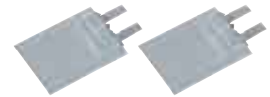


THIN FILM TYPE PAS CAPACITOR



Manual Soldering

FEATURES

- PAS can store a large number of ions into its amorphous structure (doping), therefore PAS capacitor has much larger capacitance than conventional electric double layer capacitors.
- Quick-charge with ampere measure is possible with its Low internal resistance.
- Possible to charge/discharge more than 100,000 times with less deterioration caused by charging/discharging compared to secondary battery which involves chemical reaction, and that enables to more than 100,000 times charge/discharge and large excellence of durability for over charge/discharge.
- PAS capacitor is environmentally friendly power source, which does not contain any heavy metals such as Cd, Hg and Pb. (RoHS compliant)

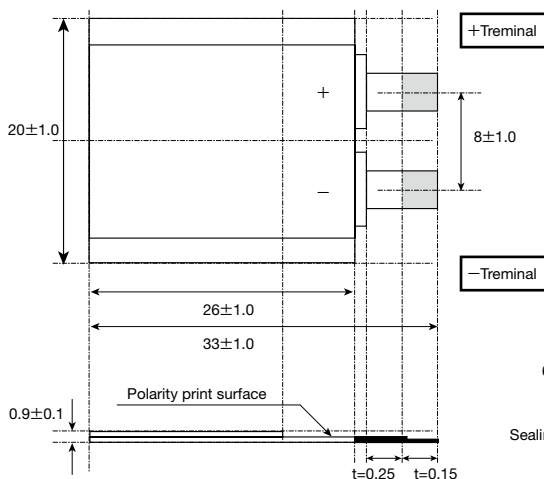
APPLICATIONS

- Back-up power source for CPU, microcomputer, and flash memory writing when shutting off the power.
- Load change leveling (life lengthening of main power source such as dry battery, Lithium primary battery)
- Power source storage combined with solar cell, fuel cell, generator, and so on.
- Main power source for small devices (Measuring equipments, toys and so on).
- Peak Current Assist for LED Flash.

ORDERING CODE

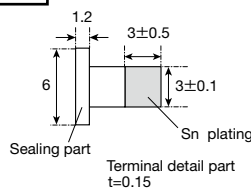
P	A	S	2	1	2	6	F	R	2	R	5	5	0	4
① Type		② Dimensions/ W [mm]		③ Dimensions/ L [mm]		④ Shape		⑤ Maximum Usable Voltage [V]		⑥ Nominal Capacitance [F]				
PAS Polyacene Capacitors		21 20.0		26 26.0		FR Thin Film Type		2R5 2.5		504 0.5F				
													※R=decimal point	

EXTERNAL DIMENSIONS



Part Number	W	L	T
PAS2126FR2R5504	20.0	26.0	0.9

Unit : mm



PART NUMBERS

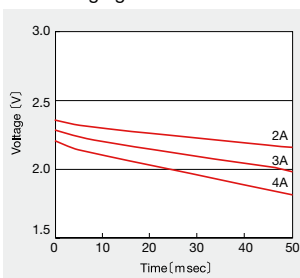
Part Number	Maximum Usable Voltage (V)	Nominal Capacitance (F)	Internal Resistance (mΩ)
PAS2126FR2R5504	2.5	0.5	80

SPECIFICATIONS

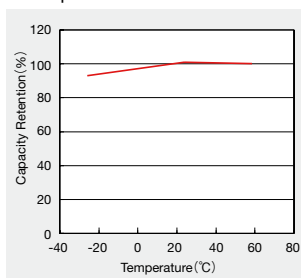
Part Number	Operation Temp. Range (°C)	Max. Usable Voltage (V)	Initial Capacitance (F)	Initial Internal Resistance (mΩ)
PAS2126FR2R5504	-25~+60	2.5	0.5±20%	80

ELECTRICAL CHARACTERISTICS

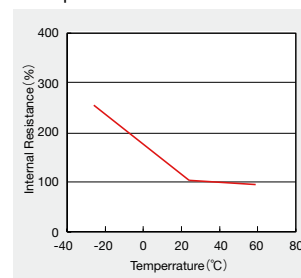
Discharging Characteristics



Temperature Characteristics



Temperature Characteristics



* This catalog contains the typical specification only due to the limitation of space. When you consider the purchase of our products, please check our specification. For details of each product (characteristics graph, reliability information, precautions for use, and so on), see our Web site (<http://www.ty-top.com/>) or CD catalogs.

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RELIABILITY DATA

Items	Specifications	Test Conditions, Remark
1. Operating Temperature range	-25~+60°C	
2. Max. Usable Voltage	2.5V	
3. Floating Charge Characteristics	Capacitance(F) : 0.28~0.6 Internal Resistance(mΩ) : Under 120 Appearance : No leakage/Thickness within 1.1mm	Apply the max. Usable voltage to the capacitors for 500hours at max. operating temp. and measure the floating charge characteristics after returning to normal temperature and humidity.
4. Charge/Discharge Cycle Characteristics	Capacitance(F) : 0.28~0.6 Internal Resistance(mΩ) : Under 120 Appearance : No leakage/Thickness within 1.1mm	Temperature : 25±5°C Charge/Discharge Cycle : 10,000times Cycle Condition Charge : 2.5V-5sec MAX 1A Discharge : c1A (Cutoff 1.5V)
5. Thermal Durability	Capacitance(F) : 0.4~0.6 Internal Resistance(mΩ) : Under 96 Appearance : No leakage/Thickness within 1.1mm	Leave in the atmosphere of 60±2°C and -25°C±2°C for 96 hours each and return to normal temp. and pressure.
6. Humidity Durability	Capacitance(F) : 0.4~0.6 Internal Resistance(mΩ) : Under 96 Appearance : No leakage/Thickness within 1mm	Leave in the atmosphere of temp. 40±2 °C humidity 90~95 %RH for 500h and return to normal temperature.
7. Solder Heat Resistance	Capacitance : Within 0.4~0.6F Internal Resistance : Within 2 times of initial spec. Appearance : No leakage/Thickness within 1.1mm	Manual Soldering : Heating condition : After 380 °C × 10sec × 2times, return to normal temp. and pressure.

PRECAUTIONS

- Use under the maximum usable voltage.
When voltage which exceed the maximum usable voltage is applied, it might cause abnormal current flow, which shorten lifetime, and leakage , and sometimes damages PAS capacitors.
- Use under maximum operating temperature.
A capacitor using in over max operating temperature may lead to shorter life, leakage, and electrical damage by increasing internal pressure.
- Limited life time.
Lifetime of PAS capacitor is greatly affected by surrounding temperature. 10°C drop in temperature extends its expected lifetime approximately twice as much. Design a circuit under consideration of deterioration of electrical characteristics after long time usage, decreasing in capacitance and increasing in internal resistance.
- PAS capacitor's electrical characteristics might change depending on the surrounding temperature.
PAS Capacitor's electrical characteristics might change depending on the surrounding temperature aside from aged deterioration.
Therefore, be sure to confirm the temperature performance before use product.
- PAS capacitor has polarity.
PAS capacitor has polarity. Please check the polarity before use.
If a reverse voltage is applied, causing damage to the product.
- Mind voltage drop when back-up.
When back-up (discharging) starts, voltage will drop because of active current and internal resistance.
- Environment of usage .
In case PAS capacitor is used in high humidity, alkaline or acid air, it may cause deteriorating of its performance and short circuit by corrosion of outer can or lead terminal. In addition, used in sudden temperature change or high humidity, it may cause deteriorating of its performance and electrolyte leak by dew condensation.
- Don't apply shock and vibration or pressure.
PAS capacitor is sensitive to shock. Don't drop PAS capacitor and not apply strong pressure to a body, terminals and lead. Soldering part or lead terminal might be damaged if applying vibration, shock and stress such as pinch, tip, push and twist after installed.
- Soldering
If next each item is not minded, it may cause deteriorating of its performance, leakage, shortening lifetime.
Don't solder over solder conditions in the spec. sheet.
- Cleaning condition when cleaning circuit-board after soldering.
Cleaning may affect PAS capacitor. Consult us about cleaning conditions beforehand. Some cleaning conditions cause detrimental influence.
- Storage.
Keep following cautions for storage of PAS capacitor.
 - Don't store in the high temperature, the high humidity condition and a place where receiving direct sunlight. Storing PAS capacitor in the room condition of 10°C - 35°C and less than 65% relative humidity is recommended. Sudden temperature change or high humidity may cause deteriorating of its characteristics and Soldering.
 - Don't store PAS capacitor near water, salt water or oil, and it the dew condensation, gasified oil or salinity filled place.
 - Don't store PAS capacitor in the hazardous gas (hydrogen sulfide, sulfurous, chlorine , ammonia, bromine, methyl bromine and etc).
 - Don't fumigate by halogen fumigant.
 - Don't store PAS capacitor near acid or alkaline solvent.
 - Don't store PAS capacitor in a place where exposed to ozone, ultraviolet or x-ray.
 - Don't store PAS capacitor in a place where vibration and shock might occur in.

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