КОНДЕНСАТОРЫ ЭЛЕКТРОЛИТИЧЕСКИЕ ИМПОРТНЫЕ
JAMICON терминального типа, **серия HS**

ОСНОВНЫЕ ХАРАКТЕРИСТИКИ

уменьшенный размер по сравнению с серией HP

жесткие выводы, высокие импульсные токи, наработка на отказ 2000 часов при 105°C

Технические характеристики

Диапазон рабочих температур	-40 ... +105°C
Номинальное напряжение, В	16 ... 500
Допустимое отклонение емкости от номинала (20°C, 120Гц)	±20% (M)
Ток утечки, мкА (20°C)	не превышает меньшей из величин: 0.02CV или 3 (мкА) после 5 минут работы, где C и V - номинальные емкость (мкФ) и напряжение (В), соответственно

Импульсное напряжение (при 20°C)

V, В	16	25	35	50	63	80	100	160	200	250	350	400	450	500
S, В	20	32	44	63	79	100	125	200	225	250	300	400	500	550

Тангенс угла потерь (фактор дестабилизации) (при 20°C, 120Гц)

V, В	16	25	35	50		63		80		100		не менее 160
емкость	-	-	-	не более 6,800	не менее 10,000	не более 6,800	не менее 10.000	не более 3,300	не менее 4,700	не более 3,300	не менее 4,700	-
tan	0.50	0.40	0.35	0.30	0.35	0.25	0.35	0.20	0.25	0.20	0.25	0.15

Низкотемпературная стабильность (120Гц)

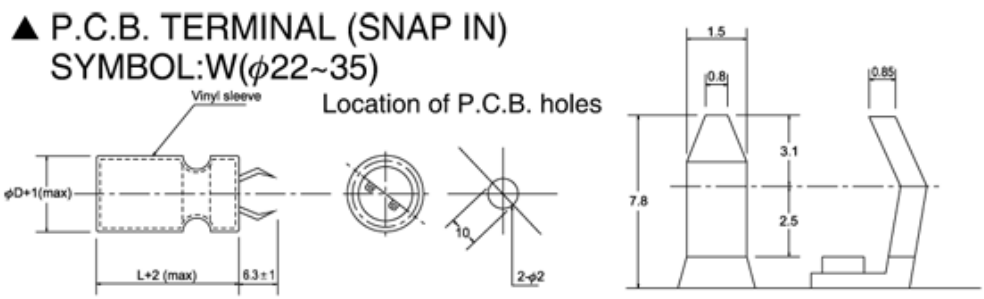
ном.напряжение, В		16	25	35	50	63 - 100	160 - 250	350 - 500
коэф. импеданса	$Z_{-25°C}/Z_{+20°C}$	6	6	6	4	3	4	6
	$Z_{-40°C}/Z_{+20°C}$	15	15	10	8	6	-	-

Наработка на отказ при 105°C - после 2000 часов при номинальном напряжении (DC + пиковые пульсации напряжения не превышает уровень рабочего напряжения):

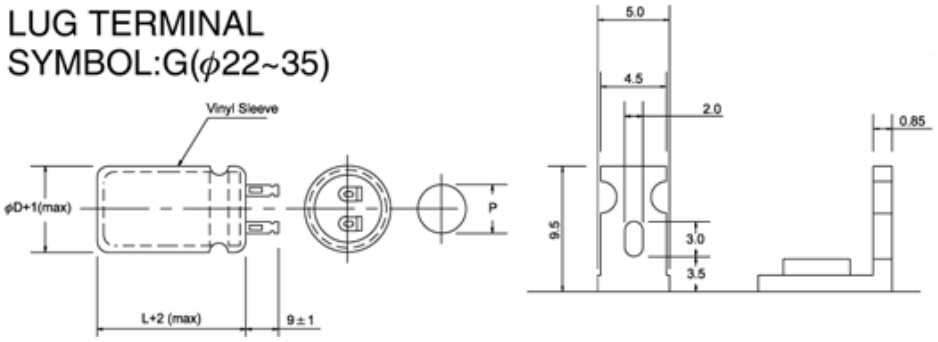
изменение емкости	не более ±20% от заданного значения
фактор дестабилизации	не более 175% от заданного значения
ток утечки	не превышает заданных значений

Время хранения - 1000 часов при 105°C, напряжение не прикладывается, после этого конденсатор демонстрирует те же характеристики, что и при наработке на отказ (with voltage treatment):

Габаритные размеры (мм):



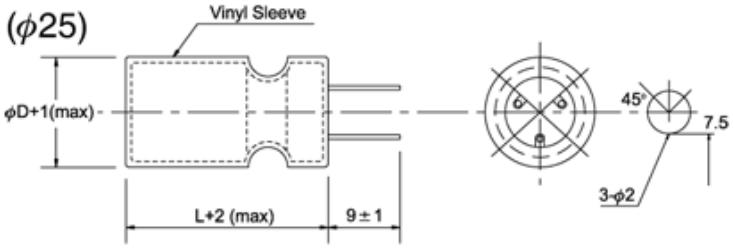
▲ LUG TERMINAL SYMBOL:G(φ22~35)



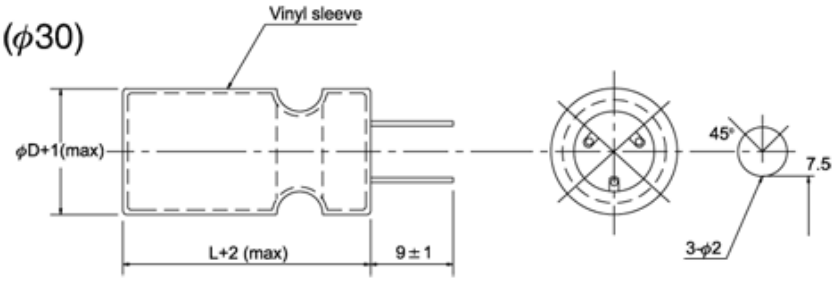
D	22	25	30	35
P	8	10	10	14

▲ P.C.B. TERMINAL SYMBOL:V(φ25~35)

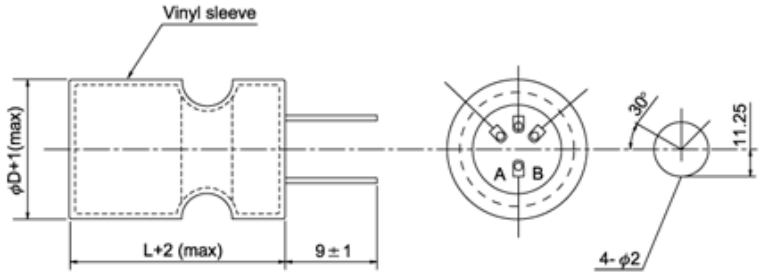
(φ25)

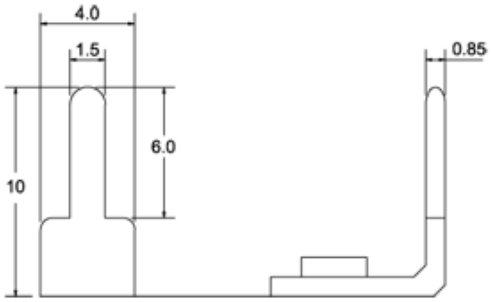


(φ30)



(φ35) A.B. blank terminals





Коэффициенты импульсного тока:

Температура (°C)	40	60	70	85	105
Multiplier	2.50	2.20	2.00	1.80	1.00

Частота (Гц)	60	120	400	1k	10k
V, В			Multiplier		
не больше 100	0.80	1.00	1.10	1.20	1.20
не меньше 160	0.80	1.00	1.10	1.30	1.40

Габаритные размеры корпуса, максимальный импульсный ток при 105°C, 120кГц

W, В (код)		16 (1C)				25 (1E)				35 (1V)				50 (1H)			
D, мм		22	25	30	35	22	25	30	35	22	25	30	35	22	25	30	35
C, мкф	код																
1500	152	-	-	-	-	-	-	-	-	-	-	-	-	25	-	-	-
		-	-	-	-	-	-	-	-	-	-	-	-	1.05	-	-	-
2200	222	-	-	-	-	-	-	-	-	25	-	-	-	30	25	-	-
		-	-	-	-	-	-	-	-	1.17	-	-	-	1.31	1.25	-	-
3300	332	-	-	-	-	25	-	-	-	30	25	-	-	35	30	25	-
		-	-	-	-	1.34	-	-	-	1.43	1.36	-	-	1.58	1.52	1.50	-
4700	472	25	-	-	-	30	25	-	-	35	30	25	-	45	35	30	25
		1.36	-	-	-	1.58	1.51	-	-	1.65	1.58	1.56	-	1.90	1.74	1.73	1.86
6800	682	35	30	-	-	35	30	25	-	50	40	30	25	-	50	35	30
		1.74	1.67	-	-	1.85	1.78	1.75	-	2.09	1.94	1.82	1.96	-	2.19	1.98	2.15
10000	103	45	35	25	-	45	35	30	25	-	50	35	30	-	-	45	40
		2.09	1.92	1.77	-	2.19	2.01	2.00	2.15	-	2.24	2.03	2.20	-	-	2.39	2.62
15000	153	-	45	35	30	-	45	35	30	-	-	50	40	-	-	-	50
		-	2.29	2.17	2.36	-	2.54	2.41	2.61	-	-	2.79	2.92	-	-	-	3.52
22000	223	-	-	45	35	-	-	45	40	-	-	-	-	-	-	-	-
		-	-	2.86	2.97	-	-	3.24	3.55	-	-	-	-	-	-	-	-
33000	333	-	-	-	50	-	-	-	50	-	-	-	-	-	-	-	-
		-	-	-	4.21	-	-	-	4.78	-	-	-	-	-	-	-	-

W, В (код)		63 (1J)				80 (1K)				100 (2A)				160 (2C)			
D, мм		22	25	30	35	22	25	30	35	22	25	30	35	22	25	30	35
C, мкф	код																
330	331	-	-	-	-	-	-	-	-	-	-	-	-	25	-	-	-
		-	-	-	-	-	-	-	-	-	-	-	-	0.88	-	-	-
390	391	-	-	-	-	-	-	-	-	-	-	-	-	30	25	-	-
		-	-	-	-	-	-	-	-	-	-	-	-	1.03	1.03	-	-
470	471	-	-	-	-	-	-	-	-	-	-	-	-	30	25	-	-
		-	-	-	-	-	-	-	-	-	-	-	-	1.14	1.14	-	-
560	561	-	-	-	-	-	-	-	-	-	-	-	-	35	30	25	-
		-	-	-	-	-	-	-	-	-	-	-	-	1.32	1.33	1.38	-
680	681	-	-	-	-	-	-	-	-	-	-	-	-	35	30	25	-
		-	-	-	-	-	-	-	-	-	-	-	-	1.55	1.57	1.53	-
820	821	-	-	-	-	-	-	-	-	-	-	-	-	45	40	35	25
		-	-	-	-	-	-	-	-	-	-	-	-	1.79	1.92	1.80	1.84
1000	102	25	-	-	-	30	25	-	-	30	25	-	-	-	45	35	25
		0.91	-	-	-	1.04	0.99	-	-	1.11	1.06	-	-	-	2.12	2.12	2.04
1200	122	-	-	-	-	-	-	-	-	-	-	-	-	-	50	35	30
		-	-	-	-	-	-	-	-	-	-	-	-	-	2.43	2.32	2.39
1500	152	30	25	-	-	35	30	25	-	40	35	25	-	-	-	45	35
		1.14	1.08	-	-	1.28	1.23	1.21	-	1.44	1.39	1.29	-	-	-	2.88	2.84
1800	182	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	40
		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.328
2200	222	35	30	25	-	50	40	30	25	-	45	35	-	-	-	-	-
		1.40	1.35	1.33	-	1.72	1.60	1.50	1.61	-	1.77	1.68	-	-	-	-	-
3300	332	45	40	30	25	-	50	40	30	-	-	45	35	-	-	-	-
		1.77	1.72	1.61	1.73	-	1.97	1.78	1.93	-	-	2.07	2.15	-	-	-	-
		-	50	35	30	-	-	50	40	-	-	-	45	-	-	-	-

4700	472	-	2.03	1.84	2.00	-	-	2.11	2.32	-	-	-	2.52	-	-	-	-
6800	682	-	-	45	40	-	-	-	50	-	-	-	-	-	-	-	-
		-	-	2.20	2.41	-	-	-	2.72	-	-	-	-	-	-	-	-
10000	103	-	-	-	50	-	-	-	-	-	-	-	-	-	-	-	-
		-	-	-	2.87	-	-	-	-	-	-	-	-	-	-	-	-

W, В (код)		180 (2M)				200 (2D)				250 (2E)			
D, мм		22	25	30	35	22	25	30	35	22	25	30	35
C, мкф	код												
220	221	-	-	-	-	25	-	-	-	30	25	-	-
		-	-	-	-	0.85	-	-	-	0.91	0.91	-	-
270	271	25	-	-	-	25	-	-	-	35	25	-	-
		0.80	-	-	-	0.94	-	-	-	1.07	1.01	-	-
330	331	30	25	-	-	30	25	-	-	35	30	25	-
		0.95	0.95	-	-	1.12	1.12	-	-	1.19	1.20	1.24	-
390	391	30	25	-	-	35	35	-	-	40	35	25	-
		1.04	1.04	-	-	1.31	1.22	-	-	1.37	1.39	1.35	-
470	471	35	30	25	-	40	30	25	-	50	40	30	25
		1.21	1.22	1.27	-	1.52	1.45	1.50	-	1.66	1.61	1.59	1.63
560	561	40	30	25	-	45	35	30	-	-	45	35	25
		1.40	1.34	1.39	-	1.75	1.68	1.76	-	-	1.85	1.85	1.78
560	561	40	30	25	-	45	35	30	-	-	45	35	25
		1.40	1.34	1.39	-	1.75	1.68	1.76	-	-	1.85	1.85	1.78
680	681	45	35	30	25	50	40	30	25	-	50	35	30
		1.63	1.57	1.64	1.68	2.02	1.96	1.94	1.98	-	2.14	2.04	2.10
820	821	50	40	30	25	-	45	35	30	-	-	45	35
		1.88	1.83	1.80	1.85	-	2.27	2.26	2.33	-	-	2.49	2.45
1000	102	-	45	35	30	-	50	40	30	-	-	-	40
		-	2.12	2.12	2.18	-	2.63	2.64	2.58	-	-	-	2.86
1200	122	-	-	40	30	-	-	45	35	-	-	-	45
		-	-	2.45	2.39	-	-	3.04	3.00	-	-	-	3.29
1500	152	-	-	50	35	-	-	-	45	-	-	-	50
		-	-	2.91	2.74	-	-	-	3.58	-	-	-	3.68
1800	182	-	-	-	40	-	-	-	50	-	-	-	L, мм
		-	-	-	3.17	-	-	-	4.10	-	-	-	ток

W, В (код)		350 (2V)				400 (2G)				450 (2W)				500 (2H)			
D, мм		22	25	30	35	22	25	30	35	22	25	30	35	22	25	30	35
C, мкф	код																
47	470	-	-	-	-	-	-	-	-	25	-	-	-	25	-	-	-
		-	-	-	-	-	-	-	-	0.39	-	-	-	0.27	-	-	-
68	680	-	-	-	-	25	-	-	-	30	25	-	-	30	25	-	-
		-	-	-	-	0.47	-	-	-	0.50	0.50	-	-	0.35	0.35	-	-
82	820	25	-	-	-	30	25	-	-	35	30	-	-	35	30	-	-
		0.43	-	-	-	0.56	0.56	-	-	0.59	0.60	-	-	0.41	0.41	-	-
120	121	30	25	-	-	35	30	25	-	45	35	30	25	50	40	35	25
		0.55	0.55	-	-	0.72	0.73	0.75	-	0.80	0.77	0.80	0.82	0.57	0.56	0.59	0.56
150	151	35	30	25	-	40	35	30	-	-	45	35	30	-	45	40	30
		0.66	0.67	0.69	-	0.85	0.86	0.90	-	-	0.96	0.96	0.99	-	0.66	0.69	0.68
180	181	40	35	30	-	45	40	30	25	-	50	35	30	-	50	40	35
		0.77	0.78	0.82	-	0.98	1.00	0.99	1.01	-	1.10	1.05	1.08	-	0.75	0.76	0.79
220	221	50	40	30	25	-	45	35	30	-	-	40	35	-	-	45	40
		0.94	0.91	0.90	0.92	-	1.17	1.16	1.20	-	-	1.22	1.27	-	-	0.88	0.92
270	271	-	45	35	30	-	50	40	30	-	-	50	40	-	-	50	45
		-	1.07	1.06	1.10	-	1.35	1.36	1.33	-	-	1.49	1.48	-	-	1.02	1.07
		-	50	40	30	-	-	45	35	-	-	-	45	-	-	-	50

330	331	-	1.23	1.24	1.21	-	-	1.58	1.56	-	-	-	1.72	-	-	-	1.23
390	391	-	-	45	35	-	-	-	40	-	-	-	50	-	-	-	-
		-	-	1.42	1.40	-	-	-	1.79	-	-	-	1.96	-	-	-	-
470	471	-	-	-	40	-	-	-	45	-	-	-	-	-	-	-	-
		-	-	-	1.62	-	-	-	2.07	-	-	-	-	-	-	-	-
560	561	-	-	-	45	-	-	-	50	-	-	-	-	-	-	-	-
		-	-	-	1.86	-	-	-	2.36	-	-	-	-	-	-	-	-

LARGE CAN TYPE

HS Series

Wide Temperature Range, Miniature Sized

JAMICON®

- Smaller case sized than HP series.
- Withstanding 2000 hours application of high ripple current at 105°C.

SPECIFICATION

Item	Characteristic
Operation Temperature Range	-40 ~ +105°C
Rated Working Voltage	16 ~ 500VDC
Capacitance Tolerance (120Hz 20°C)	±20%(M)
Leakage Current (20°C)	I ≦0.02CV or 3 (mA) *Whichever is smaller after 5 minutes I : Leakage Current(μA) C : Rated Capacitance(μF) V : Working Voltage(V)

Surge Voltage (20°C)

W.V.	16	25	35	50	63	80	100	160	180	200	250	350	400	450	500
S.V.	20	32	44	63	79	100	125	200	225	250	300	400	450	500	550

Dissipation Factor (tan δ) (120Hz 20°C)

Rated Voltage (V)	16	25	35	50		63		80		100		≧160
Capacitance	—	—	—	≦6,800	≧10,000	≦6,800	≧10,000	≦3,300	≧4,700	≦3,300	≧4,700	—
tan δ	0.50	0.40	0.35	0.30	0.35	0.25	0.35	0.20	0.25	0.20	0.25	0.15

Low Temperature Stability

Impedance ratio at 120Hz

Rated Voltage (V)	16	25	35	50	63~100	160~250	350~500
-25°C / +20°C	6	6	6	4	3	4	6
-40°C / +20°C	15	15	10	8	6	—	—

Load Life

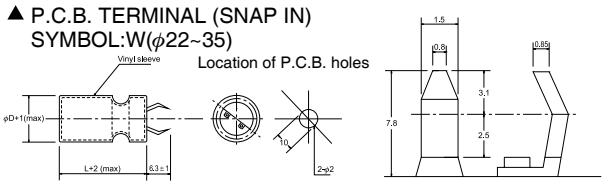
After 2000 hours application of W.V. and +105°C ripple current value, the capacitor shall meet the following limits. (DC + ripple peak voltage ≦ rate working voltage)

Capacitance Change	≦±20% of initial value
Dissipation Factor	≦175% of initial specified value
Leakage current	≦initial specified value

Shelf Life: At +105°C, no voltage application after 1000 hours, the capacitor shall meet the limits for load life characteristics. (With voltage treatment)

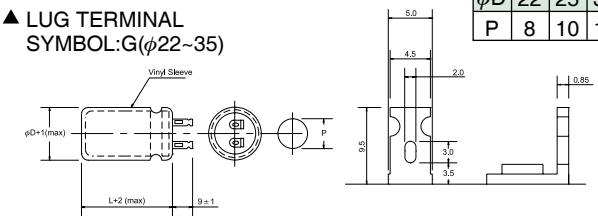
TERMINAL TYPE

▲ P.C.B. TERMINAL (SNAP IN)
SYMBOL:W(φ22~35)



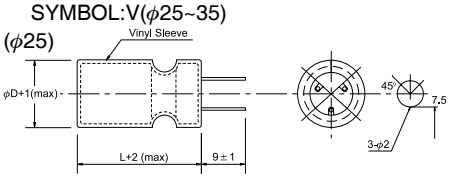
▲ LUG TERMINAL
SYMBOL:G(φ22~35)

φD	22	25	30	35
P	8	10	10	14

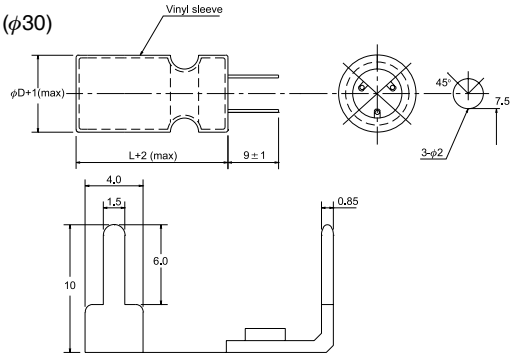


▲ P.C.B. TERMINAL
SYMBOL:V(φ25~35)

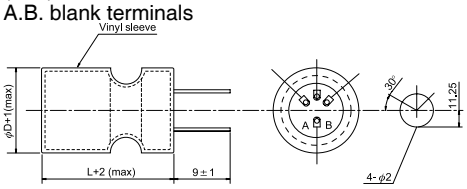
(φ25)



(φ30)



(φ35)
A.B. blank terminals



RIPPLE CURRENT COEFFICIENTS

Temperature(°C)	40	60	70	85	105
Multiplier	2.50	2.20	2.00	1.80	1.00

Frequency(Hz)	60	120	400	1k	10k
W.V.	Multiplier				
≦100V	0.80	1.00	1.10	1.20	1.20
≧160V	0.80	1.00	1.10	1.30	1.40

HS Series

JAMICON®

CASE SIZE & MAX RIPPLE CURRENT

Case size : D x L (mm)
Max ripple current : A(rms) 105°C 120Hz

μF	Code	V(Code) / φD	16 (1C)				25 (1E)				35 (1V)				50 (1H)			
			22	25	30	35	22	25	30	35	22	25	30	35	22	25	30	35
1500	152														25			
															1.05			
2200	222										25				30	25		
											1.17				1.31	1.25		
3300	332						25				30	25			35	30	25	
							1.34				1.43	1.36			1.58	1.52	1.50	
4700	472		25				30	25			35	30	25		45	35	30	25
			1.36				1.58	1.51			1.65	1.58	1.56		1.90	1.74	1.73	1.86
6800	682		35	30			35	30	25		50	40	30	25		50	35	30
			1.74	1.67			1.85	1.78	1.75		2.09	1.94	1.82	1.96		2.19	1.98	2.15
10000	103		45	35	25		45	35	30	25		50	35	30			45	40
			2.09	1.92	1.77		2.19	2.01	2.00	2.15		2.24	2.03	2.20			2.39	2.62
15000	153			45	35	30		45	35	30			50	40				50
				2.29	2.17	2.36		2.54	2.41	2.61			2.79	2.92				3.52
22000	223				45	35			45	40								
					2.86	2.97			3.24	3.55								
33000	333					50				50								L(mm)
						4.21				4.78								R.C.

μF	Code	V(Code) / φD	63 (1J)				80 (1K)				100 (2A)				160 (2C)			
			22	25	30	35	22	25	30	35	22	25	30	35	22	25	30	35
330	331														25			
															0.88			
390	391														30	25		
															1.03	1.03		
470	471														30	25		
															1.14	1.14		
560	561														35	30	25	
															1.32	1.33	1.38	
680	681														40	35	25	
															1.55	1.57	1.53	
820	821														45	40	30	25
															1.79	1.82	1.80	1.84
1000	102		25				30	25			30	25				45	35	25
			0.91				1.04	0.99			1.11	1.06				2.12	2.12	2.04
1200	122															50	35	30
																2.43	2.32	2.39
1500	152		30	25			35	30	25		40	35	25				45	35
			1.14	1.08			1.28	1.23	1.21		1.44	1.39	1.29				2.88	2.84
1800	182																	40
																		3.28
2200	222		35	30	25		50	40	30	25		45	35					
			1.40	1.35	1.33		1.72	1.60	1.50	1.61		1.77	1.68					
3300	332		45	40	30	25		50	40	30			45	35				
			1.77	1.72	1.61	1.73		1.97	1.78	1.93			2.07	2.15				
4700	472			50	35	30			50	40				45				
				2.03	1.84	2.00			2.11	2.32				2.52				
6800	682				45	40				50								
					2.20	2.41				2.72								
10000	103					50												L(mm)
						2.87												R.C.

CASE SIZE & MAX RIPPLE CURRENT

Case size : D x L (mm)
Max ripple current : A(rms) 105°C 120Hz

μF	Code	V(Code) / φD	180 (2M)				200 (2D)				250 (2E)			
			22	25	30	35	22	25	30	35	22	25	30	35
220	221						25				30	25		
							0.85				0.91	0.91		
270	271		25				25				35	25		
			0.80				0.94				1.07	1.01		
330	331		30	25			30	25			35	30	25	
			0.95	0.95			1.12	1.12			1.19	1.20	1.24	
390	391		30	25			35	25			40	35	25	
			1.03	1.04			1.31	1.22			1.37	1.39	1.35	
470	471		35	30	25		40	30	25		50	40	30	25
			1.21	1.22	1.27		1.52	1.45	1.50		1.66	1.61	1.59	1.63
560	561		40	30	25		45	35	30			45	35	25
			1.40	1.34	1.39		1.75	1.68	1.76			1.85	1.85	1.78
680	681		45	35	30	25	50	40	30	25		50	35	30
			1.63	1.57	1.64	1.68	2.02	1.96	1.94	1.98		2.14	2.04	2.10
820	821		50	40	30	25		45	35	30			45	35
			1.88	1.83	1.80	1.85		2.27	2.26	2.33			2.49	2.45
1000	102			45	35	30		50	40	30				40
				2.12	2.12	2.18		2.63	2.64	2.58				2.86
1200	122				40	30			45	35				45
					2.45	2.39			3.04	3.00				3.29
1500	152				50	35				45				50
					2.91	2.74				3.58				3.68
1800	182					40				50				L(mm)
						3.17				4.10				R.C.

μF	Code	V(Code) / φD	350 (2V)				400 (2G)				450 (2W)				500 (2H)			
			22	25	30	35	22	25	30	35	22	25	30	35	22	25	30	35
47	470										25				25			
											0.39				0.27			
68	680						25				30	25			30	25		
							0.47				0.50	0.50			0.35	0.35		
82	820		25				30	25			35	30			35	30		
			0.43				0.56	0.56			0.59	0.60			0.41	0.41		
100	101		30	25			30	25			40	35	25		40	35	30	
			0.51	0.51			0.61	0.61			0.69	0.70	0.68		0.47	0.48	0.50	
120	121		30	25			35	30	25		45	35	30	25	50	40	35	25
			0.55	0.55			0.72	0.73	0.75		0.80	0.77	0.80	0.82	0.57	0.56	0.59	0.56
150	151		35	30	25		40	35	30			45	35	30		45	40	30
			0.66	0.67	0.69		0.85	0.86	0.90			0.96	0.96	0.99		0.66	0.69	0.68
180	181		40	35	30		45	40	30	25		50	35	30		50	40	35
			0.77	0.78	0.82		0.98	1.00	0.99	1.01		1.10	1.05	1.08		0.75	0.76	0.79
220	221		50	40	30	25		45	35	30			40	35			45	40
			0.94	0.91	0.90	0.92		1.17	1.16	1.20			1.22	1.27			0.88	0.92
270	271			45	35	30		50	40	30			50	40			50	45
				1.07	1.06	1.10		1.35	1.36	1.33			1.49	1.48			1.02	1.07
330	331			50	40	30			45	35				45				50
				1.23	1.24	1.21			1.58	1.56				1.72				1.23
390	391				45	35				40				50				
					1.42	1.40				1.79				1.96				
470	471					40				45								
						1.62				2.07								
560	561					45				50								L(mm)
						1.86				2.36								R.C.