

## Product Line-up Table

### Product Line-up Table of Aluminum Electrolytic Capacitors with Hybrid Conductive Polymer

Classification	Series	Features	Small & Thin type	Low ESR	Long Life	Solvent Proof	Category Temperature Range(°C)	Rated Voltage Range(V.DC)	Rated Capacitance Range(μF)	External Appearance	Marking Color
Surface Mount Type	H V A	Super Low ESR		●	●	●	-55 to +105	6.3 to 16	10 to 1000	—	Blue
	H V B F	125°C		●	●	●	-55 to +125	6.3 to 16	33 to 1000	—	Blue
	H V H	Super Low ESR	●	●	●	●	-55 to +105	16 to 125	6.8 to 560	—	Blue
	H V P	125°C		●	●	●	-55 to +125	16 to 125	6.8 to 560	—	Blue
	H V T	135°C		●	●	●	-55 to +135	25 to 63	10 to 330	—	Blue
	NEW H V H Z	105°C High Ripple		●		●	-55 to +105	16 to 40	18 to 560	—	Blue
	NEW H V P Z	125°C High Ripple		●		●	-55 to +125	16 to 40	18 to 560	—	Blue
Radial Lead Type	H E A	Super Low ESR		●	●	●	-55 to +105	6.3 to 16	47 to 1000	—	Blue
	H E B F	125°C		●	●	●	-55 to +125	6.3 to 16	100 to 1000	—	Blue
	UP GRADE H E H	Super Low ESR		●	●	●	-55 to +105	16 to 100	10 to 560	—	Blue
	H E P	125°C		●	●	●	-55 to +125	16 to 100	10 to 560	—	Blue
	UP GRADE H E T	135°C		●	●	●	-55 to +135	25 to 63	10 to 330	—	Blue
	NEW H E H Z	105°C High Ripple		●		●	-55 to +105	16 to 40	27 to 560	—	Blue
	NEW H E P Z	125°C High Ripple		●		●	-55 to +125	16 to 40	27 to 560	—	Blue

### Product Line-up Table of Surface Mount Type

Classification	Series	Features	Small & Thin type	Low Impedance	Long Life	Solvent Proof	Category Temperature Range(°C)	Rated Voltage Range(V.DC)	Rated Capacitance Range(μF)	External Appearance	Marking Color	
Surface Mount Type	CE-BE	Super Low Profile 3.9mm Height	●			●	-40 to +85	4 to 50	1.0 to 180	—	Black	
	CE-BD	Low Profile 4.5mm Height	●			●	-40 to +85	4 to 50	0.47 to 220	—	Black	
	CE-BS	Standard				●	-40 to +85	4 to 100	0.47 to 6800	—	Black	
	CE-BSS	Miniature, Standard	●			●	-40 to +85	6.3 to 50	4.7 to 220	—	Black	
	CE-FE	3.9mm Height, Temperature of Wide Range	●			●	-40 to +105	6.3 to 50	1.0 to 100	—	Black	
	CE-FD	4.5mm Height, Temperature of Wide Range	●			●	-40 to +105	6.3 to 50	0.47 to 100	—	Black	
	CE-LD	4.5mm Height, Long Life	●		●	●	-40 to +105	6.3 to 50	0.47 to 100	—	Black	
	CE-FU	High Temperature, Reflow Soldering	●			●	-55 to +105	6.3 to 50	2.2 to 100	—	Black	
	CE-FS	105°C, Standard				●	-55 to +105	6.3 to 63	0.47 to 12000	—	Black	
						●	-40 to +105	100	1.0 to 330			
							-40 to +105	160 to 400	2.2 to 82			
	CE-FSS	105°C Miniature, High Capacitance	●			●	-40 to +105	6.3 to 50	4.7 to 220	—	Black	
	CE-FH	Long Life			●	●	-40 to +105	6.3 to 50	1.0 to 4700	—	Black	
	CE-GA	5.4mm Height, Low Impedance		●		●	-55 to +105	6.3 to 63	1.0 to 220	—	Black	
	CE-AX	Low Impedance		●		●	-55 to +105	6.3 to 50	4.7 to 6800	—	Black	
	CE-KX	Super Low Impedance		●		●	-55 to +105	6.3 to 100	2.2 to 6800	—	Black	
	CE-LX	Low Impedance, Long Life		●	●	●	-55 to +105	6.3 to 100	4.7 to 12000	—	Black	
	CE-LS	Low Impedance, Long Life		●	●	●	-40 to +105	6.3 to 50	10 to 330	—	Black	
	CE-LH	Long Life				●	●	-40 to +105	6.3 to 50	1.0 to 220	—	Black
						●		-40 to +105	160 to 400	2.2 to 120		
CE-LL	Low Impedance, Long Life		●	●	●	-25 to +105	6.3 to 50	10 to 1000	—	Black		
CE-PC	125°C				●	●	-55 to +125	6.3 to 100	2.2 to 4700	—	Black	
UP GRADE CE-PH	125°C Low ESR, High Capacitance		●	●	●	-40 to +125	16 to 35	47 to 3900	—	Black		
CE-PF	125°C Long Life, High Ripple		●	●	●	-40 to +125	25 to 35	100 to 330	—	Black		
CE-NP	Bi-polar				●	-40 to +85	6.3 to 50	1.0 to 100	—	Black		
CE-FN	Bi-polar, Temperature of Wide Range				●	-55 to +105	6.3 to 63	1.0 to 47	—	Black		

# EP-cap

The EP-cap is an aluminum electrolytic capacitor with a hybrid cathode formed by combining an electrolyte and electroconductive polymer with high conductivity. EP-cap have very low ESR at high frequency as compared with electrolytic capacitors. The structure of hybrid cathode electrolyte enables EP-cap to have the same self-healing function as aluminum electrolytic capacitors. EP-cap have high reliability product of 125°C (HVP series), 135°C (HVT series) and high voltage up to 125V.

High performance electronic modules

Comfortable

Safety

Space saving

- High reliability
- High temperature
- Miniaturize • High capacitance



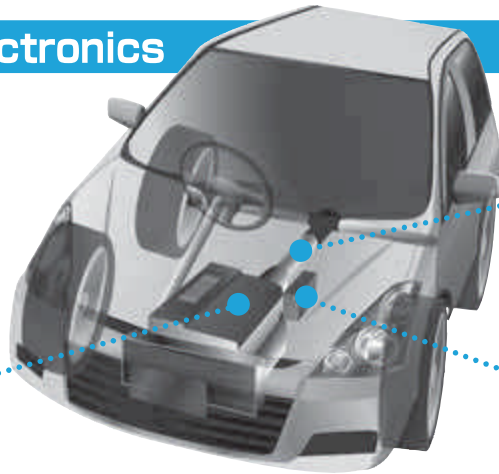
## Automotive electronics



HVP series  
125°C 125V



HVT series  
135°C 63V



Chassis electronics  
ABS, ESC, TRC, ECS

Power train electronics  
EFI, Cooling fans, ECT, HV

Body electronics  
EPS, AFS, TPMS, Air bags

## Flat-TV



## Server • Base station

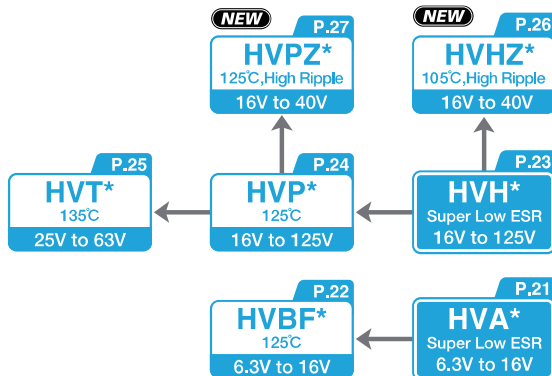


## Security camera

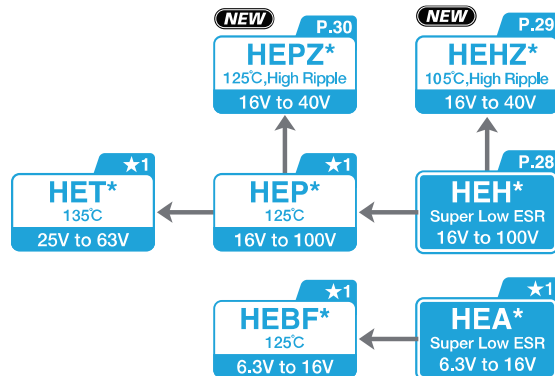


### Product Line-up Table

#### SURFACE MOUNT TYPE



#### RADIAL LEAD TYPE



Basic Construction
Features
Characteristics
Advantages of EP-cap
Soldering Condition
Recommended Reflow Condition
Ripple Current Frequency Coefficient
HVA
HVBF
HVH
HVP
HVT
HVHZ
HVPZ
HEH
HEHZ
HEPZ