

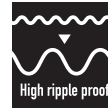
SNAP MOUNT TYPE ALUMINUM ELECTROLYTIC CAPACITORS

NEW!

US2 Series Useful of 4,000 hours at 105°C

• Conform RoHS

HU3 → P.88 High-ripple current



US2



Features

- Higher ripple though use of low-ESR material consequently, the permissible ripple current is improved by 27% in the windless status or 40% in the ventilated condition (0.5m/s) as compared with conventional constructions (HU3 series).
- Improvement in air exhaust (flow hole phenomenon) from the terminal insertion hole at solder fixing though improvement of cap construction.
- The operating space of the safety vent (arranged on the case bottom) is reduced from 5mm (conventional necessary distance) into 1mm through improvement of case construction. For these new case construction, pattern design can be move flexible.

Product Specifications

Items	Specifications
Temperature range	-40°C ~ +105°C
Rated voltage	200 ~ 450V.DC
Capacitance tolerance	±20% (20°C, 120Hz)
Leakage current	0.01CV (µA) or 5mA, 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 product table. (105°C, 120Hz)
Endurance	After the rated voltage with specified ripple current is applied at 105°C for 2,000 hours : Capacitance change : Within ±15% of the initial value measured Dissipation factor : 175% or less than the initial value specified Leakage current : Less than or equal to the initial value specified
Shelf life	The following specification shall be meet when the capacitor are restored to 20°C after storage of 500 hours at 105°C with no voltage applied. Before the measurement, the capacitor shall be preconditioned by applying the voltage treatment according to Item 4.1 of JIS C 5101-4. Capacitance change : Within ±15% of the initial value measured Dissipation factor : 175% or less than the initial value specified Leakage current : Less than or equal to the initial value specified
Others	JIS C 5101-4

Ripple current correction coefficient

Temperature (°C)	40	60	85	105	
Correction coefficient	2.50	2.00	1.63	1.00	
Frequency (Hz)	50/60	120	300	1K	≥10K
Correction coefficient	0.7	1.0	1.1	1.3	1.4
Forced wind (m/s)	<0.5	0.5 ≤			
Correction coefficient	1.0	1.1			

Terminal permissible current is limited to 15Arms (φ41, 46), 20Arms (φ51).
(Even if calculated the permissible ripple current with the correction coefficient exceeds 15, 20Arms)
Please consult us when the ripple voltage exceeds 70Vp-p.

Product code

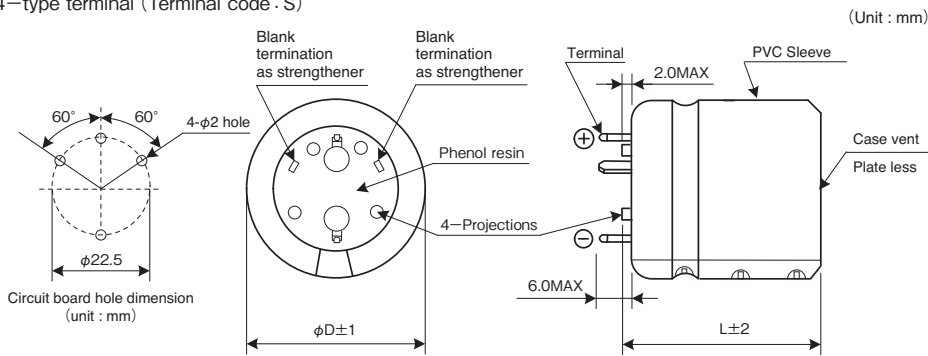
(Example) US2 Series 450V 1,000µF ±20%

US2	2W	102	M	T	C	S11	PH	WP	PF
Type of series	Rated voltage code	Capacitance code	Capacitance tolerance code	Terminal code	Case dia code	Case height code	Sealing code	Plate code	Environmental code

Dimensions

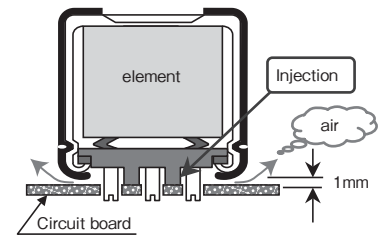
● $\phi 41, 46$

4-type terminal (Terminal code : S)

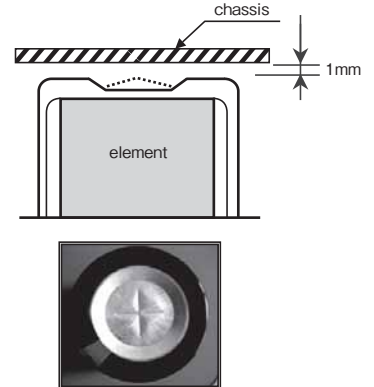


Special structure

① Improvement of flow hole

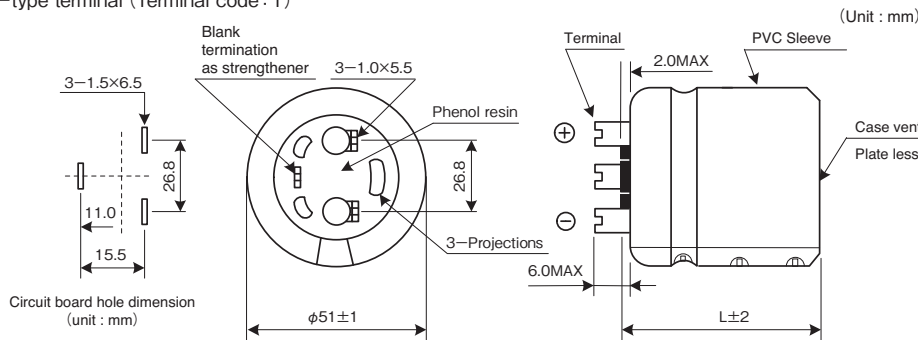


② Improved valve working distance



● $\phi 51$

T-type terminal (Terminal code : T)



Standard Products Table

Rated Voltage (V. D.C)	Capacitance (μ F)	Case size $\phi D \times L$ (mm)	$\tan \delta$ 20°C, 120Hz	Ripple current (Arms) 105°C, 120Hz	ESR (typ.) (m Ω) 20°C, 100Hz	Product name
200	1,500	41×45	0.15	3.99	76	US22D152MSBS6PHWPPF
		41×55	0.15	4.80	52	US22D222MSBS8PHWPPF
		46×51	0.15	4.49	52	US22D222MSHS7PHWPPF
	2,700	41×64	0.15	5.37	42	US22D272MSBS10PHWPPF
		51×51	0.15	4.84	42	US22D272MTC97PHWPPF
	3,300	46×61	0.15	5.56	34	US22D332MSHS9PHWPPF
		46×70	0.15	6.03	30	US22D392MSHS11PHWPPF
	3,900	51×61	0.15	5.87	30	US22D392MTC99PHWPPF
51×70		0.15	6.42	25	US22D472MTC911PHWPPF	
250	1,000	41×45	0.15	3.26	115	US22E102MSBS6PHWPPF
	1,500	41×55	0.15	3.96	76	US22E152MSBS8PHWPPF
		41×64	0.15	4.38	63	US22E182MSBS10PHWPPF
	1,800	46×51	0.15	4.06	63	US22E182MSHS7PHWPPF
		51×51	0.15	3.95	63	US22E182MTC97PHWPPF
	2,200	46×61	0.15	4.54	52	US22E222MSHS9PHWPPF
		46×70	0.15	5.02	43	US22E272MSHS11PHWPPF
	2,700	51×61	0.15	4.88	43	US22E272MTC99PHWPPF
51×70		0.15	5.38	38	US22E332MTC911PHWPPF	
400	470	41×45	0.15	2.92	158	US22G471MSBS6PHWPPF
		41×55	0.15	3.50	109	US22G681MSBS8PHWPPF
	680	46×51	0.15	3.53	109	US22G681MSHS7PHWPPF
		41×64	0.15	3.87	90	US22G821MSBS10PHWPPF
	820	51×51	0.15	4.03	90	US22G821MTC97PHWPPF
		46×61	0.15	4.33	80	US22G102MSHS9PHWPPF
	1,200	46×70	0.15	4.73	66	US22G122MSHS11PHWPPF
		51×61	0.15	4.92	66	US22G122MTC99PHWPPF
1,500	51×70	0.15	5.48	53	US22G152MTC911PHWPPF	

Rated Voltage (V. D.C)	Capacitance (μ F)	Case size $\phi D \times L$ (mm)	$\tan \delta$ 20°C, 120Hz	Ripple current (Arms) 105°C, 120Hz	ESR (typ.) (m Ω) 20°C, 100Hz	Product name
420	390	41×45	0.15	2.56	190	US2420V391MSBS6PHWPPF
		41×55	0.15	3.04	132	US2420V561MSBS8PHWPPF
		46×51	0.15	3.39	109	US2420V681MSHS7PHWPPF
	820	41×64	0.15	3.72	90	US2420V821MSBS10PHWPPF
		46×61	0.15	3.76	90	US2420V821MSHS9PHWPPF
		51×51	0.15	3.87	90	US2420V821MTC97PHWPPF
	1,000	46×70	0.15	4.15	80	US2420V102MSHS11PHWPPF
		51×61	0.15	4.31	80	US2420V102MTC99PHWPPF
1,200	51×70	0.15	4.71	66	US2420V122MTC911PHWPPF	
450	330	41×45	0.15	2.35	225	US22W331MSBS6PHWPPF
	470	41×55	0.15	2.79	158	US22W471MSBS8PHWPPF
		41×64	0.15	3.07	132	US22W561MSBS10PHWPPF
	560	46×51	0.15	3.07	132	US22W561MSHS7PHWPPF
		46×61	0.15	3.43	109	US22W681MSHS9PHWPPF
	680	51×51	0.15	3.52	109	US22W681MTC97PHWPPF
		46×70	0.15	3.75	90	US22W821MSHS11PHWPPF
	820	51×61	0.15	3.90	90	US22W821MTC99PHWPPF
1,000		51×70	0.15	4.30	80	US22W102MTC911PHWPPF

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Life time graph

Useful life depending on ambient temperature T_a and ripple current operating condition I versus rated ripple current at 105°C, 120Hz.

