

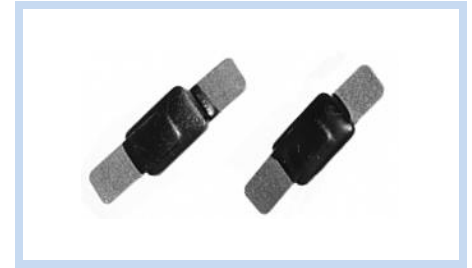
# PTC Resettable Fuse Low Rho Strap Type

MPSL Series

MERITEK

## FEATURE

- Operation Current: 1.4A to 7.0A
- Maximum Operating Voltage: 6V
- Temperature Range: -40°C to 85°C
- Low profile, Solid state
- Electronic applications: Rechargeable battery packs, Lithium cell, battery packs and laptop computer
- UL/cUL safety approved: certification No: E223037



## PART NUMBERING SYSTEM

MPSL     140  
(1)            (2)



No	Item	Digit	Description	Series Reference
(1)	Meritek Series	MPSL	Polymer Resettable Fuse Series	Strap Type
(2)	Current Rating	140	140: 1.4A	190: 1.9A

## ELECTRICAL CHARACTERISTICS AT 23°C

Item	Value	Characteristics
Hold Current	1.4A	$I_H$ =Hold current-maximum current at which the device will not trip at 23°C still air.
Trip Current	3.6A	$I_T$ =Trip current-minimum current at which the device will always trip at 23°C still air.
Rated Voltage	6V <sub>DC</sub>	$V_{MAX}$ =Maximum voltage device can withstand without damage at its rated current ( $I_{MAX}$ ).
Max Current	50A	$I_{MAX}$ = Maximum fault current device can withstand without damage at rated voltage ( $V_{MAX}$ ).
Typical Power	1.0W	$P_d$ =Typical power dissipated-type amount of power dissipated by the device when in the tripped state in 23°C still air environment.
$T_{MAX}$ to Trip	3.0Sec.	Device response time, at current of 7.0A
Resistance	$R_{MIN}$	0.010 Ω $R_{MIN}$ =Minimum device resistance at 23°C prior to tripping.
	$R_{MAX}$	0.020 Ω $R_{MAX}$ =Maximum device resistance at 23°C prior to tripping.
	$R1_{MAX}$	0.035 Ω $R1_{MAX}$ =Maximum device resistance at 23°C measured 1 hour after tripping or reflow soldering of 260°C for 20 seconds.

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

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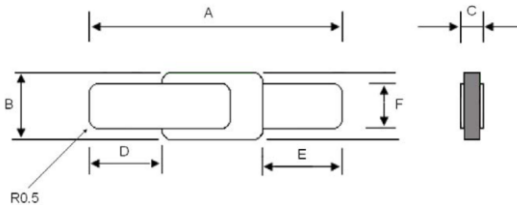
MPSL Series

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## ELECTRICAL CHARACTERISTICS AT 23°C

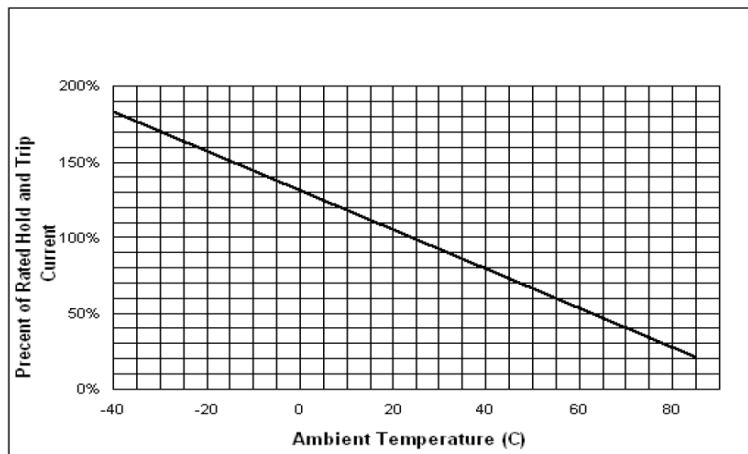
Part Number	Hold Current	Trip Current	Maximum Current	Rated Voltage	Typical Power	Max Time to Trip		Resistance Tolerance		
						Current	Time	R <sub>MIN</sub>	R <sub>MAX</sub>	R1 <sub>MAX</sub>
						I <sub>H</sub> , A	I <sub>T</sub> , A	I <sub>MAX</sub> , A	V <sub>MAX</sub> , V <sub>DC</sub>	P <sub>d</sub> , W
MPSL140	1.4	3.6	50	6	1.0	7.0	3.0	0.010	0.020	0.035
MPSL190	1.9	4.9	50	6	1.0	9.5	3.0	0.006	0.014	0.024
MPSL250	2.5	8.0	50	6	1.0	12.5	3.0	0.006	0.012	0.020
MPSL270	2.7	8.1	50	6	1.0	13.5	2.0	0.006	0.012	0.018
MPSL310	3.1	8.8	50	6	1.0	15.5	3.0	0.004	0.010	0.016
MPSL370	3.7	9.0	50	6	1.0	18.5	5.0	0.003	0.008	0.014
MPSL450L	4.5	9.5	50	6	1.0	22.5	3.0	0.0025	0.0055	0.010
MPSL500	5.0	10.0	50	6	1.0	25.0	3.0	0.0015	0.0050	0.0090
MPSL700	7.0	14.0	50	6	1.0	25.0	3.0	0.0010	0.0045	0.0080

## DIMENSIONS



Part Number	A (mm)		B (mm)		C (mm)		D (mm)		E (mm)		F (mm)	
	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
MPSL140	9.20	10.80	3.15	3.45	0.55	0.95	2.15	3.25	2.15	3.25	2.20	2.40
MPSL190	9.20	10.80	3.15	3.45	0.55	0.95	2.15	3.25	2.15	3.25	2.20	2.40
MPSL250	9.20	10.80	3.15	3.45	0.55	0.95	2.15	3.25	2.15	3.25	2.20	2.40
MPSL270	9.20	10.80	3.15	3.45	0.55	0.95	2.15	3.25	2.15	3.25	2.20	2.40
MPSL310	9.20	10.80	3.15	3.45	0.55	0.95	2.15	3.25	2.15	3.25	2.20	2.40
MPSL370	9.20	10.80	3.15	3.45	0.55	0.95	2.15	3.25	2.15	3.25	2.20	2.40
MPSL450L	20.50	21.50	3.50	3.90	0.55	0.95	7.00	8.00	7.00	8.00	2.40	2.60
MPSL500	20.50	21.50	3.50	3.90	0.55	1.10	7.00	8.00	7.00	8.00	2.40	2.60
MPSL700	21.00	23.00	3.50	3.90	0.55	1.10	4.60	6.60	4.60	6.60	2.90	3.10

## THERMAL DERATING CURVE



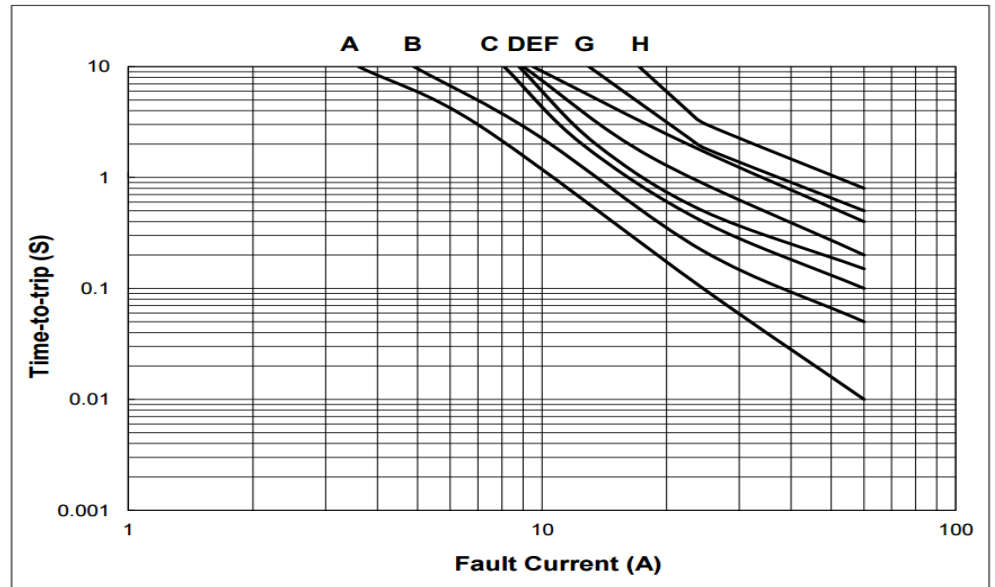
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## TYPICAL TIME-TO-TRIP AT 23°C

A = MPSL140  
B = MPSL190  
C = MPSL250  
D = MPSL270  
E = MPSL310  
F = MPSL370  
G = MPSL450L  
H = MPSL700



## 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 is not anticipated.
- Avoid contact of PPTC device with chemical solvent. Prolonged contact will damage the device performance

**NOTE:** Specification subject to change without notice.