

# SNAP MOUNT TYPE ALUMINUM ELECTROLYTIC CAPACITORS

**New**

**HU Series**

Useful of 4,000 hours at 105°C (Warranty of 2,000 hours at 105°C)

• Conform RoHS

**Features**

• The size is reduced by 10 to 16% of conventional HU5 through development of etched foil technology.



**Product Specifications**

Items	Specifications
Temperature range	-40°C ~ +105°C (200, 250V.DC) -25°C ~ +105°C (400 ~450V.DC)
Rated voltage	200 ~ 450V.DC
Capacitance tolerance	±20% (20°C,120Hz)
Leakage current	0.02CV (µA) or 3mA, whichever is smaller or less (20°C,after 5 minutes) [C = nominal capacitance (µF), V = rated voltage (V)]
Dissipation factor	Less than the value specified in the standard products table. (20°C,120Hz)
Permissible ripple current	As specified in the standard products table. (105°C,120Hz)
High temp. Load life test	After 105°C, 2000h, rated voltage with specified ripple current application Capacitance variation : Initial value ±20% Dissipation factor : 200% of less of specified initial value Leakage current : Not greater than the specified initial value
Others	JIS C 5101-4.

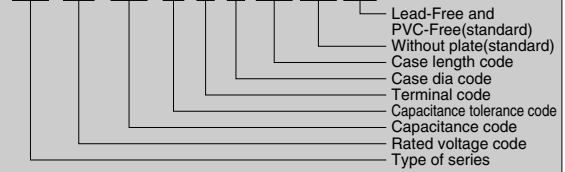
**Ripple current correction coefficient**

Temperature (°C)	60	70	85	105	
Correction coefficient	1.9	1.7	1.4	1.0	
Frequency (Hz)	50/60	120	300	1k	≥10K
Correction coefficient	0.7	1.0	1.1	1.3	1.4

A continuous load should be avoided over 10 Arms at the terminal in accordance with the permissible current. Please consult us when the ripple voltage exceeds 70Vp-p .

Product code : (Example) HU Series 400V 330µF ±20%

**HU 2G 331 M C A S2 WPEC**



Refer to page (97) for other terminal shape available on request

**Standard Products Table**

Rated Voltage Code (Surge Voltage) (V. DC)	Capacitance (µF)	Case size øDXL(mm)	tanδ 20°C,120Hz	Ripple current (Arms) 105°C,120Hz	ESR(typ.) 20°C,100Hz (mΩ)	Product name
200 2D (250)	330	22×25	0.15	1.07	330	HU2D331MCXS2WPEC
	390	22×30	0.15	1.24	280	HU2D391MCXS3WPEC
	470	25×25	0.15	1.31	240	HU2D471MCYS2WPEC
	560	22×35	0.15	1.58	200	HU2D561MCXS4WPEC
		25×30	0.15	1.52	200	HU2D561MCYS3WPEC
	680	22×40	0.15	1.83	160	HU2D681MCXS5WPEC
		25×35	0.15	1.77	160	HU2D681MCYS4WPEC
		30×25	0.15	1.60	160	HU2D681MCZS2WPEC
	820	22×50	0.15	2.20	140	HU2D821MCXS7WPEC
		25×40	0.15	2.05	140	HU2D821MCYS5WPEC
		30×30	0.15	1.86	140	HU2D821MCZS3WPEC
		35×25	0.15	1.52	140	HU2D821MCAS2WPEC
	1000	25×45	0.15	2.37	110	HU2D102MCYS6WPEC
		30×35	0.15	2.17	110	HU2D102MCZS4WPEC
	1200	25×50	0.15	2.70	100	HU2D122MCYS7WPEC
		30×40	0.15	2.49	100	HU2D122MCZS5WPEC
		35×30	0.15	1.94	100	HU2D122MCAS3WPEC
	1500	30×45	0.15	2.91	80	HU2D152MCZS6WPEC
		35×35	0.15	2.29	80	HU2D152MCAS4WPEC
	1800	30×50	0.15	3.32	70	HU2D182MCZS7WPEC
35×40		0.15	2.62	70	HU2D182MCAS5WPEC	
2200	35×45	0.15	3.02	50	HU2D222MCAS6WPEC	

Rated Voltage Code (Surge Voltage) (V. DC)	Capacitance (µF)	Case size øDXL(mm)	tanδ 20°C,120Hz	Ripple current (Arms) 105°C,120Hz	ESR(typ.) 20°C,100Hz (mΩ)	Product name
250 2E (300)	220	22×25	0.15	0.95	440	HU2E221MCXS2WPEC
	330	22×30	0.15	1.24	290	HU2E331MCXS3WPEC
		25×25	0.15	1.19	290	HU2E331MCYS2WPEC
	390	22×35	0.15	1.42	250	HU2E391MCXS4WPEC
		25×30	0.15	1.37	250	HU2E391MCYS3WPEC
	470	22×40	0.15	1.65	210	HU2E471MCXS5WPEC
		30×25	0.15	1.42	210	HU2E471MCZS2WPEC
		22×45	0.15	1.88	180	HU2E561MCXS6WPEC
	560	25×35	0.15	1.74	180	HU2E561MCYS4WPEC
		25×45	0.15	2.11	150	HU2E681MCYS6WPEC
	680	30×30	0.15	1.82	150	HU2E681MCZS3WPEC
		35×25	0.15	1.52	150	HU2E681MCAS2WPEC
		25×50	0.15	2.41	120	HU2E821MCYS7WPEC
	820	30×35	0.15	2.10	120	HU2E821MCZS4WPEC
		35×30	0.15	1.76	120	HU2E821MCAS3WPEC
	1000	30×40	0.15	2.43	100	HU2E102MCZS5WPEC
		35×35	0.15	2.04	100	HU2E102MCAS4WPEC
	1200	30×50	0.15	2.89	80	HU2E122MCZS7WPEC
		35×40	0.15	2.34	80	HU2E122MCAS5WPEC
	1500	35×45	0.15	2.73	70	HU2E152MCAS6WPEC
1800	35×50	0.15	3.11	60	HU2E182MCAS7WPEC	

ALUMINUM ELECTROLYTIC CAPACITORS

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Rated Voltage Code (Surge Voltage) (V. DC)	Capacitance (μF)	Case size øDXL (mm)	tanδ 20°C,120Hz	Ripple current (Arms) 105°C,120Hz	ESR(typ.) 20°C,100Hz (mΩ)	Product name
400 2G (450)	120	22×25	0.20	0.77	800	HU2G121MCXS2WPEC
	150	22×30	0.20	0.91	640	HU2G151MCXS3WPEC
	180	22×35	0.20	1.05	540	HU2G181MCXS4WPEC
	220	22×40	0.20	1.21	440	HU2G221MCXS5WPEC
		25×30	0.20	1.15	440	HU2G221MCYS3WPEC
	270	22×45	0.20	1.39	360	HU2G271MCXS6WPEC
		25×35	0.20	1.34	360	HU2G271MCYS4WPEC
	330	22×50	0.20	1.59	290	HU2G331MCXS7WPEC
		25×40	0.20	1.54	290	HU2G331MCYS5WPEC
		30×30	0.20	1.49	290	HU2G331MCZS3WPEC
		35×25	0.20	1.46	290	HU2G331MCAS2WPEC
	390	25×45	0.20	1.74	250	HU2G391MCYS6WPEC
		30×35	0.20	1.69	250	HU2G391MCZS4WPEC
	470	30×40	0.20	1.93	210	HU2G471MCZS5WPEC
		35×30	0.20	1.83	210	HU2G471MCAS3WPEC
	560	30×45	0.20	2.18	180	HU2G561MCZS6WPEC
		35×35	0.20	2.09	180	HU2G561MCAS4WPEC
	680	30×50	0.20	2.48	150	HU2G681MCZS7WPEC
		35×40	0.20	2.39	150	HU2G681MCAS5WPEC
	820	35×45	0.20	2.71	120	HU2G821MCAS6WPEC
420 420V (470)	100	22×25	0.20	0.70	1020	HU420V101MCXS2WPEC
	150	22×30	0.20	0.91	680	HU420V151MCXS3WPEC
		25×25	0.20	0.90	680	HU420V151MCYS2WPEC
	180	22×35	0.20	1.05	570	HU420V181MCXS4WPEC
		25×30	0.20	1.04	570	HU420V181MCYS3WPEC
	220	22×40	0.20	1.21	470	HU420V221MCXS5WPEC
		25×35	0.20	1.21	470	HU420V221MCYS4WPEC
		30×25	0.20	1.15	470	HU420V221MCZS2WPEC
	270	22×50	0.20	1.44	380	HU420V271MCXS7WPEC
		25×40	0.20	1.39	380	HU420V271MCYS5WPEC
		30×30	0.20	1.34	380	HU420V271MCZS3WPEC
		35×25	0.20	1.32	380	HU420V271MCAS2WPEC
	330	25×45	0.20	1.60	310	HU420V331MCYS6WPEC
		30×35	0.20	1.56	310	HU420V331MCZS4WPEC
	390	25×50	0.20	1.79	270	HU420V391MCYS7WPEC
		30×40	0.20	1.76	270	HU420V391MCZS5WPEC
	470	35×30	0.20	1.67	270	HU420V391MCAS3WPEC
		30×45	0.20	2.00	220	HU420V471MCZS6WPEC
	560	35×35	0.20	1.91	220	HU420V471MCAS4WPEC
		30×50	0.20	2.25	190	HU420V561MCZS7WPEC
680	35×40	0.20	2.17	190	HU420V561MCAS5WPEC	
	35×45	0.20	2.47	150	HU420V681MCAS6WPEC	
820	35×50	0.20	2.79	130	HU420V821MCAS7WPEC	

Rated Voltage Code (Surge Voltage) (V. DC)	Capacitance (μF)	Case size øDXL (mm)	tanδ 20°C,120Hz	Ripple current (Arms) 105°C,120Hz	ESR(typ.) 20°C,100Hz (mΩ)	Product name
450 2W (500)	100	22×25	0.20	0.70	1020	HU2W101MCXS2WPEC
	120	22×30	0.20	0.82	850	HU2W121MCXS3WPEC
		25×25	0.20	0.81	850	HU2W121MCYS2WPEC
	150	22×35	0.20	0.96	680	HU2W151MCXS4WPEC
		22×40	0.20	1.09	570	HU2W181MCXS5WPEC
	180	25×30	0.20	1.04	570	HU2W181MCYS3WPEC
		30×25	0.20	1.04	570	HU2W181MCZS2WPEC
		22×45	0.20	1.25	470	HU2W221MCXS6WPEC
	220	25×35	0.20	1.21	470	HU2W221MCYS4WPEC
		25×40	0.20	1.39	380	HU2W271MCYS5WPEC
	270	30×30	0.20	1.34	380	HU2W271MCZS3WPEC
		35×25	0.20	1.32	380	HU2W271MCAS2WPEC
	330	25×50	0.20	1.65	310	HU2W331MCYS7WPEC
		30×35	0.20	1.56	310	HU2W331MCZS4WPEC
		35×30	0.20	1.53	310	HU2W331MCAS3WPEC
	390	30×40	0.20	1.76	270	HU2W391MCZS5WPEC
	470	30×45	0.20	2.00	220	HU2W471MCZS6WPEC
		35×35	0.20	1.91	220	HU2W471MCAS4WPEC
	560	35×40	0.20	2.17	190	HU2W561MCAS5WPEC
	680	35×50	0.20	2.54	150	HU2W681MCAS7WPEC

## Life time graph

Useful life depending on ambient temperature  $T_a$  and ripple current operating conditions  $I_r$  versus rated ripple current at 105°C, 120Hz

