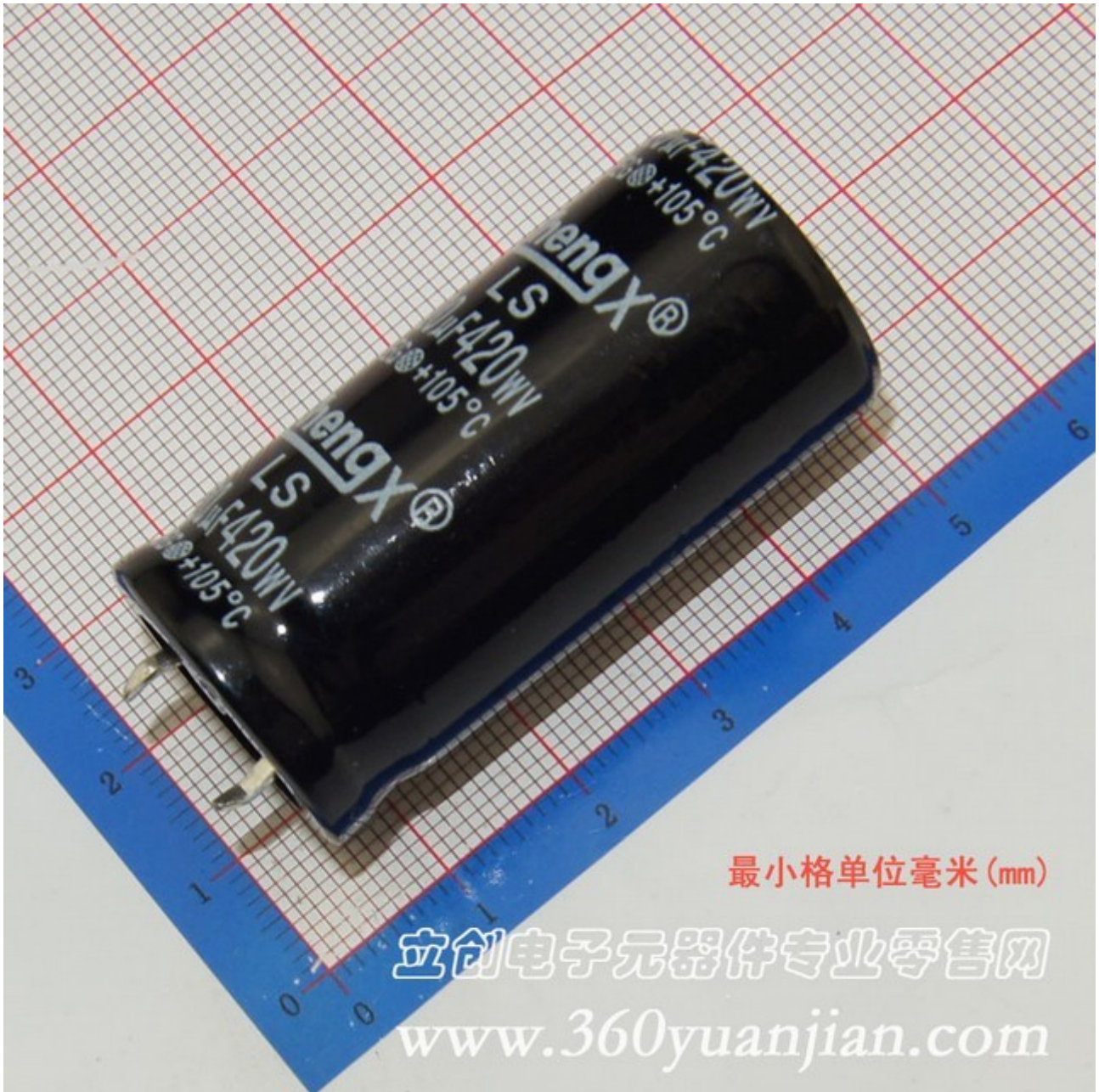


此商品编号对应的规格参数是: 220uF 420V 22\*45 钮角

此商品的实物图片为:



## LS Series

### Lug/Snap-in Terminal Type (插入/自立型), Wide Temperature (宽温度)

#### FEATURES

1. Highly reliable capacitors that withstand under high ripple current.
2. Two or three dimensions with same ratings.
3. Aluminum case designed explosion-proof vent.
4. Best for switching power supplies.



#### SPECIFICATIONS

Item	Performance Characteristics								
Operating Temperature Range	-40 to +105°C				-25 to +105°C				
Rated Working Voltage Range	10 to 100V				160 to 500V				
Nominal Capacitance Range	47 ~ 56000µF								
Capacitance Tolerance	±20% (120Hz, +20°C)								
Leakage Current	$I \leq 3 \sqrt{CV}$ (µA) after 5 minutes application of rated working voltage at +20°C								
tan δ (120Hz, +20°C)	Working Voltage (V)	10	16	25	35	50	63	80	100
	tan δ (max.)	0.55	0.50	0.45	0.35	0.30	0.30	0.25	0.20
	Working Voltage (V)	160 ~ 220	250	315 ~ 385	400 ~ 500				
	tan δ (max.)	0.15	0.15	0.15	0.20				
For capacitance value > 33000µF, add following calculated value: $\frac{(\text{rated capacitance}) - 33000\mu\text{F}}{10000\mu\text{F}} \times 0.1$									
Low Temperature Characteristics	Impedance ratio max. at 120Hz								
	Working Voltage (V)	10	16	25	35	50	63	80	100
	Z-25°C / Z+20°C	6	6	6	6	4	3	3	3
	Z-40°C / Z+20°C	15	15	15	15	15	15	15	15
	Working Voltage (V)	160 ~ 180	200 ~ 220	250	315 ~ 385	400	450	500	
Z-25°C / Z+20°C	8	8	8	8	8	8	8		
Z-40°C / Z+20°C	-	-	-	-	-	-	-		
High Temperature Loading	Testing time	: 2000 hours			Post test requirements at +20°C				
	Testing temp.	: +105°C			Leakage current : ≤ Initial specified value				
	Testing condition	: Rated DC working voltage with the max. ripple current			Cap. change : within ±20% of initial measured value				
					tan δ : ≤ 200% of initial specified value				
Shelf Life	At 105°C no voltage applied after 1000 hours and then being stabilized at 20 °C the capacitors shall meet the following limits								
	Leakage current	: ≤ Initial specified value							
	Cap. change	: within ±15% of initial measured value							
	tan δ	: ≤ 150% of initial specified value							
Others	JIS C - 5101 (IEC 60384)								

#### RIPPLE CURRENT MULTIPLIER

##### Frequency Coefficient

Frequency multiplying factor:

If capacitors are used to filter circuits at a frequency other than 120Hz, the maximum ripple current must be multiplied by the figure shown in the table below.

Freq.(Hz)	60	120	1k	10 ~ 50k
10 ~ 100V	0.90	1.00	1.15	1.25
160 ~ 250V	0.80	1.00	1.25	1.47
315 ~ 500V	0.80	1.00	1.30	1.47

## LS Series

Lug/Snap-in Terminal Type(插入/自立型), Wide Temperature(宽温度)

### STANDARD RATINGS

Voltage (Code)		10V (1A)		16V (1C)		25V (1E)		35V (1V)			
Cap.( $\mu$ F)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current		
2700	278							20 x 25	1.62		
3300	338							20 x 30	1.94		
								22 x 25	1.90		
3900	398					20 x 25	1.72	20 x 35	2.02		
								22 x 30	2.00		
4700	478					20 x 30	2.04	20 x 40	2.21		
								22 x 35	2.20		
						22 x 25	2.00	25 x 25	2.20		
5600	568			20 x 25	1.89	20 x 35	2.23	22 x 35	2.40		
						22 x 30	2.20	25 x 30	2.40		
6800	688	20 x 25	1.41	20 x 30	2.25	20 x 40	2.72	22 x 40	2.60		
				22 x 25	2.20	22 x 30	2.40	25 x 35	2.60		
						25 x 25	2.40	30 x 25	2.78		
8200	828	20 x 30	1.67	20 x 35	2.43	22 x 35	2.70	22 x 50	2.90		
				22 x 30	2.40	25 x 30	2.70	25 x 40	2.90		
						30 x 25	2.70	30 x 30	2.90		
10000	109	20 x 30	1.88	20 x 40	2.79	22 x 40	3.00	25 x 45	3.20		
				22 x 30	2.60	25 x 35	3.00	30 x 35	3.20		
				25 x 25	2.60	30 x 30	3.00				
12000	129	20 x 35	2.23	22 x 35	2.90	22 x 50	3.20	25 x 50	3.50		
				22 x 30	2.20	25 x 30	2.90	25 x 40	3.20	30 x 40	3.50
				25 x 25	2.20	30 x 25	2.90	30 x 30	3.20	35 x 30	3.50
15000	159	20 x 40	2.31	22 x 40	3.20	25 x 45	3.60	30 x 45	3.90		
				22 x 35	2.30	25 x 35	3.20			30 x 35	3.60
				25 x 25	2.30	30 x 30	3.20	35 x 30	3.60	35 x 35	3.90
18000	189	22 x 40	2.52	22 x 45	3.50	30 x 40	3.90	35 x 40	4.51		
				25 x 30	2.40	25 x 40	3.50				
				30 x 25	2.49	30 x 30	3.50			35 x 35	3.90
22000	229	22 x 45	2.60	25 x 45	3.80	30 x 45	4.30	35 x 45	5.24		
				25 x 35	2.60	30 x 35	3.80				
				30 x 25	2.60	35 x 30	3.80			35 x 35	4.30
27000	279	22 x 50	3.19	25 x 50	4.20	35 x 45	4.80				
		25 x 40	3.10	30 x 40	4.20						
		30 x 30	3.10	35 x 30	4.20						
33000	339	25 x 45	3.40	30 x 45	4.70	35 x 50	5.55				
		30 x 35	3.40								
		35 x 30	3.40					35 x 35	4.70		
39000	399	30 x 40	3.79	30 x 50	5.10						
		35 x 30	3.70	35 x 40	5.10						
47000	479	30 x 45	4.26	35 x 45	5.50						
		35 x 35	4.20								
56000	569	35 x 40	5.00								

Maximum Allowable Ripple Current (A rms) at 105°C 120Hz

Case Size  $\phi$ D x L(mm)

## LS Series

### Lug/Snap-in Terminal Type(插入/自立型), Wide Temperature(宽温度)

#### STANDARD RATINGS

Voltage (Code)		50V (1H)		63V (1J)		80V (1K)		100V (2A)	
Cap.( $\mu$ F)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current
560	567							20 x 25	0.95
680	687							20 x 30	1.15
								22 x 25	1.09
820	827					20 x 25	1.04	20 x 35	1.31
								22 x 30	1.40
1000	108			20 x 25	1.21	20 x 30	1.24	20 x 35	1.43
						22 x 25	1.19	22 x 30	1.47
								25 x 25	1.45
1200	128			20 x 30	1.43	20 x 35	1.43	20 x 40	1.61
				22 x 25	1.40	22 x 30	1.50	22 x 35	1.69
1500	158	20 x 25	1.29	20 x 35	1.52	20 x 35	1.57	22 x 40	1.97
				22 x 30	1.50	22 x 30	1.59	25 x 35	1.98
						25 x 25	1.59	30 x 25	1.95
1800	188	20 x 30	1.53	20 x 35	1.72	20 x 40	1.77	22 x 45	2.23
				22 x 30	1.70	22 x 35	1.79	25 x 40	2.20
		22 x 25	1.50	25 x 25	1.70	25 x 30	1.71	30 x 30	2.20
2200	228	20 x 35	1.72	20 x 40	2.01	22 x 40	2.03	25 x 45	2.53
				22 x 30	1.87	25 x 35	2.10	30 x 35	2.55
		22 x 30	1.70	25 x 30	1.00	30 x 25	1.98	35 x 30	2.60
2700	278	20 x 35	1.82	22 x 40	2.20	22 x 45	2.39	25 x 50	2.82
		22 x 30	1.80	25 x 35	2.20	25 x 40	2.35	30 x 40	2.86
		25 x 25	1.80	30 x 25	2.20	30 x 30	2.35	35 x 35	2.90
3300	338	20 x 40	2.01	22 x 45	2.60	25 x 45	2.64	30 x 45	3.30
		22 x 35	2.00	25 x 35	2.39	30 x 35	2.61	35 x 35	3.25
		25 x 30	2.00	30 x 30	250	35 x 30	2.60		
3900	398	22 x 40	2.23	25 x 40	2.57	25 x 50	2.92	30 x 50	3.60
		25 x 30	2.20	30 x 35	2.70	30 x 40	2.82	35 x 40	3.67
		30 x 25	2.20			35 x 30	2.97		
4700	478	22 x 45	2.50	25 x 50	3.00	30 x 45	3.34	35 x 45	3.80
		25 x 35	2.43	30 x 40	3.00	35 x 35	3.38		
		30 x 30	2.50	35 x 30	3.00				
5600	568	22 x 50	2.80	30 x 40	3.22	30 x 50	3.80	35 x 50	4.05
		25 x 40	2.80	35 x 35	3.30	35 x 40	3.80		
		30 x 30	2.76						
6800	688	25 x 45	3.30	30 x 50	3.86	35 x 45	3.90		
		30 x 35	3.30	35 x 40	3.84				
		35 x 30	3.30						
8200	828	30 x 40	3.71	35 x 45	4.43	35 x 50	4.20		
		35 x 35	3.85						
10000	109	30 x 45	4.30	35 x 50	5.11				
		35 x 40	4.49						
12000	129	35 x 45	4.56						
15000	159	35 x 50	4.80						

Maximum Allowable Ripple Current (A rms) at 105°C 120Hz

Case Size  $\phi$ D x L(mm)

## LS Series

Lug/Snap-in Terminal Type(插入/自立型), Wide Temperature(寬溫度)

### STANDARD RATINGS

Voltage (Code)		160V (2C)		180V (2P)		200V (2D)		220V (2N)	
Cap.( $\mu$ F)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current
180	187							20 x 25	0.90
220	227			20 x 25	1.00	20 x 25	1.00	20 x 30	1.00
								22 x 25	1.00
270	277	20 x 25	1.10	20 x 30	1.10	20 x 30	1.10	20 x 35	1.15
				22 x 25	1.00	22 x 25	1.10	22 x 30	1.15
330	337	20 x 30	1.20	20 x 30	1.20	20 x 35	1.20	20 x 40	1.25
						22 x 30	1.25	22 x 35	1.25
						25 x 25	1.25	25 x 25	1.25
390	397	20 x 35	1.42	20 x 35	1.30	20 x 40	1.31	20 x 45	1.40
				22 x 30	1.35	22 x 30	1.35	22 x 35	1.40
				22 x 30	1.30	25 x 25	1.35	25 x 30	1.40
470	477	20 x 40	1.34	20 x 40	1.40	22 x 35	1.50	22 x 40	1.51
		22 x 30	1.55	22 x 35	1.50	25 x 30	1.50	25 x 30	1.44
		25 x 25	1.55	25 x 30	1.50	30 x 25	1.50	30 x 25	1.50
560	567	22 x 35	1.67	22 x 40	1.67	22 x 40	1.67	22 x 45	1.70
				25 x 30	1.67	25 x 30	1.59	25 x 35	1.64
				25 x 30	1.67	30 x 25	1.67	30 x 30	1.70
								35 x 25	1.71
680	687	22 x 40	1.82	22 x 45	1.78	22 x 45	1.78	25 x 40	1.84
		25 x 35	1.85	25 x 35	1.78	25 x 35	1.72	30 x 35	1.93
		30 x 25	1.82	30 x 30	1.78	30 x 30	1.78	35 x 30	1.89
820	827	22 x 45	2.04	22 x 50	2.04	25 x 40	1.99	25 x 45	2.08
		25 x 35	2.04	25 x 40	2.04	30 x 35	2.04	30 x 40	2.19
		30 x 30	2.04	30 x 30	2.04	35 x 25	2.04	35 x 30	2.16
1000	108	25 x 45	2.40	25 x 45	2.30	25 x 50	2.42	30 x 45	2.50
		30 x 30	2.25	30 x 35	2.30	30 x 35	2.30	35 x 35	2.44
				35 x 30	2.30	35 x 30	2.30		
1200	128	25 x 50	2.62	30 x 40	2.55	30 x 40	2.65	35 x 40	2.79
		30 x 35	2.49						
		35 x 30	2.49	35 x 35	2.55	35 x 35	2.65		
1500	158	30 x 40	2.84	30 x 45	2.90	35 x 40	3.08	35 x 45	3.22
		35 x 35	2.84	35 x 35	2.90				
1800	188	30 x 50	3.32	35 x 40	3.30	35 x 45	3.48		
		35 x 35	3.00						
2200	228	35 x 45	3.50	35 x 50	3.65				

Maximum Allowable Ripple Current (A rms) at 105°C 120Hz

Case Size  $\phi$ D x L(mm)

## LS Series

Lug/Snap-in Terminal Type(插入/自立型), Wide Temperature(寬溫度)

### STANDARD RATINGS

Voltage (Code)		250V (2E)		315V (2F)		350V (2V)		385V (2Y)			
Cap.( $\mu$ F)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current		
56	566							20 x 25	0.37		
68	686					20 x 25	0.47	20 x 30	0.44		
								22 x 25	0.45		
82	826			20 x 25	0.64	20 x 30	0.54	20 x 30	0.50		
										22 x 30	0.52
100	107			20 x 30	0.69	20 x 30	0.60	20 x 35	0.56		
										22 x 30	0.58
										22 x 25	0.69
120	127			20 x 30	0.75	20 x 35	0.68	20 x 40	0.66		
										22 x 30	0.64
				22 x 25	0.75	22 x 25	0.70	25 x 30	0.68		
150	157	20 x 25	0.79	20 x 35	0.82	20 x 40	0.78	22 x 40	0.79		
				22 x 30	0.82			25 x 30	0.78		
						25 x 25	0.82	22 x 30	0.77	30 x 25	0.75
180	187	20 x 30	0.90	20 x 40	0.90	22 x 35	0.87	22 x 40	0.84		
				22 x 25	0.88	22 x 30	0.86	25 x 30	0.92	25 x 35	0.86
				25 x 25	0.86	30 x 25	0.90	30 x 30	0.88		
220	227	20 x 35	1.00	22 x 35	0.98	22 x 40	1.00	22 x 45	0.96		
				25 x 30	1.04	25 x 35	1.04	25 x 35	0.94		
		22 x 25	1.00	30 x 25	1.04	30 x 30	1.02	30 x 30	1.00		
270	277	20 x 40	1.10	22 x 40	1.10	22 x 45	1.11	25 x 45	1.13		
		22 x 30	1.18	25 x 35	1.16	25 x 40	1.18	30 x 35	1.08		
		25 x 30	1.27	30 x 25	1.16	30 x 30	1.17	35 x 30	1.10		
330	337	22 x 35	1.30	22 x 45	1.27	25 x 45	1.29	30 x 45	1.31		
		25 x 30	1.30	25 x 40	1.33	30 x 35	1.34				
		30 x 25	1.35	30 x 30	1.33	35 x 30	1.22	35 x 30	1.24		
390	397	22 x 40	1.49	25 x 40	1.40	25 x 50	1.51	30 x 45	1.41		
		25 x 35	1.49	30 x 35	1.47						
		30 x 25	1.49	35 x 30	1.47	30 x 35	1.43	35 x 35	1.40		
470	477	22 x 45	1.65	30 x 40	1.70	30 x 40	1.57	35 x 40	1.68		
		25 x 40	1.65								
		30 x 30	1.65	35 x 30	1.70	35 x 35	1.69				
560	567	25 x 45	1.80	30 x 40	1.95	30 x 50	1.85	35 x 45	1.87		
		30 x 35	1.80	35 x 35	2.05	35 x 40	1.90				
680	687	25 x 50	2.03	35 x 40	2.17	35 x 45	2.20				
		30 x 35	2.00								
		35 x 30	2.00								
820	827	30 x 40	2.30	35 x 45	2.20						
		35 x 35	2.30								
1000	108	30 x 50	2.70								
		35 x 40	2.69								
1200	128	35 x 45	3.09								

Maximum Allowable Ripple Current (A rms) at 105°C 120Hz

Case Size  $\phi$ D x L(mm)

## LS Series

Lug/Snap-in Terminal Type(插入/自立型), Wide Temperature(寬溫度)

### STANDARD RATINGS

Voltage (Code)		400V (2G)		420V (2M)		450V (2W)		500V (2H)	
Cap.( $\mu$ F)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current
47	476					20 x 25	0.39	22 x 25	0.35
56	566	20 x 25	0.51	20 x 25	0.51	20 x 30	0.51	22 x 25	0.38
						22 x 25	0.50		
68	686	20 x 30	0.56	20 x 30	0.56	20 x 35	0.56	22 x 30	0.45
		22 x 25	0.55	22 x 25	0.55	22 x 30	0.53		
						25 x 25	0.53		
82	826	20 x 30	0.64	20 x 35	0.64	20 x 35	0.64	22 x 35	0.54
		22 x 25	0.64	22 x 25	0.64	22 x 30	0.64		
						25 x 25	0.64		
100	107	20 x 35	0.70	20 x 35	0.70	22 x 30	0.65	22 x 35	0.56
		22 x 30	0.70	22 x 30	0.70	25 x 25	0.64		
		25 x 25	0.70	25 x 25	0.70	30 x 25	0.72		
120	127	20 x 40	0.75	20 x 40	0.75	22 x 40	0.80	22 x 40	0.64
		22 x 30	0.70	22 x 30	0.70	25 x 30	0.80		
				30 x 25	0.78	30 x 25	0.80		
150	157	22 x 40	0.88	22 x 40	0.88	22 x 40	0.84	25 x 40	0.76
		25 x 30	0.83	25 x 35	0.88	25 x 35	0.88		
		30 x 25	0.88	30 x 25	0.88	30 x 30	0.88		
180	187	22 x 40	0.93	22 x 40	0.90	25 x 40	1.00	30 x 35	0.86
		25 x 35	0.98	25 x 35	0.92				
				30 x 30	0.98	30 x 30	0.96		
		35 x 25	0.94			30 x 30	1.00		
220	227	22 x 45	1.05	22 x 45	1.05	25 x 45	1.12	30 x 40	0.97
		25 x 35	1.04	30 x 30	1.03	30 x 35	1.12		
		30 x 30	1.10	35 x 25	1.10	35 x 30	1.12		
270	277	25 x 50	1.29	25 x 50	1.37	30 x 40	1.28	30 x 45	1.12
		30 x 35	1.22	30 x 35	1.18				
		35 x 30	1.22	35 x 30	1.22	35 x 35	1.28		
330	337	30 x 45	1.55	30 x 45	1.49	30 x 45	1.39		
		35 x 30	1.44	35 x 30	1.36	35 x 40	1.45		
390	397	30 x 45	1.60	30 x 45	1.60	35 x 40	1.55		
		35 x 35	1.60	35 x 40	1.66				
470	477	35 x 40	1.90	35 x 40	1.81	35 x 50	1.85		
560	567	35 x 45	2.12						

Maximum Allowable Ripple Current (A rms) at 105°C 120Hz

Case Size  $\phi$ D x L (mm)