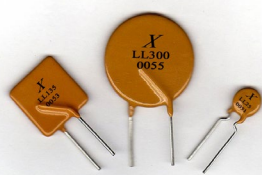


# Resettable PPTC Fuse



## Features

- Broadest range of Thru - Hole devices available in the industry
- Cured, Flame retardant epoxy, meets UL 94 V-0 requirement
- RoHS Compliant & Halogen Free

## Agency Approval and Environmental Compliance

Agency	File Number	Regulation
UL, C-UL	E211981	

Note: XLL040~XLL070, XLL100~XLL130 C-UL In Process

**120V XLL Series Thru - Hole Devices**

## Electrical Characteristics

Part Number	$I_H$	$I_T$	$T_{Trip}$	$I_{MAX}$	$V_{MAX}$	$V_{I-MAX}$	$P_D$ Typ	$R_{MIN}$	$R1_{MAX}$
	A	A	sec/A	A	VAC/DC	VAC/DC	W	$\Omega$	$\Omega$
<b>XLL010</b>	0.10	0.20	10.0/0.50	2.0	120	135	0.84	3.00	7.50
<b>XLL017</b>	0.17	0.34	10.0/0.85	2.0	120	135	0.84	2.00	7.00
<b>XLL020</b>	0.20	0.40	9.0/1.00	2.0	120	135	1.08	1.83	4.40
<b>XLL025</b>	0.25	0.50	7.5/1.25	3.0	120	135	1.08	1.25	3.00
<b>XLL030</b>	0.30	0.60	8.5/1.50	3.0	120	135	1.44	0.88	2.10
<b>XLL040</b>	0.40	0.80	6.5/2.00	3.0	120	135	1.44	0.55	1.29
<b>XLL050</b>	0.50	1.00	6.0/2.50	3.0	120	135	1.56	0.50	1.17
<b>XLL065</b>	0.65	1.30	5.7/3.25	5.0	120	135	1.68	0.31	0.72
<b>XLL070</b>	0.75	1.50	6.3/3.75	5.0	120	135	1.80	0.25	0.60
<b>XLL075</b>	0.75	1.50	15.0/3.75	7.5	120	135	2.64	0.25	0.69
<b>XLL090</b>	0.90	1.80	7.2/4.50	5.0	120	135	1.80	0.20	0.47
<b>XLL100</b>	1.00	2.00	15.0/5.00	10.0	120	135	2.64	0.18	0.47
<b>XLL110</b>	1.10	2.20	8.2/5.50	8.0	120	135	2.28	0.15	0.38
<b>XLL125</b>	1.25	2.50	20.0/6.25	12.5	120	135	2.88	0.11	0.33
<b>XLL130</b>	1.35	2.70	9.6/6.75	10.0	120	135	2.64	0.12	0.30
<b>XLL135</b>	1.35	2.70	20.0/6.75	13.5	120	135	3.12	0.11	0.30
<b>XLL160</b>	1.60	3.20	11.4/8.00	12.0	120	135	3.12	0.09	0.22
<b>XLL185</b>	1.85	3.70	12.6/9.25	12.0	120	135	3.36	0.08	0.19
<b>XLL200</b>	2.00	4.20	36.0/10.00	20.0	120	135	4.32	0.08	0.21
<b>XLL250</b>	2.50	5.00	15.6/12.50	15.0	120	135	4.44	0.05	0.13
<b>XLL300</b>	3.00	6.00	19.8/15.00	17.0	120	135	4.56	0.04	0.10
<b>XLL375</b>	3.75	7.50	24.0/18.75	20.0	120	135	4.80	0.03	0.08

# Resettable PPTC Fuse



$I_H$ =Hold current-maximum current at which the device will not trip at 23°C still air.

$I_T$ =Trip current-minimum current at which the device will always trip at 23°C still air.

$T_{trip}$ =Maximum time to trip(s) at assigned current.

$I_{MAX}$ = Maximum fault current device can withstand without damage at rated voltage ( $V_{MAX}$ ).

$V_{MAX}$ =Maximum voltage device can withstand without damage at its rated current.

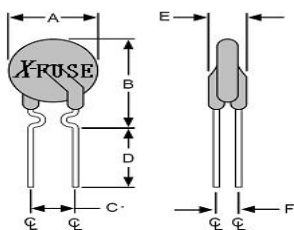
$P_{D Typ}$ =Typical power dissipated from device when in tripped state in 23°C still air environment.

$R_{MIN}$ =Minimum device resistance at 23°C.

$R1_{MAX}$ =Maximum device resistance at 23°C, 1 hour after tripping .

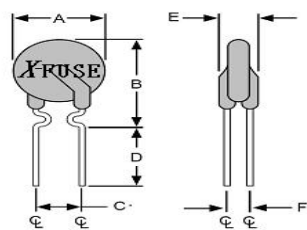
## Product Dimensions (Millimeter)

Part Number	Figure	A	B	C	D	E	F
		Maximum	Maximum	Typical	Minimum	Maximum	Typical
<b>XLL010</b>	1	7.9	13.0	5.1	7.6	3.8	2.2
<b>XLL017</b>	1	7.9	13.0	5.1	7.6	3.8	2.2
<b>XLL020</b>	2	7.9	13.0	5.1	7.6	3.8	2.2
<b>XLL025</b>	2	7.9	13.0	5.1	7.6	3.8	2.2
<b>XLL030</b>	2	7.9	13.0	5.1	7.6	3.8	2.2
<b>XLL040</b>	2	8.2	14.2	5.1	7.6	3.8	2.2
<b>XLL050</b>	2	9.2	14.9	5.1	7.6	3.8	2.2
<b>XLL065</b>	2	9.7	14.9	5.1	7.6	3.8	2.2
<b>XLL070</b>	2	10.6	15.5	5.1	7.6	3.8	2.2
<b>XLL075</b>	4	10.9	17.0	5.1	7.6	4.1	2.2
<b>XLL090</b>	2	11.9	15.9	5.1	7.6	3.8	2.2
<b>XLL100</b>	4	11.5	20.1	5.1	7.6	4.1	2.2
<b>XLL110</b>	3	13.3	18.3	5.1	7.6	4.1	2.2
<b>XLL125</b>	4	14.0	21.7	5.1	7.6	4.1	2.2
<b>XLL130</b>	3	15.5	20.6	5.1	7.6	4.1	2.2
<b>XLL135</b>	4	16.3	21.7	5.1	7.6	4.1	2.2
<b>XLL160</b>	3	17.5	22.5	5.1	7.6	4.1	2.2
<b>XLL185</b>	3	19.9	24.9	5.1	7.6	4.1	2.2
<b>XLL200</b>	4	23.5	27.9	10.2	7.6	4.1	2.2
<b>XLL250</b>	3	22.5	27.5	10.2	7.6	4.1	2.2
<b>XLL300</b>	3	25.5	30.0	10.2	7.6	4.1	2.2
<b>XLL375</b>	3	29.5	34.0	10.2	7.6	4.1	2.2



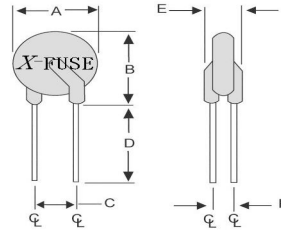
**Figure 1**

Lead Size :24AWG  
Φ 0.51 mm Diameter



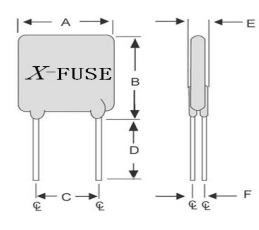
**Figure 2**

Lead Size :22AWG  
Φ 0.65 mm Diameter



**Figure 3**

Lead Size :20AWG  
Φ 0.81 mm Diameter



**Figure 4**

Lead Size :20AWG  
Φ 0.81 mm Diameter

# Resettable PPTC Fuse

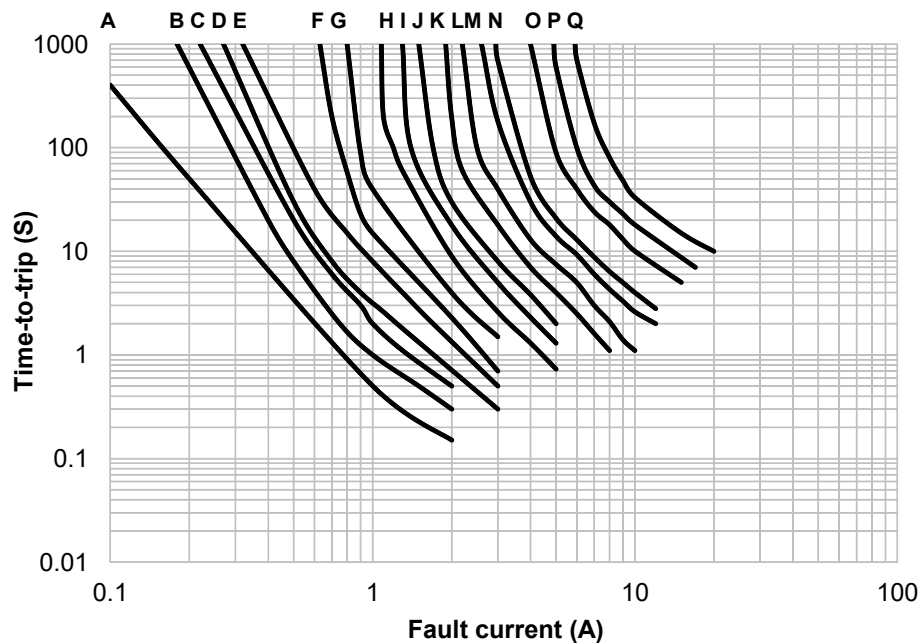


## Thermal Derating Chart-I<sub>H</sub> (A)

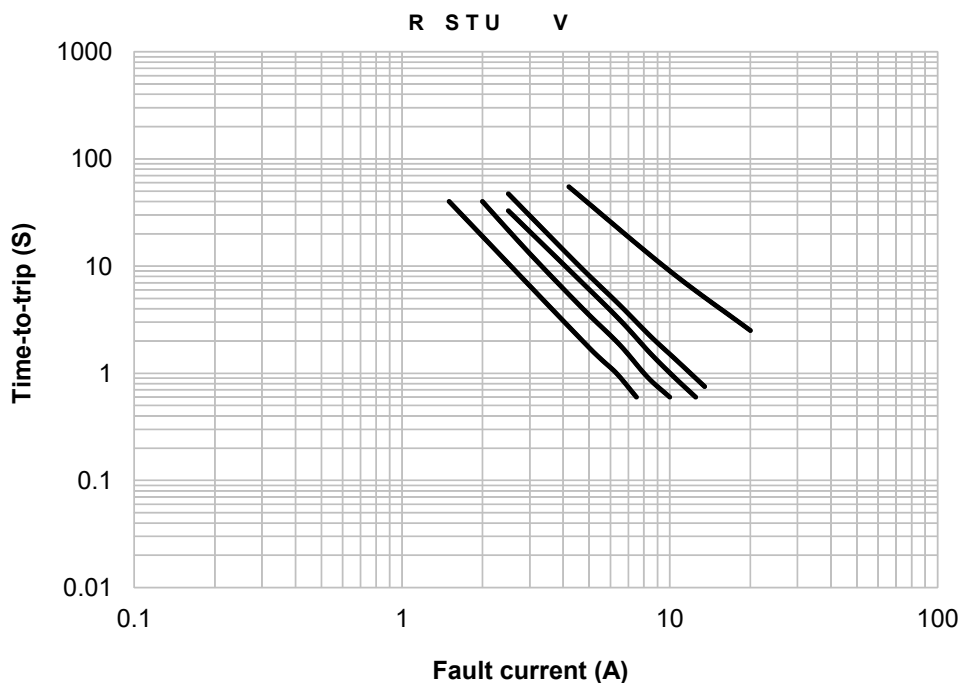
Part Number	Maximum ambient operating Temperature(°C)									
	-40	-20	0	23	30	40	50	60	70	85
<b>XLL010</b>	0.16	0.14	0.12	0.10	0.09	0.08	0.07	0.06	0.05	0.04
<b>XLL017</b>	0.27	0.23	0.20	0.17	0.15	0.14	0.12	0.10	0.09	0.06
<b>XLL020</b>	0.32	0.28	0.24	0.20	0.18	0.16	0.14	0.12	0.10	0.08
<b>XLL025</b>	0.40	0.35	0.30	0.25	0.23	0.20	0.18	0.15	0.13	0.10
<b>XLL030</b>	0.47	0.41	0.36	0.30	0.27	0.24	0.21	0.18	0.15	0.11
<b>XLL040</b>	0.63	0.55	0.48	0.40	0.36	0.32	0.28	0.24	0.20	0.15
<b>XLL050</b>	0.79	0.69	0.60	0.50	0.45	0.40	0.35	0.30	0.25	0.19
<b>XLL065</b>	1.03	0.90	0.77	0.65	0.59	0.52	0.46	0.39	0.33	0.25
<b>XLL070</b>	1.19	1.04	0.89	0.75	0.68	0.60	0.53	0.45	0.38	0.29
<b>XLL075</b>	1.19	1.04	0.89	0.75	0.68	0.60	0.53	0.45	0.38	0.29
<b>XLL090</b>	1.42	1.24	1.07	0.90	0.81	0.72	0.63	0.54	0.45	0.34
<b>XLL100</b>	1.58	1.38	1.19	1.00	0.90	0.80	0.70	0.60	0.50	0.38
<b>XLL110</b>	1.74	1.52	1.31	1.10	0.99	0.88	0.77	0.66	0.55	0.42
<b>XLL125</b>	1.98	1.73	1.49	1.25	1.13	1.00	0.88	0.75	0.63	0.48
<b>XLL130</b>	2.13	1.86	1.61	1.35	1.22	1.08	0.95	0.81	0.68	0.51
<b>XLL135</b>	2.13	1.86	1.61	1.35	1.22	1.08	0.95	0.81	0.68	0.51
<b>XLL160</b>	2.53	2.21	1.90	1.60	1.44	1.28	1.12	0.96	0.80	0.61
<b>XLL185</b>	2.92	2.55	2.20	1.85	1.67	1.48	1.30	1.11	0.93	0.70
<b>XLL200</b>	3.16	2.76	2.38	2.00	1.80	1.60	1.40	1.20	1.00	0.76
<b>XLL250</b>	3.95	3.45	2.98	2.50	2.25	2.00	1.75	1.50	1.25	0.95
<b>XLL300</b>	4.74	4.14	3.57	3.00	2.70	2.40	2.10	1.80	1.50	1.14
<b>XLL375</b>	5.93	5.18	4.46	3.75	3.38	3.00	2.63	2.25	1.88	1.43

## Typical Time-To-Trip at 23°C

- A = ~~X~~LL010
- B = ~~X~~LL017
- C = ~~X~~LL020
- D = ~~X~~LL025
- E = ~~X~~LL030
- F = ~~X~~LL040
- G = ~~X~~LL050
- H = ~~X~~LL065
- I = ~~X~~LL070
- J = ~~X~~LL090
- K = ~~X~~LL110
- L = ~~X~~LL130
- M = ~~X~~LL160
- N = ~~X~~LL185
- O = ~~X~~LL250
- P = ~~X~~LL300
- Q = ~~X~~LL375



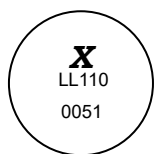
- R = ~~X~~LL075
- S = ~~X~~LL100
- T = ~~X~~LL125
- U = ~~X~~LL135
- V = ~~X~~LL200



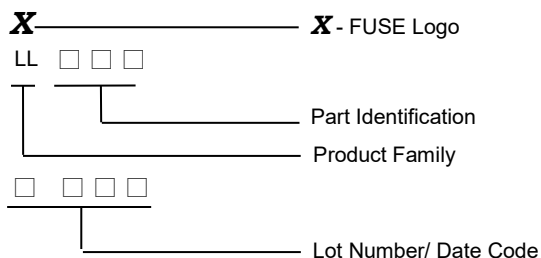
# Resettable PPTC Fuse



## Marking System



Example



## Package Information

### Bulk:

<b>X</b> LL010~ <b>X</b> LL050	-----	500pcs per bag
<b>X</b> LL065~ <b>X</b> LL110	-----	300pcs per bag
<b>X</b> LL125~ <b>X</b> LL160	-----	200pcs per bag
<b>X</b> LL185~ <b>X</b> LL375	-----	100pcs per bag

### Tape & Reel:

<b>X</b> LL010~ <b>X</b> LL050	-----	2000pcs per reel
<b>X</b> LL065~ <b>X</b> LL075	-----	1500pcs per reel
<b>X</b> LL090	-----	2000pcs per reel
<b>X</b> LL100~ <b>X</b> LL110	-----	1500pcs per reel
<b>X</b> LL125~ <b>X</b> LL135	-----	1000pcs per reel

**Caution** : Operation beyond the specified maximum ratings or misuse can result in damage and possible electrical arcing and/or flame.  
PPTC device are designed for occasional overcurrent protection. Not for continuously overcurrent circumstance and/or prolonged trip are not anticipated.  
Keep PPTC device away from chemical solvent contact. Prolonged contact will damage the device performance.