.5	---	---	5.9	6.1
FLR730F	2	27.1	29.1	13.9	14.5	0.6	1.0	4.1	5.5	---	---	5.9	6.1

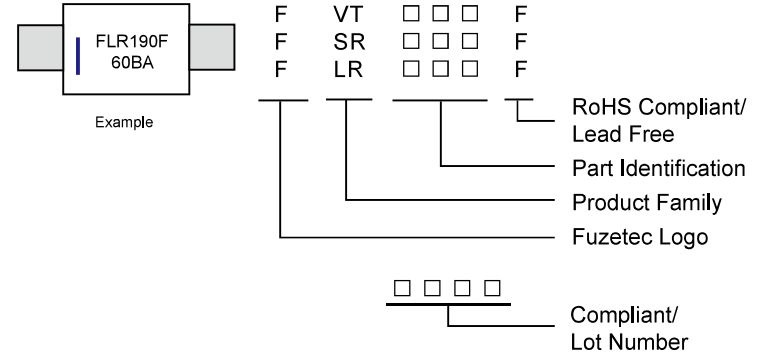
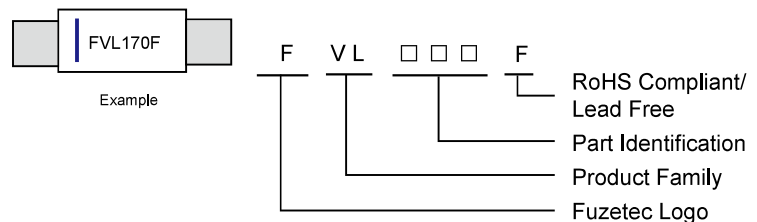
Physical specifications

Lead material : 0.13mm nominal thickness, quarter-hard nickel.
Insulating material : Polyester tape.

Part Numbering System



Part Marking System



Strap

Package Information

Part Number	Standard Package
FVL170F~FVL175F	: 1.0K Pcs/Bag
FVL230F	: 500 Pcs/Bag
FVT110F~FVT210F	: 1.0K Pcs/Bag
FVT240F	: 500 Pcs/Bag
FSR120F~FSR175F	: 1.0K Pcs/Bag
FSR200F~FSR420F	: 500 Pcs/Bag
FLR190F~FLR380F	: 1.0K Pcs/Bag
FLR450F~FLR730F	: 500 Pcs/Bag

Warning :

- Operation beyond the specified maximum ratings or improper use may result in damage and possible electrical arcing and/or flame.
- PPTC device are intended for occasional overcurrent protection. Application for repeated overcurrent condition and/or prolonged trip are not anticipated.
- Avoid contact of PPTC device with chemical solvent. Prolonged contact will damage the device performance.

