



Features

- Smaller size of 1210
- Fast tripping resettable circuit protection
- Surface mount packaging for automated assembly
- Agency recognition: UL, CSA, TUV

SEL-USE

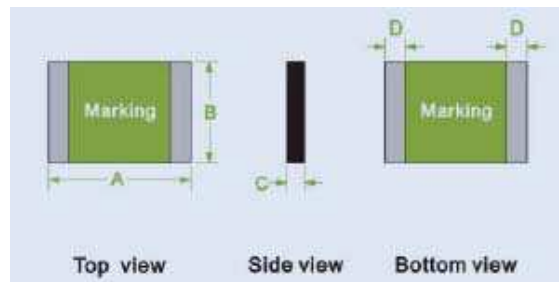


LP-USM series

Surface-mount devices

Product Dimensions (mm)

Part number	A	B	C	D	Part marking
	Max	Max	Max	Max	
LP-USM005	3.43	2.80	1.25	0.60	0
LP-USM010	3.43	2.80	1.25	0.60	1
LP-USM020	3.43	2.80	1.25	0.60	2
LP-USM035	3.43	2.80	0.85	0.60	3
LP-USM050	3.43	2.80	0.85	0.60	4
LP-USM075	3.43	2.80	1.30	0.60	5
LP-USM110	3.43	2.80	1.30	0.60	6
LP-USM150	3.43	2.80	2.25	0.60	7



Electrical Characteristics

Part number	I_H	I_T	V_{max}	I_{max}	T_{trip}		$P_{d\ typ}$	R_{min}	R_{1max}
	(A)	(A)	(V)	(A)	Current(A)	Time(S)	(W)	Ohm	Ohm
LP-USM005	0.05	0.15	30	10	1.5	0.25	1.0	3.60	50.0
LP-USM010	0.10	0.30	30	10	1.5	0.50	1.0	1.60	15.0
LP-USM020	0.20	0.40	30	10	8.0	0.02	1.0	0.80	5.0
LP-USM035	0.35	0.70	6	40	8.0	0.20	1.0	0.32	1.30
LP-USM050	0.50	1.00	13.2	40	8.0	0.10	1.0	0.25	0.90
LP-USM075	0.75	1.50	6	40	8.0	0.10	1.0	0.13	0.40
LP-USM110	1.10	2.20	6	40	8.0	0.30	1.0	0.06	0.21
LP-USM150	1.50	3.00	6	40	8.0	0.50	1.0	0.04	0.11

I_H =Hold current: maximum current at which the device will not trip at 25C still air.

I_T =Trip current: minimum current at which the device will always trip at 25C still air.

V_{max} =Maximum voltage device can withstand without damage at rated current.

I_{max} =Maximum fault current device can withstand without damage at rated voltage.

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

$P_{d\ typ}$ =Typical power dissipation: typical amount of power dissipated by the device when in state air environment.

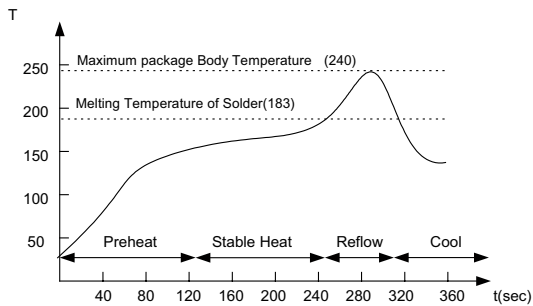
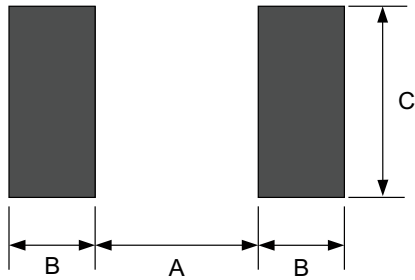
R_{min} =Minimum device resistance at 25C prior to tripping.

R_{1max} =Maximum device resistance measured in the nontripped state 1 hour post reflow.

Test Procedures And Requirements

Test	Test Conditions	Accept/Reject Criteria
Resistance	In still air @ 25C	$R_{min} < R < R_{max}$
Time to Trip	Specified current, V_{max} , 25C	$T < \text{maximum Time to Trip}$
Hold Current	30min, at I_H	No trip
Trip Cycle Life	V_{max} , I_{max} , 100cycles	No arcing or burning
Trip Endurance	V_{max} , 24hours	No arcing or burning

Solder Reflow Recommendations



Solder Pad Layouts

Part number	A (mm)	B (mm)	C (mm)
LP-USM005	2.00	1.00	2.50
LP-USM010	2.00	1.00	2.50
LP-USM020	2.00	1.00	2.50
LP-USM035	2.00	1.00	2.50
LP-USM050	2.00	1.00	2.50
LP-USM075	2.00	1.00	2.50
LP-USM110	2.00	1.00	2.50
LP-USM150	2.00	1.00	2.50

* Recommended reflow methods: IR, Vapor phase oven, hot air oven, wave solder.

* Devices can be cleaned using standard industry methods and solvents.

Notes:

If reflow temperatures exceed the recommended profile, devices may not meet the performance requirements.

Package Information

Tape and Reel:

LP-USM005~ LP-USM110.....2000pcs per reel

LP-USM150.....3000pcs per reel