

Please take note of the following points in order to make the best use of SANYO capacitor's performance. Please use the capacitor within the range of specified performance after confirming each capacitor's usage environment and circuit condition.

Please choose the capacitor that matches the lifetime of the intended circuit design.

The performance of the capacitor the temperature or frequency. Therefore, please consider these variations when designing the circuit.

Please buy SANYO capacitors from our official distributors. Otherwise there is no SANYO warranty.

Line-up

Aluminum Solid Capacitors with Conductive Polymer
 Aluminum Solid Capacitors with Organic Semiconductive Electrolyte
 Tantalum Solid Capacitors with Conductive Polymer

OS-CON
 OS-CON
 POSCAP

Considerations when using in industrial equipment

To when capacitor is used in industrial equipment, allow wider margin of capacitance, impedance and other characteristics.

Polarity

SANYO capacitors have polarity.

Please confirm the polarity prior to use. If it is used with the polarities reverse in leakage current or a short circuit may result.

There is no bi-polar model of OS-CON and POSCAP.

Rated and category

The definition of rated and category is as follows.

- **Rated temperature:**
The maximum ambient temperature at which the rated voltage may be continuously applied.
- **Rated voltage:**
The maximum direct voltage or peak value of pulse voltage which may be applied continuously to a capacitor at any temperature between the lower category temperature and the rated temperature.
- **Category temperature range:**
The range of ambient temperatures for which the capacitor has been designed to operate continuously; this is given by the lower and upper category temperature.
- **Category voltage:**
The maximum voltage which may be applied continuously to a capacitor at its upper category temperature.

Operating temperature and ripple current

- Set the operating temperature so that it falls within the range stipulated in this delivery specification.
- Do not apply current that exceeds the allowable ripple current. When excessive ripple current is applied, internal heat increases and reduces the life span.
- In case the capacitor is used under the condition out of the specified frequency, ripple current shall not exceed the value revised by the frequency coefficient.

POSCAP About TQC series please contact us.

Parallel connection

Ripple current may be flowed to the capacitor that has lower impedance when different kind of capacitors are used in parallel.

Please be very careful of choosing models.

Please consider the balance of electric current when more than two capacitors are connected in parallel.

Applied voltage for designing

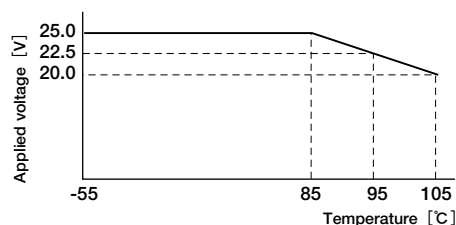
Do not apply voltages exceeding the full rated voltage.

If such voltage is applied, it may cause short circuit even though it is just a moment.

- 90% and below of the rated voltage or category voltage of POSCAP is recommended. If the rated voltage is 10V or over, 80% and below of the rated voltage or category voltage is recommended.
- Please refer to the following table for rated voltage of OS-CON.
- The sum of the DC voltage plus the peak AC voltage shall not exceed the rated voltage or category voltage.
- The sum of the DC voltage plus the negative peak AC voltage shall not allow reverse voltage.
- Do not apply reverse voltage.

Please contact us when there is a concern that circuit operation may cause reverse voltage.

	Operating environmental temperature	Applied voltage
25V products except for SVPD	85°C below	Less than the rated voltage
	85°C above	Applied the voltage shown right figure
All except for the above	—	Less than the rated voltage



Operating environment restrictions

Do not use the capacitor in the following environments.

- Places where water, salt water or oil can directly fall on it and places where condensation may form
- Places with noxious gas (hydrogen sulfide, sulfurous acid, nitrous acid, chlorine, ammonia, etc)
- Places susceptible to ozone, ultraviolet rays and radiation
- Where vibration or shock exceeds the allowable value as specified in the catalog or specification sheet
- Places the capacitor under direct sunlight

Land pattern

Please design capacitor SMD type and hole space and hole diameter of circuit board for capacitor radial lead type, or land patterns with consideration of the product dimension specified in the catalog or specification sheet and the size tolerance.

Avoid locating heat-generating components around the capacitor and on the underside of the PC board.

When capacitor is mounted to the double sided circuit board, avoid placing through holes under capacitors.

Avoid having the printed wire under the capacitor.

Capacitor insulation (OS-CON)

Be sure to completely separate the case, negative lead terminal, positive lead terminal and PC board patterns with each other due to the following reasons.

- Insulation in the marking sleeve and the laminate resin is not guaranteed.
- The space between the case and the negative electrode terminal is not insulated and has some resistance.

Storage conditions

It is necessary to maintain a good storage environment in order to prevent the problem when soldering due to the degradation of solderability or moisturization of molding resin.

1. When storing the reel in the storage bag, please ensure that the storage bag is fully sealed.
2. Do not store in high temperature and high humidity environment.
3. For duration of storage, refer to the respective "Guidelines and precautions for use" of each capacitor.
4. Do not store in damp conditions such as with water, salt water, or oil, and dew condensation.
5. Do not store in places filled with noxious gas (hydrogen sulfide, sulfurous acid, nitrous acid, chlorine, ammonia, etc).
6. Do not store in places susceptible to ozone, ultraviolet rays and radiation.
7. Please unseal storage bag just before mounting and be conscious that not remain.
Refer to the respective "Guidelines and Precautions for Use" of each capacitor when some remain by necessity.

※ Only for capacitors packed by laminate bag.

Considerations when soldering

- The soldering conditions as soldering iron, flow soldering, reflow soldering should be under the range prescribed in specifications.
- If the specifications are not followed, there is a possibility of the cosmetic defection, the intensive increase of leakage current or the capacitance reduction.
- Soldering heat stress to capacitor varies depending on temperature, duration time, mounting condition as size, material and component population of PC board. Please check the heat durability in your actual soldering condition.

Things to be noted before mounting

- Do not reuse capacitors that have been assembled in a set and energized.
- Leakage current may increase when capacitors are stored for long term. In this case, we recommend you to apply the rated voltage for 1 hour at 60°C to 70°C with a resistor load of 1kΩ.
- In case the capacitor has re-striking-voltage, please apply the rated voltage to the capacitor through 1kΩ resistor.

Mounting 1

- Please mount capacitor after confirming the polarity.
- Please mount capacitor after confirming its rated capacitance and rated voltage.
- When mounting capacitors to the circuit board, please use capacitors with the lead space matching the hole space of the circuit board.
- Do not drop capacitor or use capacitor dropped beforehand.
- Be careful not to deform the capacitor during installation.

Mounting 2

- When an automatic inserter is used to clinch the capacitor lead terminal, make sure it is not set too strongly.
- Be careful to the shock force that can be produced by absorbers, product chckers and centers on automatic inserters and installers.
- Do not apply excessive external force to the lead terminal or the capacitor itself.

Disposal of capacitors

Capacitor comprises solid organic compounds, various metals, resin, rubber, etc. Treat it as industrial waste when disposing of it.

In case of disposing a large amount of SANYO capacitor, SANYO can dispose on your behalf.