# SOLDERING CONDITIONS LEAD TERMINAL TYPE ALUMINUM ELECTROLYTIC CAPACITORS

ELNA

## Recommended soldering conditions (Lead free)

#### • Lead terminal type aluminum electrolytic capacitors

#### (1) Soldering iron conditions

Iron tip temperature shall be 400°C±5°C within the duration of 3<sup>+1</sup> seconds.

(2) Flow soldering conditions

The recommendation soldering conditions of the product in which flow soldering is possible are as graph.



#### Caution for Using aluminum Electrolytic Capacitors

- (1) Do not dip the capacitor into melted solder.
- (2) Do not flux other part than the terminals.
- (3) If there is a direct contact between the sleeve of the capacitor and the printed circuit pattern or a metal part of another component such as a lead wire, it may cause shrinkage of crack.
- (4) If the application is for extended use, understand and manage the soldering characteristics to avoid abnormal current caused by a contact failure between the capacitor and the PCB.
- (5) Please refer to cautions for using on page and product specifications about other notes.

# SOLDERING CONDITIONS CHIP TYPE (CONDUCTIVE POLYMER HYBRID) ALUMINUM ELECTROLYTIC CAPACITORS

ELNA

## Recommended soldering conditions (Lead free)

- Chip type (conductive polymer hybrid) aluminum electrolytic capacitors
- (1) Soldering iron conditions
- Iron tip temperature shall be 400°C±5°C within the duration of 3<sup>+1</sup> seconds.
- (2) Reflow soldering conditions
  - Profile



 Preheating shall be under 180°C within 120 seconds.

- 2. Peak temperature shall be within the following table.
- 3. For conditions exceeding the tolerances, consult with us.

T200 : Duration while capacitor head temperature exceeds 200°C (s) T217 : Duration while capacitor head temperature exceeds 217°C (s) T230 : Duration while capacitor head temperature exceeds 230°C (s) The measurement temperature point is the case top.

## • Chip type conductive polymer hybrid aluminum electrolytic capacitors

Series	Size	Peak temp. (5sec or less)	T230	T217	T200	Reflow cycle
HV1, HVK, HVX, HVQ, HT1, HTK, HTX, HTQ, HVY, HVL HTY, HTL	φ5 to φ6.3	250°C Max.	40 sec. max.	50 sec. max.	60 sec. max.	2 times or less
	φ8 to φ10	240°C Max.	40 sec. max.	50 sec. max.	60 sec. max.	2 times or less
	φ12.5	240°C Max.	20 sec. max.	30 sec. max.	50 sec. max.	2 times or less

## • Chip type aluminum electrolytic capacitors

Series	Size	Peak temp. (5sec or less)	T230	T217	T200	Reflow cycle
VVR, VVC, VVZ, VVD, VVV, VZD, VVT, VZJ, VZF, VZE, VVX	φ4 to φ6.3	250°C Max.	40 sec. max.	50 sec. max.	60 sec. max.	2 times or less
	φ8 to φ10	240°C Max.	40 sec. max.	50 sec. max.	60 sec. max.	2 times or less
	φ12.5	240°C Max.	20 sec. max.	30 sec. max.	50 sec. max.	2 times or less
VTZ, VTD, VTT, VTV, VMD, VMJ, VMF, VME, VTX	φ6.3	250°C Max.	40 sec. max.	60 sec. max.	80 sec. max.	2 times or less
	φ8 to φ10	250°C Max.	30 sec. max.	60 sec. max.	80 sec. max.	2 times or less
	φ12.5 to φ18	240°C Max.	20 sec. max.	30 sec. max.	50 sec. max.	2 times or less

\*Please ensure that the capacitor became cold enough to the room temperature (5 to 35°C) before the second reflow.