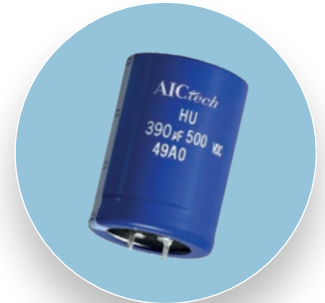


# HU · Snap-In · 6000h/105 °C

## Standard Performances · Compact Design

### > Specifications · Spezifikationen

Items	Characteristics
Temperature range	-40°C ~ + 105°C (200VDC - 250VDC) -25°C ~ + 105°C (400VDC - 550VDC)
Capacitance tolerance (at 20°C)	Standard +/- 20%, -10%/+30% on request
Surge voltage	Repetitive max. 30 sec per 6 Minutes
Leakage current max. $I_L$ (20°C, 5 min)	0.02 • C • $V_r$ [ $\mu$ A] or 3 mA, which is smaller.
Useful life	6000h at 105°C
Field failure rate	0.5 FIT = 0.5 • 10 <sup>-9</sup> Failures/hour
RoHS conform	Directive 2011/65/EU & (EU)2015/863
Specifications	JIS C 5101-4, AEC-Q200 qualified
Vibration	0.75mm, 10...55Hz, 10g, 3x2h
Sleeve withstanding voltage	3000 Vac/1 min between terminals bundled and plate*



\* Typical value using sleeve which is free from any scratches and damages

### > Outline Drawings · Bauformen

Refer to page 5 for available terminal shapes and dimensions. · Auf Seite 5 finden Sie die verfügbaren Bauformen und Maße.

### > Product Code · Bestellbezeichnung

**Example:** Series HU · 400 V · 330  $\mu$ F  $\pm$  20 % · 30x30 mm · 2-pin terminal · without plate

HU		2G		331		M		R		Z		S3		WEPC	
Type of series		Capacitance code		Terminal symbol code		Rated voltage code		Capacitance tolerance		Diameter code		Length code			
		The first two digits are significant. The last digit indicates the number of following zeros in $\mu$ F.		R: 2-pin terminal S: 4-pin terminal C: 2-pin short terminal X: 4-pin short terminal E: 3-pin short terminal		Code   Voltage		M : $\pm$ 20% Q : -10% ~ +30%		Code   $\varnothing$ D		Code   L   Code   L			
						2D   200				W   20		S1   20   S10   65			
						2E   250				X   22		S2   25   S11   70			
						2V   350				Y   25		S3   30   S12   75			
						2G   400				Z   30		S4   35   S13   80			
						420V   420				A   35		S5   40   S14   85			
						2W   450				B   40		S6   45   S15   90			
						2H   500				H   46		S7   50   S16   95			
						2L   550				C   50		S8   55   S17   100			
												S9   60   S18   105			
												Others on request			

Rated VoltageCode (Surge Voltage) $V_r$ [V DC]	Capacitance $C_r$ [ $\mu$ F]	Ripple Current at 105°C/120Hz $I_r$ [A RMS]	Ripple Current at 40°C/120Hz [A RMS]	ESR (typ) at 20°C/100Hz [m $\Omega$ ]	Dissipation Factor at 20°C/100Hz Tan $\delta$	DxL [mm]	Product Code  # = variable value, see fixing code in the product code
<b>200 VDC Code: 2D</b>  Surge Voltage 250 VDC	330	1.07	2.46	330	0.15	22x25	HU2D331M#XS2
	390	1.24	2.85	280	0.15	22x30	HU2D391M#XS3
	470	1.31	3.01	240	0.15	25x25	HU2D471M#YS2
	560	1.58	3.63	200	0.15	22x35	HU2D561M#XS4
		1.52	3.50	200	0.15	25x30	HU2D561M#YS3
	680	1.83	4.21	160	0.15	22x40	HU2D681M#XS5
		1.77	4.07	160	0.15	25x35	HU2D681M#YS4
		1.60	3.68	160	0.15	30x25	HU2D681M#ZS2
	820	2.20	5.06	140	0.15	22x50	HU2D821M#XS7
		2.05	4.72	140	0.15	25x40	HU2D821M#YS5
		1.86	4.28	140	0.15	30x30	HU2D821M#ZS3
		1.52	3.50	140	0.15	35x25	HU2D821M#AS2
	1 000	2.37	5.45	110	0.15	25x45	HU2D102M#YS6
		2.17	4.99	110	0.15	30x35	HU2D102M#ZS4
	1 200	2.70	6.21	100	0.15	25x50	HU2D122M#YS7
		2.49	5.73	100	0.15	30x40	HU2D122M#ZS5
		1.94	4.46	100	0.15	35x30	HU2D122M#AS3
	1 500	2.91	6.69	80	0.15	30x45	HU2D152M#ZS6
		2.29	5.27	80	0.15	35x35	HU2D152M#AS4
	1 800	3.32	7.64	70	0.15	30x50	HU2D182M#ZS7
2.62		6.03	70	0.15	35x40	HU2D182M#AS5	
2 200	3.02	6.95	50	0.15	35x45	HU2D222M#AS6	
2 700	3.86	8.88	50	0.15	35x50	HU2D272M#AS7	
<b>250 VDC Code: 2E</b>  Surge Voltage 300 VDC	220	0.95	2.19	440	0.15	22x25	HU2E221M#XS2
		1.30	2.99	290	0.15	20x35	HU2E331M#WS4
	330	1.24	2.85	290	0.15	22x30	HU2E331M#XS3
		1.19	2.74	290	0.15	25x25	HU2E331M#YS2
	390	1.42	3.27	250	0.15	22x35	HU2E391M#XS4
		1.37	3.15	250	0.15	25x30	HU2E391M#YS3
	470	1.65	3.80	210	0.15	22x40	HU2E471M#XS5
		1.42	3.27	210	0.15	30x25	HU2E471M#ZS2
	560	1.88	4.32	180	0.15	22x45	HU2E561M#XS6
		1.74	4.00	180	0.15	25x35	HU2E561M#YS4
		2.16	4.97	150	0.15	22x50	HU2E681M#XS7
	680	2.01	4.62	150	0.15	25x40	HU2E681M#YS5
		2.11	4.85	150	0.15	25x45	HU2E681M#YS6
		1.82	4.19	150	0.15	30x30	HU2E681M#ZS3
		1.52	3.50	150	0.15	35x25	HU2E681M#AS2
	820	2.41	5.54	120	0.15	25x50	HU2E821M#YS7
		2.10	4.83	120	0.15	30x35	HU2E821M#ZS4
		1.76	4.05	120	0.15	35x30	HU2E821M#AS3
	1 000	2.43	5.59	100	0.15	30x40	HU2E102M#ZS5
		2.04	4.69	100	0.15	35x35	HU2E102M#AS4
1 200	2.89	6.65	80	0.15	30x50	HU2E122M#ZS7	
	2.34	5.38	80	0.15	35x40	HU2E122M#AS5	
1 500	2.73	6.28	70	0.15	35x45	HU2E152M#AS6	
1 800	3.11	7.15	60	0.15	35x50	HU2E182M#AS7	

Additional designs on request · Weitere Designs auf Anfrage

Rated VoltageCode (Surge Voltage) $V_r$ [V DC]	Capacitance $C_r$ [μF]	Ripple Current at 105°C/120Hz $I_r$ [A RMS]	Ripple Current at 40°C/120Hz [A RMS]	ESR (typ) at 20°C/100Hz [mΩ]	Dissipation Factor at 20°C/100Hz Tan δ	DxL [mm]	Product Code  # = variable value, see fixing code in the product code
400 VDC Code: 2G  Surge Voltage 450 VDC	82	0.63	1.45	1170	0.20	22x25	HU2G820M#XS2
	120	0.77	1.77	800	0.20	22x25	HU2G121M#XS2
	150	0.92	2.12	640	0.20	22x30	HU2G151M#XS3
	180	1.01	2.32	540	0.20	22x30	HU2G181M#XS3
		1.05	2.42	540	0.20	22x35	HU2G181M#XS4
		0.99	2.28	540	0.20	25x25	HU2G181M#YS2
	220	1.11	2.55	440	0.20	22x30	HU2G221M#XS3
		1.22	2.81	440	0.20	22x40	HU2G221M#XS5
		1.10	2.53	440	0.20	25x25	HU2G221M#YS2
		1.16	2.67	440	0.20	25x30	HU2G221M#YS3
	270	1.29	2.97	360	0.20	22x35	HU2G271M#XS4
		1.40	3.22	360	0.20	22x45	HU2G271M#XS6
		1.28	3.46	360	0.20	25x30	HU2G271M#YS3
		1.35	3.11	360	0.20	25x35	HU2G271M#YS4
		1.28	2.94	360	0.20	30x25	HU2G271M#ZS2
	330	1.54	3.54	290	0.20	22x45	HU2G331M#XS6
		1.59	3.66	290	0.20	22x50	HU2G331M#XS7
		1.49	3.43	290	0.20	25x35	HU2G331M#YS4
		1.55	3.57	290	0.20	25x40	HU2G331M#YS5
		1.41	3.24	290	0.20	30x25	HU2G331M#ZS2
		1.49	3.43	290	0.20	30x30	HU2G331M#ZS3
	390	1.46	3.36	290	0.20	35x25	HU2G331M#AS2
		1.73	3.98	250	0.20	22x50	HU2G391M#XS7
		1.68	3.86	250	0.20	25x40	HU2G391M#YS5
		1.74	4.00	250	0.20	25x45	HU2G391M#YS6
		1.62	3.72	250	0.20	30x30	HU2G391M#ZS3
		1.70	3.91	250	0.20	30x35	HU2G391M#ZS4
		1.59	3.66	250	0.20	35x25	HU2G391M#AS2
	470	1.87	4.30	250	0.20	35x30	HU2G391M#AS3
		1.92	4.41	210	0.20	25x45	HU2G471M#YS6
		1.98	4.55	210	0.20	25x50	HU2G471M#YS7
		1.86	4.28	210	0.20	30x35	HU2G471M#ZS4
		1.94	4.46	210	0.20	30x40	HU2G471M#ZS5
	560	1.84	4.23	210	0.20	35x30	HU2G471M#AS3
		2.16	4.97	180	0.20	25x50	HU2G561M#YS7
		2.11	4.85	180	0.20	30x40	HU2G561M#ZS5
		2.19	5.04	180	0.20	30x45	HU2G561M#ZS6
		2.01	4.62	180	0.20	35x30	HU2G561M#AS3
	680	2.09	4.81	180	0.20	35x35	HU2G561M#AS4
		2.41	5.54	150	0.20	30x45	HU2G681M#ZS6
		2.48	5.70	150	0.20	30x50	HU2G681M#ZS7
		2.31	5.31	150	0.20	35x35	HU2G681M#AS4
	770	2.40	5.52	150	0.20	35x40	HU2G681M#AS5
		2.51	5.77	132	0.20	35x50	HU2G771M#AS7

Additional designs on request · Weitere Designs auf Anfrage

Rated VoltageCode (Surge Voltage) $V_r$ [V DC]	Capacitance $C_r$ [ $\mu$ F]	Ripple Current at 105°C/120Hz $I_r$ [A RMS]	Ripple Current at 40°C/120Hz [A RMS]	ESR (typ) at 20°C/100Hz [m $\Omega$ ]	Dissipation Factor at 20°C/100Hz Tan $\delta$	DxL [mm]	Product Code  # = variable value, see fixing code in the product code
<b>400 VDC</b> Code: <b>2G</b>  Surge Voltage 450 VDC	<b>820</b>	2.81	6.46	120	0.20	30x55	HU2G821M#ZS8
		2.63	6.05	120	0.20	35x40	HU2G821M#AS5
		2.72	6.26	120	0.20	35x45	HU2G821M#AS6
		2.78	6.39	120	0.20	35x50	HU2G821M#AS7
	<b>950</b>	4.00	9.20	75	0.20	35x55	HU2G951S#AS82PCC
	<b>1 000</b>	3.09	7.11	100	0.20	35x50	HU2G102M#AL51
		2.86	6.58	120	0.20	35x60	HU2G102M#AS9
	<b>1 200</b>	3.44	7.91	80	0.20	35x75	HU2G122M#AS12
	<b>1 500</b>	3.93	9.04	80	0.20	35x100	HU2G152M#AS17
		3.99	9.18	80	0.20	40x75	HU2G152M#BS12
	<b>1 700</b>	6.00	13.80	45	0.20	40x90	HU2G172Q#BS15CC
	<b>1 800</b>	4.47	10.28	60	0.20	40x100	HU2G182M#BS17
<b>420 VDC</b> Code: <b>420V</b>  Surge Voltage 470 VDC	<b>100</b>	0.71	1.63	1020	0.20	22x25	HU420V101M#XS2
	<b>120</b>	0.77	1.77	850	0.20	22x25	HU420V101M#XS2
	<b>150</b>	0.87	2.00	680	0.20	22x25	HU420V151M#XS2
		0.92	2.12	680	0.20	22x30	HU420V151M#XS3
	<b>180</b>	0.90	2.07	680	0.20	25x25	HU420V151M#YS2
		1.01	2.32	570	0.20	22x30	HU420V181M#XS3
		1.05	2.42	570	0.20	22x35	HU420V181M#XS4
	<b>220</b>	1.05	2.42	570	0.20	25x30	HU420V181M#YS3
		1.17	2.69	470	0.20	22x35	HU420V221M#XS4
		1.22	2.81	470	0.20	22x40	HU420V221M#XS5
	<b>270</b>	1.21	2.78	470	0.20	25x35	HU420V221M#YS4
		1.15	2.65	470	0.20	30x25	HU420V221M#ZS2
		1.35	3.11	380	0.20	22x40	HU420V271M#XS5
		1.40	3.22	380	0.20	22x45	HU420V271M#XS6
		1.35	3.11	380	0.20	25x35	HU420V271M#YS4
	<b>330</b>	1.28	2.94	380	0.20	30x25	HU420V271M#ZS2
		1.38	3.17	380	0.20	35x25	HU420V271M#AS2
		1.54	3.54	310	0.20	22x45	HU420V331M#XS6
		1.59	3.66	310	0.20	22x50	HU420V331M#XS7
		1.55	3.57	310	0.20	25x40	HU420V331M#YS5
		1.61	3.70	310	0.20	25x45	HU420V331M#YS6
		1.49	3.43	310	0.20	30x30	HU420V331M#ZS3
	<b>390</b>	1.56	3.59	310	0.20	30x35	HU420V331M#ZS4
		1.46	3.36	310	0.20	35x25	HU420V331M#AS2
		1.74	4.00	270	0.20	25x45	HU420V391M#YS6
		1.80	4.14	270	0.20	25x50	HU420V391M#YS7
		1.62	3.73	270	0.20	30x30	HU420V391M#ZS3
		1.76	4.05	270	0.20	30x40	HU420V391M#ZS5
	<b>470</b>	1.59	3.66	270	0.20	35x25	HU420V391M#AS2
		1.67	3.84	270	0.20	35x30	HU420V391M#AS3
		1.98	4.55	220	0.20	25x50	HU420V471M#YS7
		1.86	4.28	220	0.20	30x35	HU420V471M#ZS4
1.94		4.46	220	0.20	30x40	HU420V471M#ZS5	

Additional designs on request · Weitere Designs auf Anfrage

Rated VoltageCode (Surge Voltage) $V_r$ [V DC]	Capacitance $C_r$ [μF]	Ripple Current at 105°C/120Hz $I_r$ [A RMS]	Ripple Current at 40°C/120Hz [A RMS]	ESR (typ) at 20°C/100Hz [mΩ]	Dissipation Factor at 20°C/100Hz Tan δ	DxL [mm]	Product Code  # = variable value, see fixing code in the product code
<b>420 VDC</b> Code: 420V  Surge Voltage 470 VDC	470	2.00	4.60	220	0.20	30x45	HU420V471M#ZS6
		1.84	4.23	220	0.20	35x30	HU420V471M#AS3
		1.92	4.42	220	0.20	35x35	HU420V471M#AS4
	520	2.18	5.01	190	0.20	30x45	HU420V521M#ZS6
		2.27	5.22	190	0.20	25x60	HU420V561M#YS9
	560	2.11	4.85	190	0.20	30x40	HU420V561M#ZS5
		2.25	5.18	190	0.20	30x50	HU420V561M#ZS7
		2.09	4.81	190	0.20	35x35	HU420V561M#AS4
		2.18	5.01	190	0.20	35x40	HU420V561M#AS5
		2.48	5.70	150	0.20	30x50	HU420V681M#ZS7
	680	2.40	5.52	150	0.20	35x40	HU420V681M#AS5
		2.48	5.70	150	0.20	35x45	HU420V681M#AS6
		2.56	5.89	150	0.20	35x50	HU420V681M#AS7
	720	2.55	5.86	140	0.20	35x45	HU420V721M#AS6
	820	2.81	6.46	130	0.20	30x55	HU420V821M#ZS8
		2.72	6.26	130	0.20	35x45	HU420V821M#AS6
		2.80	6.44	130	0.20	35x50	HU420V821M#AS7
	920	2.96	6.81	120	0.20	35x60	HU420V921M#AS9
	1000	3.25	7.48	110	0.20	35x60	HU420V102M#AS9
		3.30	7.59	110	0.20	40x56	HU420V102M#BS8
	1200	3.57	8.21	90	0.20	40x75	HU420V122M#BS12
		3.46	7.96	90	0.20	35x80	HU420V122M#AS13
	1500	4.07	9.36	70	0.20	40x100	HU420V152M#BS17
	1600	4.20	9.66	70	0.20	40x100	HU420V162M#BS17
1800	4.45	10.24	67	0.20	40x100	HU420V182M#BS17	
<b>450 VDC</b> Code: 2W  Surge Voltage 500 VDC	100	0.71	1.63	1020	0.20	20x30	HU2W101M#WS3
		0.71	1.63	1020	0.20	22x25	HU2W101M#XS2
		0.75	1.73	1020	0.20	22x30	HU2W101M#XS3
		0.72	1.66	1020	0.20	30x20	HU2W101M#ZS1
	120	0.82	1.89	850	0.20	22x30	HU2W121M#XS3
		0.81	1.86	850	0.20	25x25	HU2W121M#YS2
	150	0.92	2.12	680	0.20	22x30	HU2W151M#XS3
		0.96	2.21	680	0.20	22x35	HU2W151M#XS4
		0.90	2.07	680	0.20	25x25	HU2W151M#YS2
	180	1.01	2.32	570	0.20	22x30	HU2W181M#XS3
		1.05	2.42	570	0.20	22x35	HU2W181M#XS4
		1.09	2.51	570	0.20	22x40	HU2W181M#XS5
		0.99	2.28	570	0.20	25x25	HU2W181M#YS2
		1.05	2.42	570	0.20	25x30	HU2W181M#YS3
		1.09	2.51	570	0.20	25x35	HU2W181M#YS4
	220	1.04	2.39	570	0.20	30x25	HU2W181M#ZS2
		1.17	2.69	470	0.20	22x35	HU2W221M#XS4
		1.22	2.81	470	0.20	22x40	HU2W221M#XS5
	1.25	2.88	470	0.20	22x45	HU2W221M#XS6	

Additional designs on request · Weitere Designs auf Anfrage

Rated VoltageCode (Surge Voltage) $V_r$ [V DC]	Capacitance $C_r$ [ $\mu$ F]	Ripple Current at 105°C/120Hz $I_r$ [A RMS]	Ripple Current at 40°C/120Hz [A RMS]	ESR (typ) at 20°C/100Hz [m $\Omega$ ]	Dissipation Factor at 20°C/100Hz Tan $\delta$	DxL [mm]	Product Code  # = variable value, see fixing code in the product code	
450 VDC Code: 2W  Surge Voltage 500 VDC	220	1.16	2.67	470	0.20	25x30	HU2W221M#YS3	
		1.21	2.78	470	0.20	25x35	HU2W221M#YS4	
		1.15	2.65	470	0.20	30x25	HU2W221M#ZS2	
	270	1.40	3.22	380	0.20	22x45	HU2W271M#XS6	
		1.44	3.31	380	0.20	22x50	HU2W271M#XS7	
		1.35	3.11	380	0.20	25x35	HU2W271M#YS4	
		1.40	3.22	380	0.20	25x40	HU2W271M#YS5	
		1.28	2.94	380	0.20	30x25	HU2W271M#ZS2	
		1.35	3.11	380	0.20	30x30	HU2W271M#ZS3	
		1.38	3.17	380	0.20	35x25	HU2W271M#AS2	
		330	1.59	3.66	310	0.20	22x50	HU2W331M#XS7
			1.55	3.57	310	0.20	25x40	HU2W331M#YS5
	1.61		3.70	310	0.20	25x45	HU2W331M#YS6	
	1.65		3.80	310	0.20	25x50	HU2W331M#YS7	
	1.49		3.43	310	0.20	30x30	HU2W331M#ZS3	
	1.56		3.59	310	0.20	30x35	HU2W331M#ZS4	
	1.46		3.36	310	0.20	35x25	HU2W331M#AS2	
	390	1.53	3.52	310	0.20	35x30	HU2W331M#AS3	
		1.74	4.00	270	0.20	25x45	HU2W391M#YS6	
		1.80	4.14	270	0.20	25x50	HU2W391M#YS7	
		1.70	3.91	270	0.20	30x35	HU2W391M#ZS4	
		1.76	4.05	270	0.20	30x40	HU2W391M#ZS5	
	470	1.59	3.66	270	0.20	35x25	HU2W391M#AS2	
		2.04	4.69	220	0.20	25x55	HU2W471M#YS8	
		2.29	5.27	220	0.20	25x60	HU2W471M#YS9	
		1.94	4.46	220	0.20	30x40	HU2W471M#ZS5	
		2.00	4.60	220	0.20	30x45	HU2W471M#ZS6	
		2.08	4.78	220	0.20	30x50	HU2W471M#ZS7	
		1.84	4.23	220	0.20	35x30	HU2W471M#AS3	
		1.92	4.42	220	0.20	35x35	HU2W471M#AS4	
		1.99	4.58	220	0.20	35x40	HU2W471M#AS5	
	560	2.27	5.22	190	0.20	25x60	HU2W561M#YS9	
		2.25	5.18	190	0.20	30x50	HU2W561M#ZS7	
		2.09	4.81	190	0.20	35x35	HU2W561M#AS4	
		2.18	5.01	190	0.20	35x40	HU2W561M#AS5	
		2.26	5.20	190	0.20	35x45	HU2W561M#AS6	
		680	2.48	5.70	150	0.20	25x70	HU2W681M#YS11
	2.48		5.70	150	0.20	30x51	HU2W681M#ZS7	
	2.56		5.89	150	0.20	30x55	HU2W681M#ZS8	
	2.48		5.70	150	0.20	35x45	HU2W681M#AS6	
	2.55		5.87	150	0.20	35x50	HU2W681M#AS7	
	820	2.87	6.60	130	0.20	30x60	HU2W821M#ZS9	
2.80		6.44	130	0.20	35x50	HU2W821M#AS7		
1000	3.25	7.48	110	0.20	35x60	HU2W102M#AS9		
	3.15	7.25	110	0.20	35x70	HU2W102M#AS11		
1200	4.01	9.22	90	0.20	35x82	HU2W122M#AS13CC		
	3.51	8.05	90	0.20	35x100	HU2W122M#AS17		

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Rated VoltageCode (Surge Voltage) $V_r$ [V DC]	Capacitance $C_r$ [ $\mu$ F]	Ripple Current at 105°C/120Hz $I_r$ [A RMS]	Ripple Current at 40°C/120Hz [A RMS]	ESR (typ) at 20°C/100Hz [m $\Omega$ ]	Dissipation Factor at 20°C/100Hz Tan $\delta$	DxL [mm]	Product Code  # = variable value, see fixing code in the product code	
<b>450 VDC</b> Code: 2W  Surge Voltage 500 VDC	<b>1200</b>	3.57	8.21	90	0.20	40x75	HU2W122M#BS12	
		4.01	9.22	90	0.20	40x90	HU2W122M#BS15	
	<b>1500</b>	4.02	9.25	70	0.20	40x81	HU2W152M#BS13	
		4.07	9.36	70	0.20	40x100	HU2W152M#BS17	
		4.00	9.20	70	0.20	46x97	HU2W152M#HL97	
	<b>2200</b>	5.33	12.26	50	0.20	46x100	HU2W222M#HS17	
<b>500 VDC</b> Code: 2H  Surge Voltage 550 VDC	<b>56</b>	0.42	0.97	1710	0.20	22x25	HU2H560M#XS2	
	<b>68</b>	0.45	1.04	1410	0.20	22x25	HU2H680M#XS2	
		0.48	1.10	1410	0.20	22x30	HU2H680M#XS3	
		0.55	1.27	1410	0.20	25x25	HU2H680M#YS2	
	<b>82</b>	0.53	1.22	1170	0.20	22x30	HU2H820M#XS3	
		0.54	1.24	1170	0.20	25x25	HU2H820M#YS2	
		0.57	1.31	1170	0.20	25x30	HU2H820M#YS3	
	<b>100</b>	0.59	1.36	960	0.20	22x30	HU2H101M#XS3	
		0.62	1.43	960	0.20	22x35	HU2H101M#XS4	
		0.65	1.50	960	0.20	22x40	HU2H101M#XS5	
		0.61	1.40	960	0.20	25x25	HU2H101M#YS3	
		0.64	1.47	960	0.20	25x30	HU2H101M#YS4	
		0.63	1.45	960	0.20	30x25	HU2H101M#ZS3	
	<b>120</b>	0.69	1.59	800	0.20	22x35	HU2H121M#XS4	
		0.72	1.66	800	0.20	22x40	HU2H121M#XS5	
		0.71	1.63	800	0.20	25x30	HU2H121M#YS3	
		0.74	1.70	800	0.20	25x35	HU2H121M#YS4	
		0.75	1.73	800	0.20	30x25	HU2H121M#ZS2	
	<b>150</b>	0.82	1.89	640	0.20	22x40	HU2H151M#XS5	
		0.85	1.96	640	0.20	22x45	HU2H151M#XS6	
		0.84	1.93	640	0.20	25x35	HU2H151M#YS4	
		0.88	2.02	640	0.20	25x40	HU2H151M#YS6	
		0.85	1.96	640	0.20	30x25	HU2H151M#ZS2	
		0.90	2.07	640	0.20	30x30	HU2H151M#ZS3	
	<b>180</b>	0.94	2.16	640	0.20	35x25	HU2H151M#AS2	
		0.97	2.23	540	0.20	22x50	HU2H181M#XS7	
		0.98	2.25	540	0.20	25x40	HU2H181M#YS5	
		1.01	2.32	540	0.20	25x45	HU2H181M#YS6	
		0.99	2.28	540	0.20	30x30	HU2H181M#ZS3	
		1.04	2.39	540	0.20	30x35	HU2H181M#ZS4	
	<b>220</b>	1.04	2.39	540	0.20	35x25	HU2H181M#AS2	
		1.13	2.60	440	0.20	25x45	HU2H221M#YS6	
		1.17	2.69	440	0.20	25x50	HU2H221M#YS7	
		1.17	2.69	440	0.20	30x35	HU2H221M#ZS4	
		1.21	2.78	440	0.20	30x40	HU2H221M#ZS5	
	<b>270</b>	1.22	2.81	440	0.20	35x30	HU2H221M#AS3	
		1.36	3.13	360	0.20	30x40	HU2H271M#ZS5	
		1.41	3.24	360	0.20	30x45	HU2H271M#ZS6	
		1.37	3.15	360	0.20	35x30	HU2H271M#AS3	
			1.44	3.31	360	0.20	35x35	HU2H271M#AS4

Additional designs on request · Weitere Designs auf Anfrage

# HU · Snap-In · 6000h/105 °C

Rated VoltageCode (Surge Voltage) $V_r$ [V DC]	Capacitance $C_r$ [ $\mu$ F]	Ripple Current at 105°C/120Hz $I_r$ [A RMS]	Ripple Current at 40°C/120Hz [A RMS]	ESR (typ) at 20°C/100Hz [m $\Omega$ ]	Dissipation Factor at 20°C/100Hz Tan $\delta$	DxL [mm]	Product Code # = variable value, see fixing code in the product code
<b>500 VDC</b> Code: 2H  Surge Voltage 550 VDC	<b>330</b>	1.58	3.63	290	0.20	30x45	HU2H331M#ZS6
		1.63	3.75	290	0.20	30x50	HU2H331M#ZS7
		1.61	3.70	290	0.20	35x35	HU2H331M#AS5
		1.67	3.84	290	0.20	35x40	HU2H331M#AS5
	<b>390</b>	1.79	4.12	250	0.20	30x50	HU2H391M#ZS7
		1.84	4.23	250	0.20	35x40	HU2H391M#AS5
		1.90	4.37	250	0.20	35x45	HU2H391M#AS6
		2.10	4.83	210	0.20	30x60	HU2H471M#ZS9
	<b>470</b>	2.12	4.88	210	0.20	35x45	HU2H471M#AS6
		2.18	5.01	210	0.20	35x50	HU2H471M#AS7
		2.53	5.82	180	0.20	35x60	HU2H561M#AS9
	<b>550 VDC</b> Code: 2L  Surge Voltage 600 VDC	<b>82</b>	0.59	1.18	2920	0.25	30x25
<b>120</b>		0.77	1.54	1990	0.25	30x30	HU2L121M#ZS3
		0.80	1.60	1990	0.25	35x25	HU2L121M#AS2
<b>150</b>		0.91	1.82	1600	0.25	30x35	HU2L151M#ZS4
		0.96	1.92	1600	0.25	35x30	HU2L151M#AS3
<b>180</b>		1.05	2.10	1330	0.25	30x40	HU2L181M#ZS5
		1.11	2.22	1330	0.25	35x35	HU2L181M#AS4
<b>220</b>		1.26	2.52	1090	0.25	30x50	HU2L221M#ZS7
		1.29	2.58	1090	0.25	35x40	HU2L221M#AS5
<b>270</b>		1.50	3.00	890	0.25	35x45	HU2L271M#AS6
<b>330</b>		1.73	3.46	730	0.25	35x50	HU2L331M#AS7
<b>390</b>		2.00	4.00	620	0.25	35x60	HU2L391M#AS9

Additional designs on request · Weitere Designs auf Anfrage

## > Ripple Current Multiplier · Wechselstrommultiplikator

Frequency [Hz]	50/60	120	300	1k	$\geq$ 10k	Forced cooling [m/sec]	$v < 1.0$	$v \geq 1.0$
Multiplier	0.70	1.00	1.18	1.34	1.45	Multiplier	1.0	1.1

Temperature [°C]		40	60	70	85	105
Multiplier	200~500V	2.3	2.0	1.8	1.4	1.0
	550V	2.0	1.7	1.5	1.3	1.0



> Life Time Table · Brauchbarkeitsdauer – Tabelle

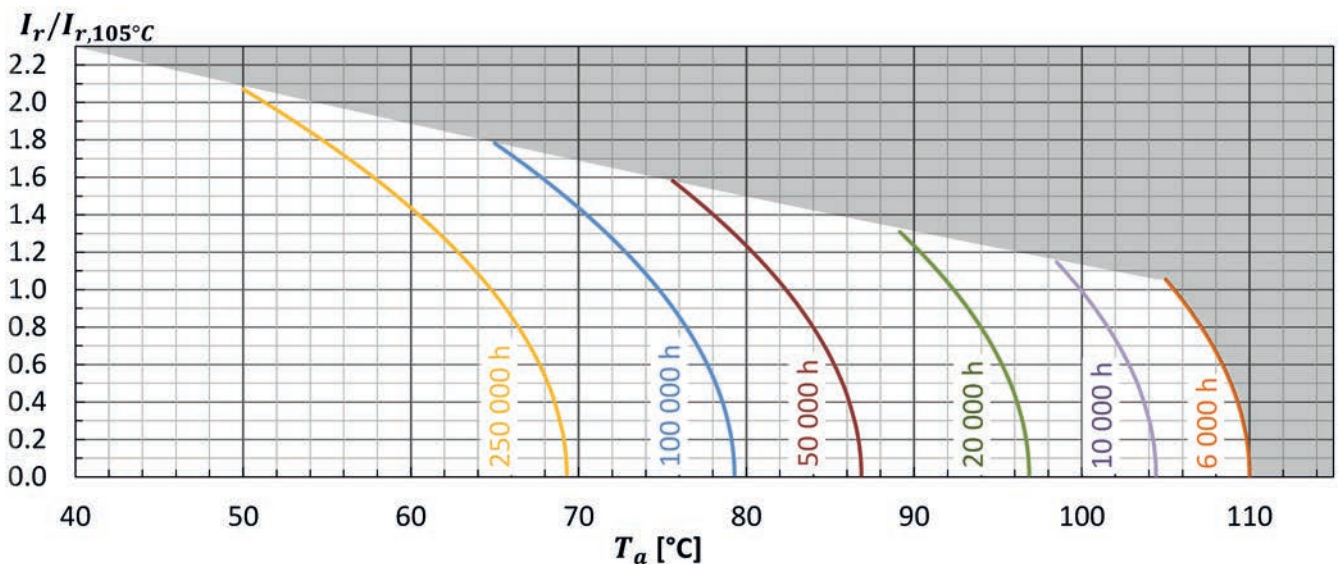
HU	Useful life as function of ambient temperature and ripple current														
	$I_r$ at 105°C	x 1.0	x 1.1	x 1.2	x 1.3	x 1.4	x 1.5	x 1.6	x 1.7	x 1.8	x 1.9	x 2.0	x 2.1	x 2.2	x 2.3
$T_a = 40°C$	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250
$T_a = 45°C$	250	250	250	250	250	250	250	250	250	250	250	250	250	250	
$T_a = 50°C$	250	250	250	250	250	250	250	250	250	250	250	250	238		
$T_a = 55°C$	250	250	250	250	250	250	250	250	250	243	209	178			
$T_a = 60°C$	250	250	250	250	250	231	203	177	154	132	113				
$T_a = 65°C$	245	225	204	184	165	146	128	112	97	84					
$T_a = 70°C$	155	142	129	116	104	92	81	71	62						
$T_a = 75°C$	98	90	81	73	66	58	51								
$T_a = 80°C$	62	56	51	46	41	37									
$T_a = 85°C$	39	36	32	29	26										
$T_a = 90°C$	24	22	20	19											
$T_a = 95°C$	15	14	13												
$T_a = 100°C$	9	9													
$T_a = 105°C$	6														

Max. value limited to 250 000 hours.

> Life Time Graph · Brauchbarkeitsdauer – Diagramm

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

Brauchbarkeitsdauer in Abhängigkeit von Umgebungstemperatur  $T_a$  und Wechselstrombelastung  $I_r$  im Verhältnis zur max. Wechselstrombelastung bei oberer Kategorie-temperatur  $I_r, 105°C, 120Hz$



> Life Time Tests and Requirements · Anforderungen Brauchbarkeitsdauer

Life time test	Test procedure	Life time criteria
Endurance test	$T_a = 105°C$ ; $V_r, I_r$ applied 4000 hours	$\Delta C/C \leq 20\%$ (of initial value) $Tan\delta \leq 200\%$ (of specified value) $I_L \leq$ specified value
Useful life	$T_a = 105°C$ ; $V_r, I_r$ applied 6000 hours	$\Delta C/C \leq 30\%$ (of initial value) $Tan\delta < 300\%$ (of specified value) $I_L \leq$ specified value

Reference Specification: JIS C 5101-4, JIS C 5102, IEC 60384-4