

UPGRADE!

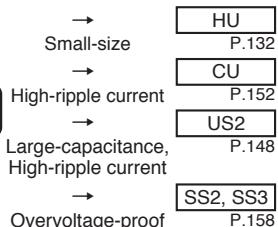
HU3 Series

Useful of 4,000 hours at 105°C

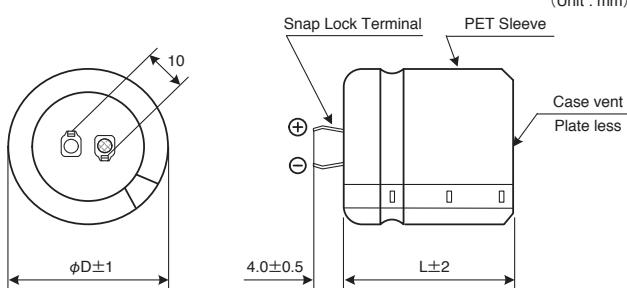
- Conform RoHS

Features

- The HU3 series is the standard products.

HU3**Product Specifications**

Items	Specifications
Temperature range	-40°C ~ +105°C
Rated voltage	16 ~ 450V.DC
Capacitance tolerance	±20% (20°C, 120Hz)
Leakage current	0.02CV (μ A) or 3 mA, whichever is smaller or less (20°C, after 5 minutes) [C = nominal capacitance (μ F), 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)
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

Dimensions**Ripple current correction coefficient**

Temperature (°C)	60	70	85	105
Correction coefficient	2.2	2.0	1.8	1.0
Frequency (Hz)	50/60	120	300	1K
Correction coefficient	16~100V	0.7	1.0	1.1
	160~450V	0.7	1.0	1.3
				≥10K
				1.2
				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) HU3 Series 16V 10,000 μ F ±20%					
HU3	1C	103	M	C	X WP EC
Type of series					

Lead-Free and PVC-Free(standard)
Without plate(standard)
Case dia code
Terminal code
Capacitance tolerance code
Capacitance code
Rated voltage code

Refer to page 122-123 for other terminal shape available on request.

SNAP MOUNT TYPE ALUMINUM ELECTROLYTIC CAPACITORS

Standard Products Table

Rated Voltage (V. DC)	Capacitance (μ F)	Case size $\phi D \times L$ (mm)	$\tan\delta$ 20°C, 120Hz	Ripple current (Arms) 105°C, 120Hz	ESR(typ.) (mΩ) 20°C, 100Hz	Product name
16	4,700	22×25	0.50	0.93	67	HU31C472MCXWPEC
	6,800	22×35	0.50	1.27	46	HU31C682MCXWPEC
	10,000	25×30	0.50	1.26	46	HU31C682MCYWPEC
	15,000	22×45	0.50	1.43	38	HU31C103MCXWPEC
	15,000	25×35	0.50	1.36	38	HU31C103MCYWPEC
	22,000	30×25	0.50	1.30	38	HU31C103MCZWPEC
	22,000	25×45	0.50	1.84	25	HU31C153MCYWPEC
	33,000	30×35	0.50	1.77	25	HU31C153MCZWPEC
	33,000	35×30	0.50	1.78	25	HU31C153MCAWPEC
	33,000	30×45	0.50	2.36	20	HU31C223MCZWPEC
	33,000	35×35	0.50	2.27	20	HU31C223MCAWPEC
	33,000	35×50	0.50	2.95	15	HU31C333MCAWPEC
25	3,300	22×25	0.40	0.87	116	HU31E332MCXWPEC
	4,700	22×30	0.40	1.00	81	HU31E472MCXWPEC
	6,800	25×25	0.40	0.98	81	HU31E472MCYWPEC
	6,800	22×35	0.40	1.27	65	HU31E682MCXWPEC
	10,000	25×30	0.40	1.27	65	HU31E682MCYWPEC
	10,000	30×25	0.40	1.27	65	HU31E682MCZWPEC
	15,000	22×45	0.40	1.43	45	HU31E103MCXWPEC
	15,000	25×35	0.40	1.38	45	HU31E103MCYWPEC
	22,000	30×30	0.40	1.38	45	HU31E103MCZWPEC
	22,000	35×25	0.40	1.38	45	HU31E103MCAWPEC
	33,000	25×45	0.40	1.84	30	HU31E153MCYWPEC
	33,000	30×35	0.40	1.78	30	HU31E153MCZWPEC
	33,000	35×30	0.40	1.78	30	HU31E153MCAWPEC
	33,000	30×45	0.40	2.36	20	HU31E223MCZWPEC
	33,000	35×40	0.40	2.38	20	HU31E223MCAWPEC
	33,000	35×50	0.40	2.95	15	HU31E333MCAWPEC
35	2,200	22×25	0.35	0.71	108	HU31V222MCXWPEC
	3,300	22×30	0.35	0.93	72	HU31V332MCXWPEC
	4,700	25×25	0.35	0.92	72	HU31V332MCYWPEC
	4,700	22×35	0.35	1.05	61	HU31V472MCXWPEC
	6,800	25×30	0.35	1.05	61	HU31V472MCYWPEC
	6,800	30×25	0.35	1.05	61	HU31V682MCXWPEC
	10,000	22×50	0.35	1.46	55	HU31V682MCYWPEC
	10,000	25×40	0.35	1.40	55	HU31V682MCZWPEC
	10,000	30×30	0.35	1.34	55	HU31V682MCAWPEC
	15,000	35×25	0.35	1.34	55	HU31V682MCAWPEC
	15,000	25×50	0.35	1.57	35	HU31V103MCYWPEC
	15,000	30×35	0.35	1.46	35	HU31V103MCZWPEC
	15,000	35×30	0.35	1.46	35	HU31V103MCAWPEC
	15,000	30×50	0.35	2.03	25	HU31V153MCZWPEC
	15,000	35×40	0.35	1.96	25	HU31V153MCAWPEC
50	1,500	22×25	0.30	0.68	159	HU31H152MCXWPEC
	2,200	22×30	0.30	0.76	108	HU31H222MCXWPEC
	3,300	25×25	0.30	0.75	108	HU31H222MCYWPEC
	4,700	22×35	0.30	0.99	72	HU31H332MCXWPEC
	6,800	25×30	0.30	0.98	72	HU31H332MCYWPEC
	6,800	30×25	0.30	0.99	72	HU31H332MCZWPEC
	10,000	22×45	0.30	1.16	50	HU31H472MCXWPEC
	10,000	25×35	0.30	1.11	50	HU31H472MCYWPEC
	10,000	30×30	0.30	1.12	50	HU31H472MCZWPEC
	10,000	35×25	0.30	1.12	50	HU31H472MCAWPEC
	15,000	25×50	0.30	1.53	35	HU31H682MCYWPEC
	15,000	30×35	0.30	1.42	35	HU31H682MCZWPEC
	15,000	35×30	0.30	1.42	35	HU31H682MCAWPEC
	15,000	30×45	0.35	1.59	31	HU31H103MCZWPEC
	15,000	35×40	0.35	1.60	31	HU31H103MCAWPEC
	15,000	35×50	0.35	2.13	25	HU31H153MCAWPEC

Rated Voltage (V. DC)	Capacitance (μ F)	Case size $\phi D \times L$ (mm)	$\tan\delta$ 20°C, 120Hz	Ripple current (Arms) 105°C, 120Hz	ESR(typ.) (mΩ) 20°C, 100Hz	Product name
63	1,000	22×25	0.25	0.56	238	HU31J102MCXWPEC
	1,500	22×30	0.25	0.73	159	HU31J152MCXWPEC
	2,200	25×25	0.25	0.72	159	HU31J152MCYWPEC
	2,200	22×35	0.25	0.81	108	HU31J222MCXWPEC
	3,300	25×30	0.25	0.80	108	HU31J222MCYWPEC
	3,300	30×25	0.25	0.81	108	HU31J222MCZWPEC
	4,700	22×45	0.25	1.09	80	HU31J332MCXWPEC
	4,700	25×40	0.25	1.09	80	HU31J332MCYWPEC
	4,700	30×30	0.25	1.05	80	HU31J332MCZWPEC
	4,700	35×25	0.25	1.05	80	HU31J332MCAWPEC
80	1,000	22×30	0.20	0.59	230	HU31K102MCXWPEC
	1,500	25×25	0.20	0.59	230	HU31K102MCYWPEC
	1,500	22×35	0.20	0.77	155	HU31K152MCXWPEC
	2,200	25×30	0.20	0.77	155	HU31K152MCYWPEC
	2,200	30×25	0.20	0.77	155	HU31K152MCZWPEC
	3,300	22×50	0.20	0.93	105	HU31K222MCXWPEC
	3,300	25×40	0.20	0.89	105	HU31K222MCYWPEC
	3,300	30×30	0.20	0.85	105	HU31K222MCZWPEC
	3,300	35×25	0.20	0.85	105	HU31K222MCAWPEC
	4,700	25×50	0.20	1.19	70	HU31K332MCYWPEC
100	1,000	30×40	0.20	1.16	70	HU31K332MCZWPEC
	1,000	35×30	0.20	1.11	70	HU31K332MCAWPEC
	1,000	22×30	0.20	0.59	180	HU32A102MCXWPEC
	1,000	25×25	0.20	0.59	180	HU32A102MCYWPEC
	1,500	22×40	0.20	0.81	120	HU32A152MCXWPEC
	1,500	25×35	0.20	0.81	120	HU32A152MCYWPEC
	2,200	30×25	0.20	0.77	120	HU32A152MCZWPEC
	2,200	25×45	0.20	0.93	82	HU32A222MCYWPEC
	3,300	30×35	0.20	0.90	82	HU32A222MCZWPEC
	3,300	35×45	0.20	1.35	45	HU32A472MCAWPEC
160	330	22×25	0.15	0.98	430	HU32C331MCXWPEC
	390	22×30	0.15	1.10	365	HU32C391MCXWPEC
	470	25×25	0.15	1.09	365	HU32C471MCXWPEC
	560	22×30	0.15	1.21	305	HU32C471MCYWPEC
	680	25×25	0.15	1.19	305	HU32C561MCYWPEC
	680	22×35	0.15	1.40	255	HU32C561MCXWPEC
	680	25×30	0.15	1.40	255	HU32C561MCZWPEC
	820	30×25	0.15	1.54	210	HU32C681MCZWPEC
	820	22×45	0.15	1.86	175	HU32C821MCXWPEC
	820	25×40	0.15	1.86	175	HU32C821MCYWPEC
	1,000	30×30	0.15	1.79	175	HU32C821MCZWPEC
	1,000	35×25	0.15	1.79	175	HU32C821MCAWPEC
	1,200	25×45	0.15	2.15	145	HU32C102MCYWPEC
	1,200	30×35	0.15	2.09	145	HU32C102MCZWPEC
	1,200	35×25	0.15	1.98	145	HU32C102MCAWPEC
	1,500	25×50	0.15	2.46	120	HU32C122MCYWPEC
	1,500	30×35	0.15	2.29	120	HU32C122MCZWPEC
	1,500	35×30	0.15	2.29	120	HU32C122MCAWPEC
	1,800	30×45	0.15	2.80	95	HU32C152MCZWPEC
	1,800	35×35	0.15	2.72	95	HU32C152MCAWPEC
	1,800	35×40	0.15	3.09	80	HU32C182MCAWPEC

SNAP MOUNT TYPE ALUMINUM ELECTROLYTIC CAPACITORS

Standard Products Table

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180	330	22×25	0.15	0.94	375	HU32P331MCXS2WPEC
		25×25	0.15	1.00	375	HU32P331MCYS2WPEC
	390	22×30	0.15	1.10	320	HU32P391MCXS3WPEC
		25×25	0.15	1.09	320	HU32P391MCYS2WPEC
	470	22×30	0.15	1.20	265	HU32P471MCXS3WPEC
		25×25	0.15	1.19	265	HU32P471MCYS2WPEC
		30×25	0.15	1.28	265	HU32P471MCZS2WPEC
	560	22×35	0.15	1.39	225	HU32P561MCXS4WPEC
		25×30	0.15	1.40	225	HU32P561MCYS3WPEC
		30×25	0.15	1.40	225	HU32P561MCZS2WPEC
	680	22×40	0.15	1.61	185	HU32P681MCXS5WPEC
		25×35	0.15	1.63	185	HU32P681MCYS4WPEC
		30×25	0.15	1.54	185	HU32P681MCZS2WPEC
		35×25	0.15	1.63	185	HU32P681MCAS2WPEC
	820	22×45	0.15	1.86	155	HU32P821MCXS6WPEC
		25×40	0.15	1.87	155	HU32P821MCYS5WPEC
		30×30	0.15	1.79	155	HU32P821MCZS3WPEC
		35×25	0.15	1.79	155	HU32P821MCAS2WPEC
	1,000	25×45	0.15	2.15	125	HU32P102MCYS6WPEC
		30×35	0.15	2.09	125	HU32P102MCZS4WPEC
		35×30	0.15	2.09	125	HU32P102MCAS3WPEC
		30×40	0.15	2.39	105	HU32P122MCZS5WPEC
	1,200	35×30	0.15	2.29	105	HU32P122MCAS3WPEC
		30×45	0.15	2.79	85	HU32P152MCZS6WPEC
	1,500	35×35	0.15	2.72	85	HU32P152MCAS4WPEC
		35×40	0.15	3.09	70	HU32P182MCAS5WPEC
200	330	22×25	0.15	1.04	325	HU32D331MCXS2WPEC
		22×30	0.15	1.20	275	HU32D391MCXS3WPEC
	470	22×35	0.15	1.40	230	HU32D471MCXS4WPEC
		25×25	0.15	1.31	230	HU32D471MCYS2WPEC
	560	22×40	0.15	1.61	190	HU32D561MCXS5WPEC
		25×30	0.15	1.52	190	HU32D561MCYS3WPEC
		30×25	0.15	1.53	190	HU32D561MCZS2WPEC
	680	22×40	0.15	1.77	160	HU32D681MCXS5WPEC
		25×35	0.15	1.78	160	HU32D681MCYS4WPEC
		30×25	0.15	1.69	160	HU32D681MCZS2WPEC
	820	25×40	0.15	2.05	130	HU32D821MCYS5WPEC
		30×30	0.15	1.97	130	HU32D821MCZS3WPEC
		35×25	0.15	1.96	130	HU32D821MCAS2WPEC
	1,000	25×45	0.15	2.37	110	HU32D102MCYS6WPEC
		30×35	0.15	2.29	110	HU32D102MCZS4WPEC
		35×30	0.15	2.29	110	HU32D102MCAS3WPEC
	1,200	30×40	0.15	2.63	90	HU32D122MCZS5WPEC
		35×30	0.15	2.51	90	HU32D122MCAS3WPEC
	1,500	35×40	0.15	3.09	75	HU32D152MCAS5WPEC
		35×45	0.15	3.53	70	HU32D182MCAS6WPEC

Rated Voltage (V. DC)	Capacitance (μ F)	Case size $\phi D \times L$ (mm)	$\tan\delta$ 20°C, 120Hz	Ripple current (Arms) 105°C, 120Hz	ESR(typ.) (mΩ) 20°C, 100Hz	Product name	
250	220	22×25	0.15	0.85	445	HU32E221MCXS2WPEC	
	270	22×30	0.15	1.00	360	HU32E271MCXS3WPEC	
	330	22×30	0.15	1.11	295	HU32E331MCXS3WPEC	
		25×25	0.15	1.10	295	HU32E331MCYS2WPEC	
	390	22×35	0.15	1.28	250	HU32E391MCXS4WPEC	
		25×30	0.15	1.27	250	HU32E391MCYS3WPEC	
		22×45	0.15	1.55	210	HU32E471MCXS6WPEC	
	470	25×35	0.15	1.48	210	HU32E471MCYS4WPEC	
		30×25	0.15	1.40	210	HU32E471MCZS2WPEC	
		25×40	0.15	1.69	175	HU32E561MCYS5WPEC	
	560	30×30	0.15	1.63	175	HU32E561MCZS3WPEC	
		25×45	0.15	1.95	145	HU32E681MCYS6WPEC	
		30×35	0.15	1.89	145	HU32E681MCZS4WPEC	
	680	35×25	0.15	1.79	145	HU32E681MCAS2WPEC	
		30×40	0.15	2.18	120	HU32E821MCZS5WPEC	
		35×30	0.15	2.08	120	HU32E821MCAS3WPEC	
	820	35×35	0.15	2.41	100	HU32E102MCAS4WPEC	
		35×40	0.15	2.76	85	HU32E122MCAS5WPEC	
		35×45	0.15	3.22	65	HU32E152MCAS6WPEC	
	350	120	22×25	0.15	0.57	770	HU32V121MCXS2WPEC
		25×25	0.15	0.60	770	HU32V121MCYS2WPEC	
		22×30	0.15	0.68	615	HU32V151MCXS3WPEC	
		25×25	0.15	0.67	615	HU32V151MCYS2WPEC	
		30×25	0.15	0.72	615	HU32V151MCZS2WPEC	
		22×35	0.15	0.79	520	HU32V181MCXS4WPEC	
		25×30	0.15	0.79	520	HU32V181MCYS3WPEC	
		30×25	0.15	0.79	520	HU32V181MCZS2WPEC	
		22×45	0.15	0.96	450	HU32V221MCXS6WPEC	
		25×35	0.15	0.92	450	HU32V221MCYS4WPEC	
	220	30×25	0.15	0.87	450	HU32V221MCZS2WPEC	
		35×25	0.15	0.93	450	HU32V221MCAS2WPEC	
		25×40	0.15	1.07	366	HU32V271MCYS5WPEC	
	270	30×30	0.15	1.03	366	HU32V271MCZS3WPEC	
		35×25	0.15	1.02	366	HU32V271MCAS2WPEC	
		25×45	0.15	1.24	299	HU32V331MCYS6WPEC	
	330	30×35	0.15	1.20	299	HU32V331MCZS4WPEC	
		35×25	0.15	1.13	299	HU32V331MCAS2WPEC	
		30×40	0.15	1.36	253	HU32V391MCZS5WPEC	
	390	35×30	0.15	1.30	253	HU32V391MCAS3WPEC	
		35×35	0.15	1.50	210	HU32V471MCAS4WPEC	
	470	35×40	0.15	1.72	181	HU32V561MCAS5WPEC	
	560	35×45	0.15	1.72	181	HU32V561MCAS5WPEC	

SNAP MOUNT TYPE ALUMINUM ELECTROLYTIC CAPACITORS

Standard Products Table

Rated Voltage (V. DC)	Capacitance (μ F)	Case size $\phi D \times L$ (mm)	$\tan\delta$ 20°C, 120Hz	Ripple current (Arms) 105°C, 120Hz	ESR(typ.) (mΩ) 20°C, 100Hz	Product name
400	100	22×25	0.15	0.57	924	HU32G101MCXS2WPEC
		22×30	0.15	0.67	770	HU32G121MCXS3WPEC
	120	25×25	0.15	0.66	770	HU32G121MCYS2WPEC
	150	22×35	0.15	0.79	615	HU32G151MCXS4WPEC
		25×30	0.15	0.79	615	HU32G151MCYS3WPEC
		30×25	0.15	0.79	615	HU32G151MCZS2WPEC
	180	22×40	0.15	0.91	520	HU32G181MCXS5WPEC
		25×35	0.15	0.91	520	HU32G181MCYS4WPEC
		30×25	0.15	0.87	520	HU32G181MCZS2WPEC
	220	25×40	0.15	1.06	450	HU32G221MCYS5WPEC
		30×30	0.15	1.02	450	HU32G221MCZS3WPEC
		35×25	0.15	1.02	450	HU32G221MCAS2WPEC
	270	25×45	0.15	1.23	366	HU32G271MCYS6WPEC
		30×35	0.15	1.19	366	HU32G271MCZS4WPEC
		35×25	0.15	1.13	366	HU32G271MCAS2WPEC
	330	30×40	0.15	1.38	299	HU32G331MCZS5WPEC
		35×30	0.15	1.32	299	HU32G331MCAS3WPEC
	390	35×35	0.15	1.51	253	HU32G391MCAS4WPEC
	470	35×45	0.15	1.80	210	HU32G471MCAS6WPEC
	560	35×45	0.15	1.97	181	HU32G561MCAS6WPEC
420	82	22×25	0.15	0.52	1,242	HU3420V820MCXS2WPEC
		25×25	0.15	0.54	1,242	HU3420V820MCYS2WPEC
	100	22×30	0.15	0.61	1,019	HU3420V101MCXS3WPEC
		25×25	0.15	0.61	1,019	HU3420V101MCYS2WPEC
	120	22×35	0.15	0.71	850	HU3420V121MCXS4WPEC
		25×25	0.15	0.66	850	HU3420V121MCYS2WPEC
		30×25	0.15	0.70	850	HU3420V121MCZS2WPEC
	150	22×40	0.15	0.83	679	HU3420V151MCXS5WPEC
		25×30	0.15	0.79	679	HU3420V151MCYS3WPEC
		30×25	0.15	0.79	679	HU3420V151MCZS2WPEC
	180	25×35	0.15	0.91	566	HU3420V181MCYS4WPEC
		30×25	0.15	0.87	566	HU3420V181MCZS2WPEC
		35×25	0.15	0.90	566	HU3420V181MCAS2WPEC
	220	25×45	0.15	1.11	463	HU3420V221MCYS6WPEC
		30×30	0.15	1.02	463	HU3420V221MCZS3WPEC
		35×25	0.15	1.02	463	HU3420V221MCAS2WPEC
	270	30×35	0.15	1.19	377	HU3420V271MCZS4WPEC
		35×30	0.15	1.19	377	HU3420V271MCAS3WPEC
	330	30×45	0.15	1.44	309	HU3420V331MCZS6WPEC
		35×35	0.15	1.39	309	HU3420V331MCAS4WPEC
	390	35×40	0.15	1.58	261	HU3420V391MCAS5WPEC
	470	35×45	0.15	1.80	218	HU3420V471MCAS6WPEC

Rated Voltage (V. DC)	Capacitance (μ F)	Case size $\phi D \times L$ (mm)	$\tan\delta$ 20°C, 120Hz	Ripple current (Arms) 105°C, 120Hz	ESR(typ.) (mΩ) 20°C, 100Hz	Product name
450	68	22×25	0.15	0.47	1,499	HU32W680MCXS2WPEC
		22×30	0.15	1.242	1,242	HU32W820MCXS3WPEC
	82	25×25	0.15	0.55	1,242	HU32W820MCYS2WPEC
	100	22×35	0.15	0.65	1,019	HU32W101MCXS4WPEC
		25×30	0.15	0.64	1,019	HU32W101MCYS3WPEC
		22×40	0.15	0.75	850	HU32W121MCXS5WPEC
	120	25×30	0.15	0.71	850	HU32W121MCYS5WPEC
		30×25	0.15	0.71	850	HU32W121MCZS2WPEC
		25×40	0.15	0.88	679	HU32W151MCYS5WPEC
	150	30×30	0.15	0.84	679	HU32W151MCZS3WPEC
		35×25	0.15	0.84	679	HU32W151MCAS2WPEC
		25×45	0.15	1.01	566	HU32W181MCYS6WPEC
	180	30×30	0.15	0.92	566	HU32W181MCZS3WPEC
		35×25	0.15	0.92	566	HU32W181MCAS2WPEC
		30×35	0.15	1.07	463	HU32W221MCZS4WPEC
	220	35×30	0.15	1.08	463	HU32W221MCAS3WPEC
		30×45	0.15	1.30	377	HU32W271MCAS4WPEC
		35×35	0.15	1.25	377	HU32W271MCAS5WPEC
	330	35×40	0.15	1.45	309	HU32W331MCAS5WPEC
		35×45	0.15	1.64	261	HU32W391MCAS6WPEC
	390	35×45	0.15	1.64	261	HU32W391MCAS6WPEC

Life time graph

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

