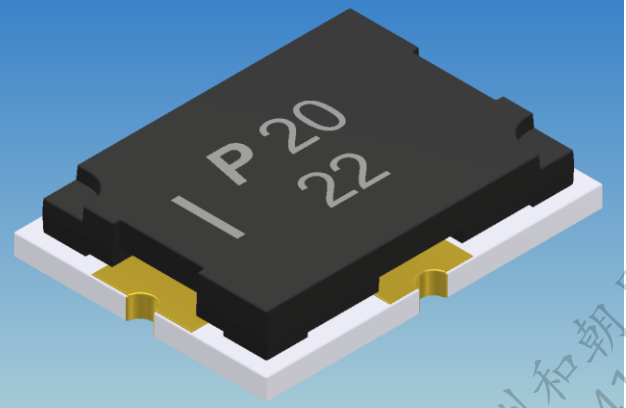


PRODUCT
DATASHEET



苏州和朝易
15962341906

CLM1612P2022F-AT Device

CLM1612P2022F-AT Device

Electrical Characteristics

Current Capacity	100% x I_{rated} No Melting
Cut Time	200% x I_{rated} < 1 min
Interrupting Current	5 x I_{rated} , power on 5 ms, power off 995 ms, 10000 cycles No Melting
Over Voltage Operation	In operation voltage range, the fusing time is <1min.

Note on Electrical Specifications & Characteristics

■ Vocabulary

- I_{rated} = Current carrying capacity that is measured at 40°C thermal equilibrium condition.
 I_{break} = The current that the fuse element is able to interrupt.
 V_{max} = The maximum voltage that can be cut off by fuse.
 V_{op} = Range of operation voltage.
 R_{heater} = The resistance of the heating element.
 R_{fuse} = The resistance of the fuse element.

Cells in series = Number of battery cells connected in series in the circuit for CLM device to protect.

- Value specified is determined by using the PWB with 6mm*2oz copper traces, AWG14 covered wire, and 0.6mm glass epoxy PCB.
- Specifications are subject to change without notice.

⚠ WARNING

■ General

- Before and after mounted, the ultrasonic-cleaning or immersion-cleaning must not be done to CLM device. The flux on element would flow, and it would not be satisfied its specification when cleaning is done. In addition, a similar influence happens when the product comes in contact with cleaning-solution. These products after cleaning will not be guaranteed.
- Silicone-based oils, oils, solvents, gels, electrolytes, fuels, acids, and the like will adversely affect the properties of CLM devices, and shall not be used or applied.
- Please Do Not reuse the CLM device removed by the soldering process.
- CLM devices are secondary protection devices and are used solely for sporadic, accidental over-current or over-temperature error condition, and shall NOT be used if or when constant or repeated fault conditions (such fault conditions may be caused by, among others, incorrect pin-connection of a connector) or over-extensive trip events may occur.
- Operation over the maximum rating or other forms of improper use may cause failure, arcing, flame and/or other damage to the CLM devices.
- The performance of CLM devices will be adversely affected if they are improperly used under electronic, thermal and/or mechanical procedures and/or conditions non-conformant to those recommended by manufacturer.
- Customers shall be responsible for determining whether it is necessary to have back-up, failsafe and/or fool-proof protection to avoid or minimize damage that may result from extra-ordinary, irregular function or failure of CLM devices.
- There should be minimum of 0.1mm spacing between CLM and surrounding compounds, to maintain the product characteristics and avoid damage other surrounding compounds.
- This product is designed and manufactured only for general-use of electronics devices. We do not recommend that it is used for the applications Military, Medical and so on which may cause direct damages on life, bodies or properties.
- Please prevent to contact resin-mold with CLM devices, which might be infiltrated by resin material and lead to the specification incompatible. It will not be guaranteed after resin-mold has been done to product.
- Hand soldering conditions for the soldering iron to the device are a temperature of 300±5 °C for 3±1 seconds.

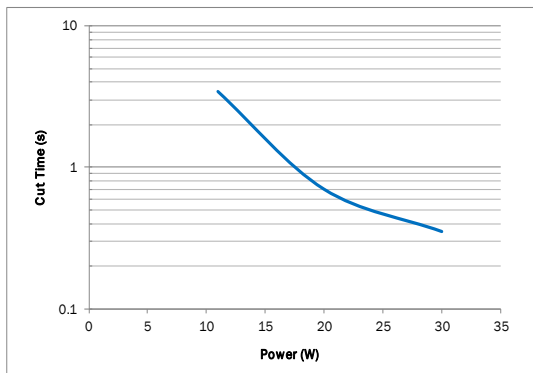
CLM1612P2022F-AT Device

Thermal Derating Characteristics

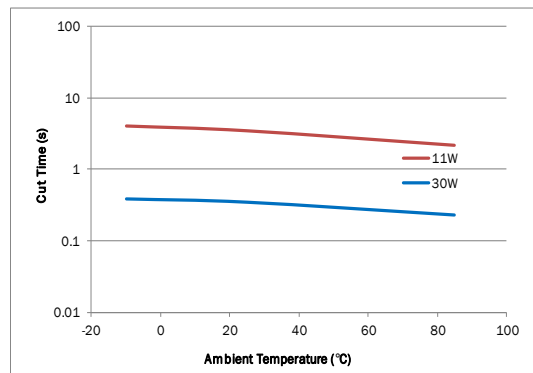
Ambient Temperature (°C)	25	40	60
Recommend Rated Current (A)	25.0	22.0	18.0

Cut Time by Heater Operation

■ Various heater wattage at 25°C ambient temperature.

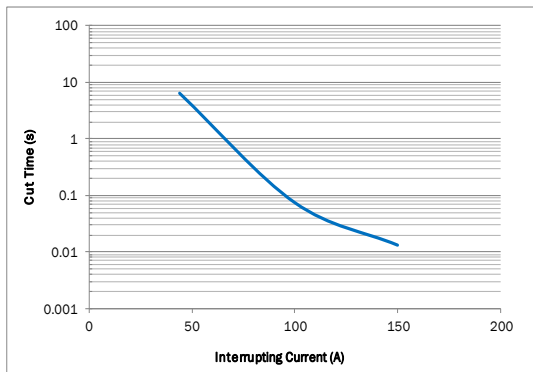


■ Constant heater wattage at various ambient temperature.

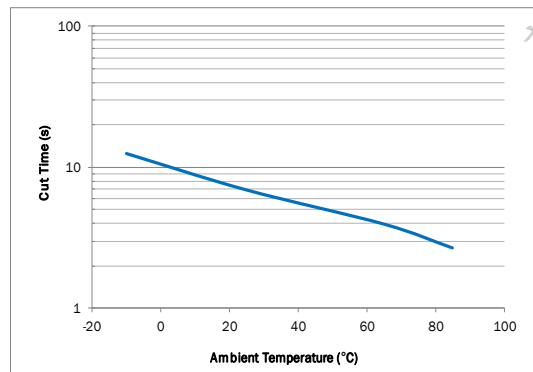


Cut Time by Current Operation

■ Various interrupting current at 25°C ambient temperature.

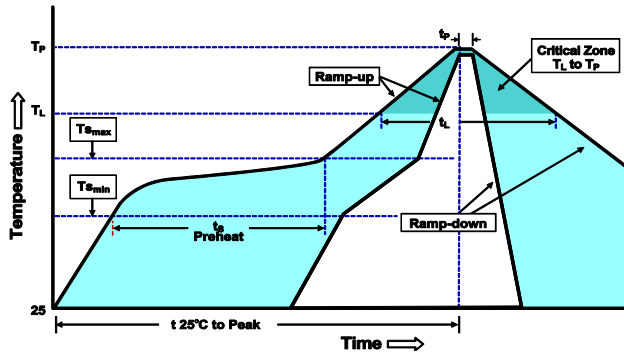


■ Constant 2x rated current at various ambient temperature.



CLM1612P2022F-AT Device

Soldering Parameters



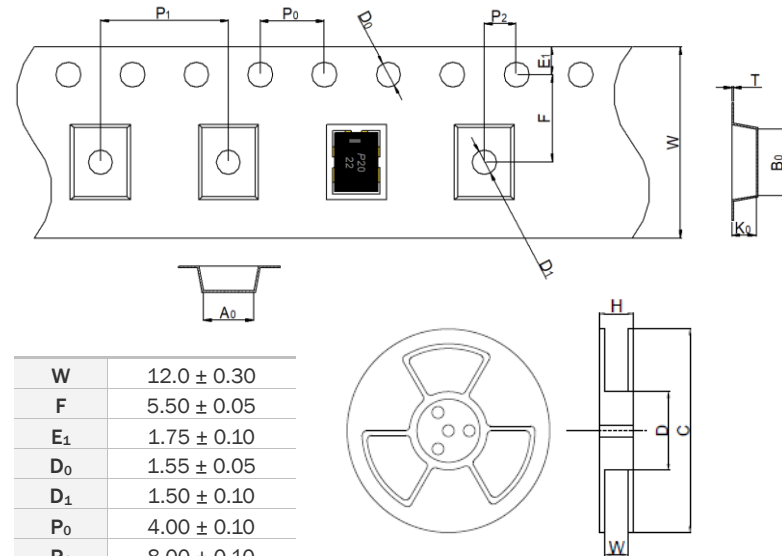
Average Ramp-Up Rate (T_{Smax} to T_P)	3°C/second max.
Preheat	
-Temperature Min (T_{Smin})	150°C
-Temperature Max (T_{Smax})	200°C
-Time (T_{Smin} to T_{Smax})	60-120 seconds
Time maintained above:	
-Temperature (T_L)	217°C
-Time (t_L)	60-105 seconds
Peak Temperature (T_P)	255°C
Time within 5°C of actual Peak Temperature (t_P)	5 seconds max.
Ramp-Down Rate	6°C /second max.
Time 25°C to Peak Temperature	8 minutes max.

Note 1: The temperature shown above is the top-side surface temperature of the device.

Note 2: If the soldering temperature profile deviates from the recommended profile, devices may not meet the performance requirements.

Note 3: The device is designed for reflow soldering and is not recommended for hand soldering.

Tape & Reel Specification (mm.)



W	12.0 ± 0.30
F	5.50 ± 0.05
E1	1.75 ± 0.10
D0	1.55 ± 0.05
D1	1.50 ± 0.10
P0	4.00 ± 0.10
P1	8.00 ± 0.10
P2	2.00 ± 0.10
A0	3.32 ± 0.10
B0	4.32 ± 0.10
T	0.23 ± 0.05
K0	1.30 ± 0.10

H	17.4 ± 1.0
W	13.4 ± 1.0
D	Ø99.0 ± 0.5
C	Ø330 ± 1.0

Packaging Quantity

Part Number	Tape & Reel Quantity
CLM1612P2022F-AT	5000