

# ALUMINUM ELECTROLYTIC CAPACITORS

| POLYMER | HYBRID | ELECTROLYTIC |

**Polymer**



*High Power*

**Hybrid**



*High Performance*

**Electrolytic**



*General Purpose*

## INTRODUCTION

KYOCERA AVX's range of Aluminum Chip Capacitors provide high-CV performance in smaller packages than competing can-type aluminum capacitors, very low equivalent series resistance (ESR), high endurance, and compatibility with lead-free and RoHS requirements. Specialized characteristics of the conductive polymer and hybrid electrolytic solutions include smaller case sizes and higher tolerance for ripple currents, inrush currents, and high temperatures than standard aluminum electrolytic solutions.

### POLYMER



### HYBRID



### ELECTROLYTIC



### The Dynamic Trio: Polymer + Hybrid + Electrolytic Capacitors

We are offering three advanced technologies to cover a variety of application requirements in an SMD style.

1. **Polymer** capacitors for power applications
2. **Hybrid** capacitors for demanding applications
3. Classic **Electrolytic** capacitors for general purpose

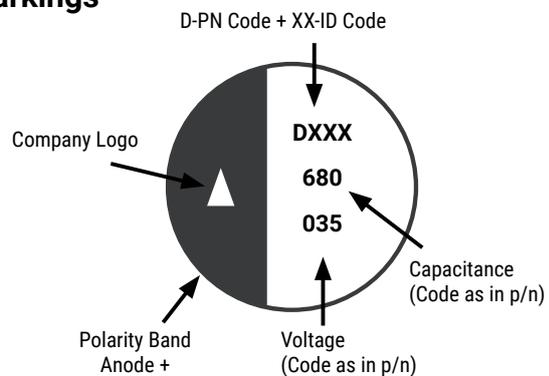
### Key Specifications

- › SMD V-chip (Polymer, Hybrid, Electrolytic)

### Top Selling Points

- › Product Range
- › One Stop Capacitor Supplier  
(see KYOCERA AVX entire cap product ranges)

### Markings



Markings may vary based on case sizes, please review datasheets for specific details.

## POLYMER SERIES

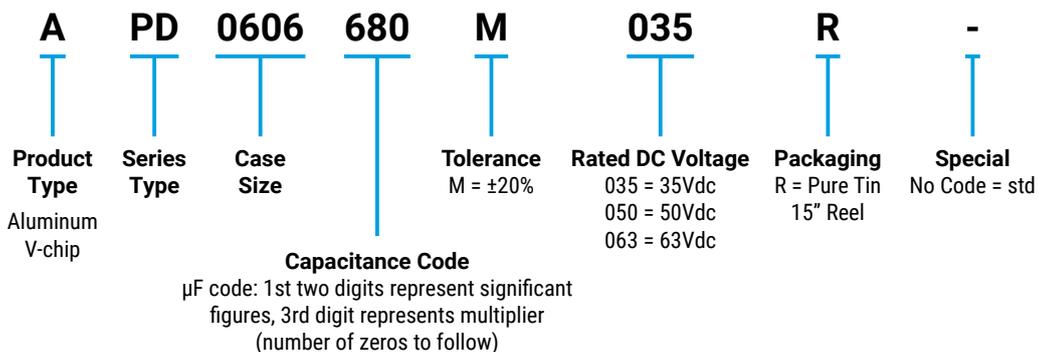
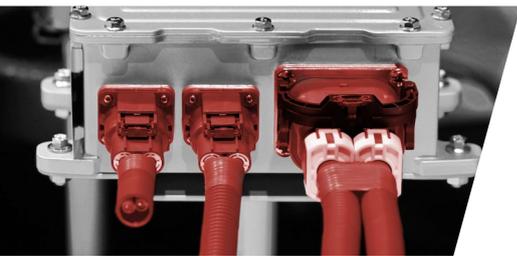
A polymer aluminum electrolytic capacitor contains two electrodes of aluminum foil with a layer of aluminum oxide and isolator between them, containing a solid conductive polymer material that improves performance like ESR, endurance, ripple current, and more. They are suitable for power applications with requirements for lower ESR, higher ripple, stability over temperature, and longer life.

### Applications

- » DC / DC Converters
- » Decoupling
- » Voltage Regulators
- » Computer Motherboards, etc
- » Lamps
- » LED
- » Power Supply

### Series Specs

- » APA Series -55°C to +105°C/10uF to 2200uF/4V to 50V/5000h
- » APD Series -55°C to +105°C/22uF to 470uF /35V to 63V/2000h
- » APV Series -55°C to +105°C/27uF to 2200uF/2.5V to 25V/2000h
- » APZ Series -55°C to +105°C/22uf to 2200uF/2.5V to 100V/2000h



# HYBRID ALUMINUM ELECTROLYTIC CAPACITOR



## HYBRID SERIES

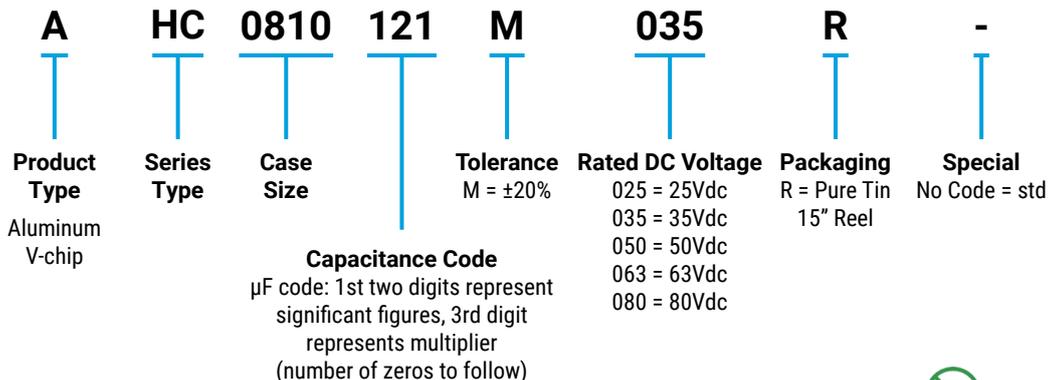
A hybrid capacitor uses polymer technology in conjunction with a liquid electrolyte in a single design to combine the performance benefits of electrolytic and polymer capacitors. They are suitable for applications requiring low ESR, DCL, humidity resistance, and good stability over frequency and time.

### Applications

- » Industrial Equipment
- » Base Station Equipment
- » Commercial/Industrial power supply applications requiring high capacitance in energy-dense, in small-volume packages with a low ESR

### Series Specs

- » AHA Series -55°C to +105°C/10uF to 560uF/16V to 125V/10000h
- » AHC Series -55°C to +125°C/15uF to 470uF/25V to 80V/4000h



# ELECTROLYTIC

## ALUMINUM ELECTROLYTIC CAPACITOR



### ELECTROLYTIC SERIES

KYOCERA AVX's range of V-chip aluminum capacitors provides high-CV performance in SMD V-chip style packages with high ripple capability, endurance, and compatibility with lead-free and RoHS requirements. Typical applications are filtering and smoothing rectified alternating voltage, followed by buffering and energy storage.

#### Applications

- » Industrial / Consumer Electronics
- » DC / DC Converters
- » Lighting
- » DC / DC Convertors, for high density SMD boards and higher operation temperature environment applications

#### Series Specs

- » AEA Series -55°C to +105°C/22uF to 6800uF/6.3V to 100V/5000h
- » AEH Series -55°C to +125°C/2.2uF to 470uF/10V to 400V/5000h
- » AEF Series -55°C to +105°C/2.2uF to 470uF/6.3V to 400V/6000h
- » AEK Series -55°C to +105°C/1uF to 1000uF/6.3 to 400V/3000h



<b>A</b>	<b>EH</b>	<b>1010</b>	<b>470</b>	<b>M</b>	<b>010</b>	<b>R</b>	<b>-</b>
Product Type	Series Type	Case Size	Tolerance M = ±20%		Rated DC Voltage	Packaging	Special
Aluminum			Capacitance Code µF code: 1st two digits represent significant figures, 3rd digit represents multiplier (number of zeros to follow)		010 = 10Vdc 016 = 16Vdc 025 = 25Vdc 035 = 35Vdc 050 = 50Vdc 063 = 63Vdc 080 = 80Vdc 250 = 250Vdc 400 = 400Vdc	R = Pure Tin 13" Reel (D≥12.50mm) 15" Reel (D≤10.00mm)	No Code = std





## ABOUT KYOCERA AVX

KYOCERA AVX is a worldwide leading supplier of passive electronic components, connectors, passive and active antennas, sensors and control units. KYOCERA AVX offers a wide range of components manufactured to the highest quality and reliability standards.

Our products include ceramic, solid electrolytic and film capacitors, pulse supercapacitors, varistors, thermistors, filters, inductors, diodes, antennas, connectors, sensors and control units. Our worldwide manufacturing capability includes facilities located in seventeen countries on four continents, allowing us to continue meeting customer needs on a global basis.

KYOCERA AVX is committed to supporting the needs of its customers for applications today and in the future. Together with continuous quality improvement process, KYOCERA AVX components provide reliable solutions for consumer application needs.

As a technology leader, KYOCERA AVX will continue to add to its product portfolio on a regular basis. Details of new devices being offered and their specifications will be shown on the [KYOCERA AVX website](#).

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