

HU · Snap-In · 6000h/105 °C

Standard Performances · Most 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)	$0.02 \cdot C \cdot V_r$ [μ A] or 3 mA, which is smaller.
Useful life	6000h at 105°C
Field failure rate	$0.5 \text{ FIT} = 0.5 \cdot 10^{-9}$ Failures/hour
Reference standards	IEC 60384-4, 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*
Product Compliance	RoHS, REACH, Conflict Minerals a.o. - refer to p. 14–15



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

> Outline Drawings · Bauformen

Refer to page 9 for available terminal shapes and dimensions. · Auf Seite 9 finden Sie die verfügbaren Bauformen und Maße.

> Product Code · Bestellbezeichnung

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

HU		2G		331		M		R		Z		S3		WPEC	
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 μ F.		R: 2-claw 6.3 mm S: 4-claw 6.3 mm C: 2-claw short 4.0 mm X: 4-claw short 4.0 mm E: 3-claw short 4.0 mm T: 2-lugs 4.5 mm		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			

Rated VoltageCode (Surge Voltage) V_r [V DC]	Capacitance C_r [μ 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 Ω]	Dissipation Factor at 20°C/100Hz Tan δ	DxL [mm]	Product Code # = variable value, see terminal code in the product code
200 VDC Code: 2D Surge Voltage 250 VDC	330	1.20	2.76	330	0.15	20x35	HU2D331M#WS4
		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
	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	2.10	4.83	140	0.15	22x45	HU2D821M#XS6
		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	
250 VDC Code: 2E Surge Voltage 300 VDC	220	0.95	2.19	440	0.15	22x25	HU2E221M#XS2
	330	1.30	2.99	290	0.15	20x35	HU2E331M#WS4
		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
	680	2.16	4.97	150	0.15	22x50	HU2E681M#XS7
		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	

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 terminal code in the product code
250 VDC Code: 2E Surge Voltage 300 VDC	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
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	0.87	2.00	640	0.20	22x26	HU2G151M#XS2
		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
	250	1.23	2.83	390	0.20	30x25	HU2G251M#ZS2
	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
	460	1.87	4.30	250	0.20	35x30	HU2G391M#AS3
	470	1.72	3.96	215	0.20	35x25	HU2G461M#AS2
		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
	500	1.84	4.23	210	0.20	35x30	HU2G471M#AS3
		1.98	4.55	200	0.20	25x45	HU2G501M#YS6
	560	1.80	4.14	200	0.20	35x25	HU2G501M#AS2
		2.16	4.97	180	0.20	25x51	HU2G561M#YL51

Additional designs on request · Weitere Designs auf Anfrage

Rated VoltageCode (Surge Voltage) V_r [V DC]	Capacitance C_r [μ 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 Ω]	Dissipation Factor at 20°C/100Hz Tan δ	DxL [mm]	Product Code # = variable value, see terminal code in the product code
400 VDC Code: 2G Surge Voltage 450 VDC	560	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
		2.09	4.81	180	0.20	35x35	HU2G561M#AS4
	680	2.51	5.77	150	0.20	25x61	HU2G681M#YS9
		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
	720	2.40	5.52	150	0.20	35x40	HU2G681M#AS5
		2.74	6.30	150	0.20	30x50	HU2G721M#ZS72PCC
	750	2.67	6.14	135	0.20	35x50	HU2G751M#AS7
	770	2.51	5.77	132	0.20	35x50	HU2G771M#AS7
	820	2.65	6.10	120	0.20	30x51	HU2G821M#ZS7
		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
	920	2.78	6.39	120	0.20	35x50	HU2G821M#AS7
		2.58	5.93	125	0.20	30x51	HU2G921M#ZS7
	950	4.00	9.20	75	0.20	35x55	HU2G951S#AS82PCC
		4.25	9.78	105	0.20	35x60	HU2G951M#AS92PCC
	1 000	3.17	7.29	100	0.20	30x61	HU2G102M#ZS9
		3.09	7.11	100	0.20	35x50	HU2G102M#AL51
		2.86	6.58	120	0.20	35x60	HU2G102M#AS9
	1 200	3.38	7.77	80	0.20	35x56	HU2G122M#AS8
		3.44	7.91	80	0.20	35x75	HU2G122M#AS12
	1 300	3.61	8.30	80	0.20	35x80	HU2G132M#AS13
	1 500	3.93	9.04	80	0.20	35x100	HU2G152M#AS17
		3.99	9.18	80	0.20	40x76	HU2G152M#BS12
1 700	6.00	13.80	45	0.20	40x90	HU2G172Q#BS15CC	
1 800	4.47	10.28	60	0.20	40x101	HU2G182M#BS17	
2 100	5.43	12.49	50	0.20	40x101	HU2G212M#BS17CC	
420 VDC Code: 420V Surge Voltage 470 VDC	100	0.71	1.63	1020	0.20	22x25	HU420V101M#XS2
	120	0.77	1.77	850	0.20	22x25	HU420V101M#XS2
	150	0.87	2.00	680	0.20	22x25	HU420V151M#XS2
		0.92	2.12	680	0.20	22x30	HU420V151M#XS3
	180	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
		1.05	2.42	570	0.20	25x30	HU420V181M#YS3
	220	1.17	2.69	470	0.20	22x35	HU420V221M#XS4
		1.22	2.81	470	0.20	22x40	HU420V221M#XS5
		1.21	2.78	470	0.20	25x35	HU420V221M#YS4
	270	1.15	2.65	470	0.20	30x25	HU420V221M#ZS2
		1.35	3.11	380	0.20	22x40	HU420V271M#XS5

Additional designs on request · Weitere Designs auf Anfrage

Rated VoltageCode (Surge Voltage) V_r [V DC]	Capacitance C_r [μ 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 Ω]	Dissipation Factor at 20°C/100Hz Tan δ	DxL [mm]	Product Code # = variable value, see terminal code in the product code	
420 VDC Code: 420V Surge Voltage 470 VDC	270	1.40	3.22	380	0.20	22x45	HU420V271M#XS6	
		1.35	3.11	380	0.20	25x35	HU420V271M#YS4	
		1.28	2.94	380	0.20	30x25	HU420V271M#ZS2	
		1.38	3.17	380	0.20	35x25	HU420V271M#AS2	
	330	1.54	3.54	310	0.20	22x45	HU420V331M#XS6	
		1.59	3.66	310	0.20	22x50	HU420V331M#XS7	
		1.45	3.34	310	0.20	25x36	HU420V331M#YS4	
		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	
		1.56	3.59	310	0.20	30x35	HU420V331M#ZS4	
		1.46	3.36	310	0.20	35x25	HU420V331M#AS2	
		390	1.64	3.77	270	0.20	25x41	HU420V391M#YS5
			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	
	1.70		3.91	270	0.20	30x35	HU420V391M#ZS4	
	1.76		4.05	270	0.20	30x40	HU420V391M#ZS5	
	1.59		3.66	270	0.20	35x25	HU420V391M#AS2	
	1.67		3.84	270	0.20	35x30	HU420V391M#AS3	
	470	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	
		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	
	500	1.89	4.35	200	0.20	35x31	HU420V501M#AL31	
	520	2.18	5.01	190	0.20	30x45	HU420V521M#ZS6	
	560	2.16	4.97	190	0.20	25x56	HU420V561M#YS8	
		2.27	5.22	190	0.20	25x60	HU420V561M#YS9	
		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	
	680	2.48	5.70	150	0.20	30x45	HU420V681M#ZS6	
		2.48	5.70	150	0.20	30x50	HU420V681M#ZS7	
		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	

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 [μ 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 Ω]	Dissipation Factor at 20°C/100Hz Tan δ	DxL [mm]	Product Code # = variable value, see terminal code in the product code
420 VDC Code: 420V Surge Voltage 470 VDC	1 000	3.18	7.31	110	0.20	35x56	HU420V102M#AS8
		3.25	7.48	110	0.20	35x60	HU420V102M#AS9
		3.30	7.59	110	0.20	40x56	HU420V102M#BS8
	1 200	3.46	7.96	90	0.20	35x80	HU420V122M#AS13
		3.57	8.21	90	0.20	40x76	HU420V122M#BS12
	1 500	4.07	9.36	70	0.20	40x101	HU420V152M#BS17
	1 600	4.20	9.66	70	0.20	40x101	HU420V162M#BS17
	1 800	4.45	10.24	67	0.20	40x101	HU420V182M#BS17
		5.74	13.19	44	0.20	45x76	HU420V182M#HS12CC
	450 VDC Code: 2W Surge Voltage 500 VDC	68	0.54	1.24	1500	0.20	22x20
82		0.62	1.43	1250	0.20	25x20	HU2W820M#YS1
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		0.77	1.77	850	0.20	22x26	HU2W121M#XS2
		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
		1.04	2.39	570	0.20	30x25	HU2W181M#ZS2
220		0.96	2.21	470	0.20	22x30	HU2W221M#XS3
		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
		1.16	2.67	470	0.20	25x30	HU2W221M#YS3
		1.21	2.78	470	0.20	25x35	HU2W221M#YS4
		1.26	2.90	470	0.20	25x40	HU2W221M#YS5
		1.15	2.65	470	0.20	30x25	HU2W221M#ZS2
270		1.11	2.55	380	0.20	22x35	HU2W271M#XS4
		1.31	3.01	380	0.20	22x41	HU2W271M#XS5
		1.40	3.22	380	0.20	22x45	HU2W271M#XS6
		1.44	3.31	380	0.20	22x50	HU2W271M#XS7
		1.11	2.55	380	0.20	25x30	HU2W271M#YS3
	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	

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 terminal code in the product code	
450 VDC Code: 2W Surge Voltage 500 VDC	270	1.35	3.11	380	0.20	30x30	HU2W271M#ZS3	
		1.38	3.17	380	0.20	35x25	HU2W271M#AS2	
	330	1.28	2.94	310	0.20	22x40	HU2W331M#XS5	
		1.33	3.06	310	0.20	22x45	HU2W331M#XS6	
		1.59	3.66	310	0.20	22x50	HU2W331M#XS7	
		1.49	3.43	310	0.20	25x35	HU2W331M#YS4	
		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	
	370	1.41	3.22	355	0.20	30x30	HU2W371M#ZS3	
	390	1.49	3.43	270	0.20	22x50	HU2W391M#XS7	
		1.45	3.34	270	0.20	25x40	HU2W391M#YS5	
		1.74	4.00	270	0.20	25x45	HU2W391M#YS6	
		1.80	4.14	270	0.20	25x50	HU2W391M#YS7	
		1.40	3.22	270	0.20	30x30	HU2W391M#ZS3	
		1.70	3.91	270	0.20	30x35	HU2W391M#ZS4	
		1.76	4.05	270	0.20	30x40	HU2W391M#ZS5	
	410	1.67	3.84	270	0.20	35x30	HU2W391M#AS3	
		1.48	3.39	220	0.20	30x30	HU2W411M#ZS3	
		470	1.65	3.80	220	0.20	25x45	HU2W471M#YS6
			1.92	4.42	220	0.20	25x50	HU2W471M#YS7
			2.04	4.69	220	0.20	25x55	HU2W471M#YS8
			2.29	5.27	220	0.20	25x60	HU2W471M#YS9
			1.61	3.70	220	0.20	30x35	HU2W471M#ZS4
			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	1.86	4.28	190	0.20	25x50	HU2W561M#YS7	
		1.91	4.39	190	0.20	25x55	HU2W561M#YS8	
		2.27	5.22	190	0.20	25x60	HU2W561M#YS9	
		1.75	4.03	190	0.20	30x35	HU2W561M#ZS4	
		1.82	4.19	190	0.20	30x40	HU2W561M#ZS5	
		2.19	5.04	190	0.20	30x46	HU2W561M#ZS6	
		2.25	5.18	190	0.20	30x50	HU2W561M#ZS7	
		1.73	3.98	190	0.20	35x30	HU2W561M#AS3	
		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		

Additional designs on request · Weitere Designs auf Anfrage

Rated VoltageCode (Surge Voltage) V_r [V DC]	Capacitance C_r [μ 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 Ω]	Dissipation Factor at 20°C/100Hz Tan δ	DxL [mm]	Product Code # = variable value, see terminal code in the product code
450 VDC Code: 2W Surge Voltage 500 VDC	590	2.14	4.90	180	0.20	35x33	HU2W591M#AS3
	610	2.18	5.00	175	0.20	35x34	HU2W611M#AL34
	680	2.16	4.97	150	0.20	25x60	HU2W681M#YS9
		2.48	5.70	150	0.20	25x70	HU2W681M#YS11
		2.08	4.78	150	0.20	30x45	HU2W681M#ZS6
		2.48	5.70	150	0.20	30x50	HU2W681M#ZS7
		2.48	5.70	150	0.20	30x51	HU2W681M#ZS7
		2.56	5.89	150	0.20	30x55	HU2W681M#ZS8
		2.61	6.00	150	0.20	30x60	HU2W681M#ZS9
		2.30	5.29	150	0.20	35x36	HU2W681M#AS4
		2.40	5.52	150	0.20	35x41	HU2W681M#AS5
		2.48	5.70	150	0.20	35x45	HU2W681M#AS6
		2.55	5.87	150	0.20	35x50	HU2W681M#AS7
	3.59	8.26	105	0.20	35x75	HU2W681M#AS122PCC	
	740	2.31	5.31	160	0.20	30x50	HU2W741M#ZS7
	810	2.42	5.56	165	0.20	30x50	HU2W811M#ZS7
	820	2.75	6.33	130	0.20	25x80	HU2W821M#YS13
		2.35	5.41	130	0.20	30x50	HU2W821M#ZS7
		2.42	5.57	130	0.20	30x55	HU2W821M#ZS8
		2.87	6.60	130	0.20	30x60	HU2W821M#ZS9
		2.35	5.41	150	0.20	35x40	HU2W821M#AS5
		2.64	6.07	130	0.20	35x45	HU2W821M#AS6
		2.64	6.07	130	0.20	35x46	HU2W821M#AS6
		2.80	6.44	130	0.20	35x50	HU2W821M#AS7
	850	2.93	6.74	125	0.20	35x55	HU2W851M#AS8
		3.18	7.31	115	0.20	35x60	HU2W851M#AS9
	910	2.70	6.21	150	0.20	30x60	HU2W911M#ZS9
	950	3.70	8.51	115	0.20	35x60	HU2W951M#AS92P
	1 000	2.73	6.28	135	0.20	30x60	HU2W102M#ZS9
		2.83	6.50	135	0.20	30x60	HU2W102M#ZS9
		2.59	5.96	110	0.20	35x45	HU2W102M#AS6
		2.67	6.14	110	0.20	35x50	HU2W102M#AS7
		3.18	7.31	110	0.20	35x55	HU2W102M#AS8
		3.25	7.48	110	0.20	35x60	HU2W102M#AS9
		3.15	7.25	110	0.20	35x70	HU2W102M#AS11
	4.00	9.20	90	0.20	35x75	HU2W102M#AS122PCC	
	1 100	2.87	6.60	90	0.20	30x60	HU2W112M#ZS9
	1 200	4.01	9.22	90	0.20	35x82	HU2W122M#AS13CC
		3.51	8.05	90	0.20	35x100	HU2W122M#AS17
		3.57	8.21	90	0.20	40x75	HU2W122M#BS12
		4.01	9.22	90	0.20	40x90	HU2W122M#BS15
	1 300	3.18	7.31	85	0.20	30x70	HU2W132M#ZS11
		3.78	8.69	85	0.20	35x70	HU2W132M#AS11
	1 500	3.51	8.07	70	0.20	30x95	HU2W152M#ZS16

Additional designs on request · Weitere Designs auf Anfrage

Rated VoltageCode (Surge Voltage) V_r [V DC]	Capacitance C_r [μ 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 Ω]	Dissipation Factor at 20°C/100Hz Tan δ	DxL [mm]	Product Code # = variable value, see terminal code in the product code
450 VDC Code: 2W Surge Voltage 500 VDC	1 500	3.52	8.10	70	0.20	35x75	HU2W152M#AS12
		4.29	9.87	70	0.20	35x90	HU2W152M#AS15CC
		4.02	9.25	70	0.20	40x81	HU2W152M#BS13
		4.07	9.36	70	0.20	40x101	HU2W152M#BS17
		4.00	9.20	70	0.20	46x97	HU2W152M#HL97
	1 600	3.63	8.35	60	0.20	30x100	HU2W162M#ZS17
	1 800	3.92	9.02	55	0.20	35x85	HU2W182M#AS14
		5.35	12.31	55	0.20	45x95	HU2W182M#HS16CCR
	2 100	4.25	9.78	85	0.20	35x100	HU2W212M#AS17
	2 200	5.33	12.26	50	0.20	46x100	HU2W222M#HS17
500 VDC Code: 2H Surge Voltage 550 VDC	56	0.42	0.97	1710	0.20	22x25	HU2H560M#XS2
	68	0.45	1.04	1410	0.20	22x25	HU2H680M#XS2
		0.48	1.10	1410	0.20	22x30	HU2H680M#XS3
	82	0.55	1.27	1410	0.20	25x25	HU2H680M#YS2
		0.50	1.15	1170	0.20	22x26	HU2H820M#XS2
		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
	100	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
	120	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
	150	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
	180	0.94	2.16	640	0.20	35x25	HU2H151M#AS2
		0.94	2.16	540	0.20	22x46	HU2H181M#XS6
		0.97	2.23	540	0.20	22x50	HU2H181M#XS7
		0.94	2.16	540	0.20	25x36	HU2H181M#YS4
		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	
1.04	2.39	540	0.20	35x25	HU2H181M#AS2		

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 [μ 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 Ω]	Dissipation Factor at 20°C/100Hz Tan δ	DxL [mm]	Product Code # = variable value, see terminal code in the product code
500 VDC Code: 2H Surge Voltage 550 VDC	220	1.13	2.60	440	0.20	25x45	HU2H221M#YS6
		1.17	2.69	440	0.20	25x50	HU2H221M#YS7
		1.11	2.55	440	0.20	30x31	HU2H221M#ZS3
		1.17	2.69	440	0.20	30x35	HU2H221M#ZS4
		1.21	2.78	440	0.20	30x40	HU2H221M#ZS5
	270	1.16	2.67	440	0.20	35x26	HU2H221M#AS2
		1.22	2.81	440	0.20	35x30	HU2H221M#AS3
		1.31	3.01	360	0.20	25x51	HU2H271M#YS7
		1.31	3.01	360	0.20	30x36	HU2H271M#ZS4
		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
	300	1.44	3.31	320	0.20	35x30	HU2H301M#AS3
		1.58	3.63	290	0.20	30x45	HU2H331M#ZS6
	330	1.63	3.75	290	0.20	30x50	HU2H331M#ZS7
		1.82	4.19	230	0.20	30x50	HU2H331M#ZS72P
		1.51	3.47	290	0.20	35x30	HU2H331M#AS3
		1.61	3.70	290	0.20	35x35	HU2H331M#AS5
		1.67	3.84	290	0.20	35x40	HU2H331M#AS5
	390	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
	470	2.10	4.83	210	0.20	30x60	HU2H471M#ZS9
		2.12	4.88	210	0.20	35x45	HU2H471M#AS6
		2.18	5.01	210	0.20	35x50	HU2H471M#AS7
	560	2.40	5.52	180	0.20	35x51	HU2H561M#AS7
		2.47	5.68	180	0.20	35x55	HU2H561M#AS8
		2.53	5.82	180	0.20	35x60	HU2H561M#AS9
	680	2.40	5.52	150	0.20	35x60	HU2H681M#AS9
820	2.53	5.82	125	0.20	35x75	HU2H821M#AS12	
550 VDC Code: 2L Surge Voltage 600 VDC	82	0.59	1.18	2920	0.25	30x25	HU2L820M#ZS2
	120	0.77	1.54	1990	0.25	30x30	HU2L121M#ZS3
		0.80	1.60	1990	0.25	35x25	HU2L121M#AS2
	150	0.91	1.82	1600	0.25	30x35	HU2L151M#ZS4
		0.96	1.92	1600	0.25	35x30	HU2L151M#AS3
	180	1.05	2.10	1330	0.25	30x40	HU2L181M#ZS5
		1.11	2.22	1330	0.25	35x35	HU2L181M#AS4
	220	1.26	2.52	1090	0.25	30x50	HU2L221M#ZS7
		1.29	2.58	1090	0.25	35x40	HU2L221M#AS5
	270	1.50	3.00	890	0.25	35x45	HU2L271M#AS6
330	1.73	3.46	730	0.25	35x50	HU2L331M#AS7	
390	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		≥ 10k	
Multiplier	0.70		1.00		1.18		1.34		1.45	

Temperature [°C]	40	45	50	55	60	65	70	75	80	85	90	95	100	105	
Multiplier	200~500V	2.3	2.2	2.1	2.0	2.0	1.9	1.8	1.6	1.5	1.4	1.3	1.2	1.1	1.0
	550V	2.0	1.9	1.8	1.7	1.7	1.6	1.5	1.4	1.4	1.3	1.2	1.1	1.0	1.0

Forced cooling – Wind speed [m/sec]	v < 0.25	v ≥ 0.25	v ≥ 0.5	v ≥ 1.0	v ≥ 2.0	v ≥ 3.0
Multiplier	1.00	1.05	1.10	1.15	1.20	1.25

> Life Time Table · Brauchbarkeitsdauer – Tabelle

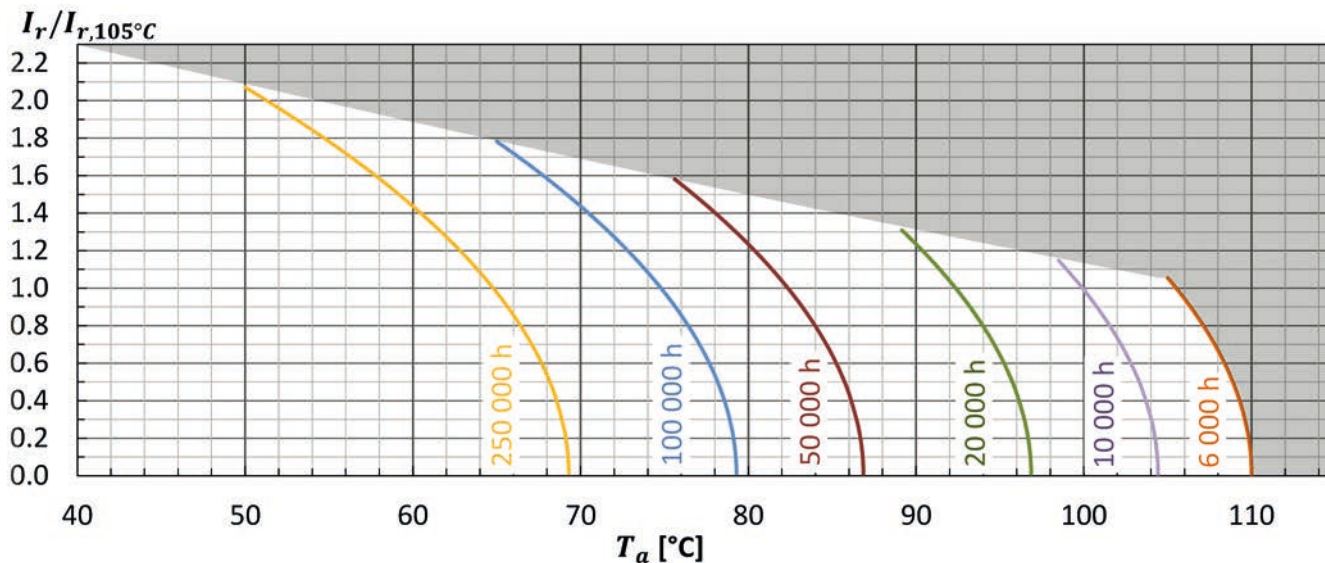
HU	Useful life as function of ambient temperature and ripple current														
	I _r at 105°C	x 1.0	x 1.1	x 1.2	x 1.3	x 1.4	x 1.5	x 1.6	x 1.7	x 1.8	x 1.9	x 2.0	x 2.1	x 2.2	x 2.3
T _a = 40°C	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250
T _a = 45°C	250	250	250	250	250	250	250	250	250	250	250	250	250	250	
T _a = 50°C	250	250	250	250	250	250	250	250	250	250	250	238			
T _a = 55°C	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														

khrs 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	End of Life criteria
Endurance test	$T_a = 105^\circ\text{C}$; V_r , I_r applied 4000 hours	$\Delta C/C \leq 20\%$ (of initial value) $\text{Tan}\delta \leq 200\%$ (of specified value) $I_L \leq \text{specified value}$
Useful life	$T_a = 105^\circ\text{C}$; V_r , I_r applied 6000 hours	$\Delta C/C \leq 30\%$ (of initial value) $\text{Tan}\delta < 300\%$ (of specified value) $I_L \leq \text{specified value}$

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