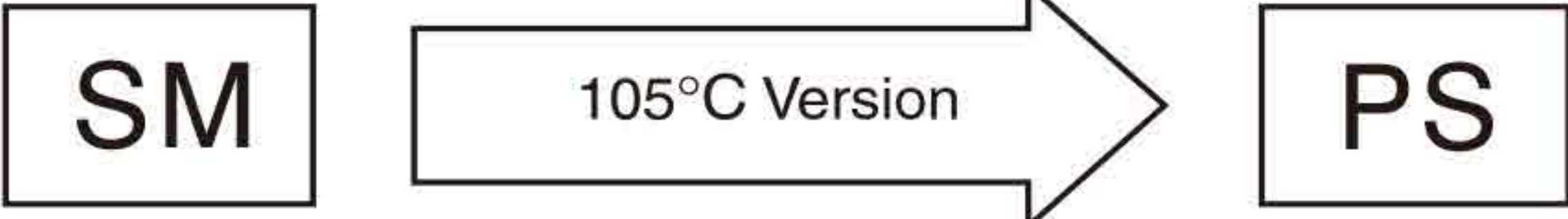
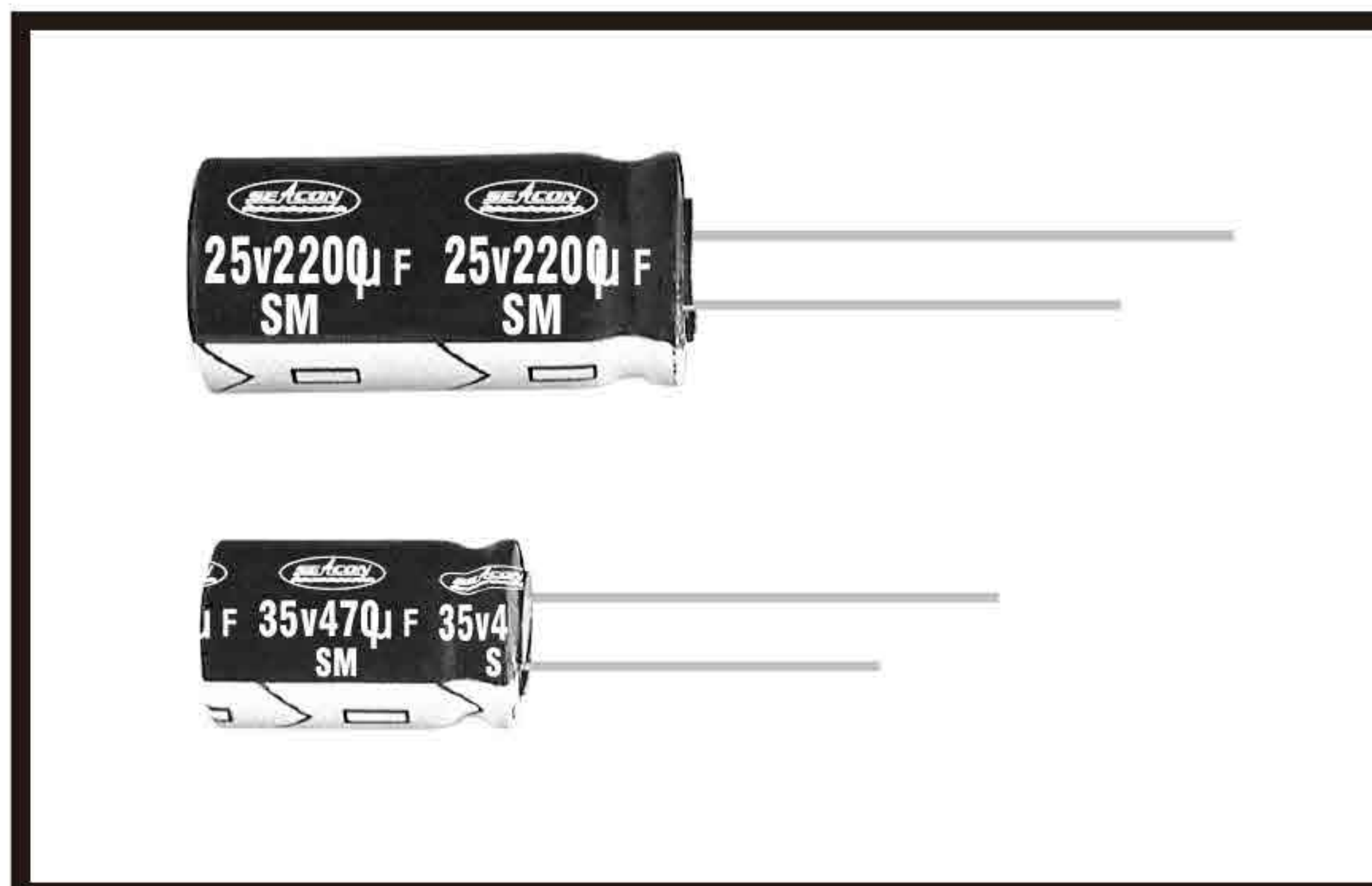


SM SERIES

85°C Standard

◆ FEATURES

- Load life : 85°C 2000 hours.



◆ SPECIFICATIONS

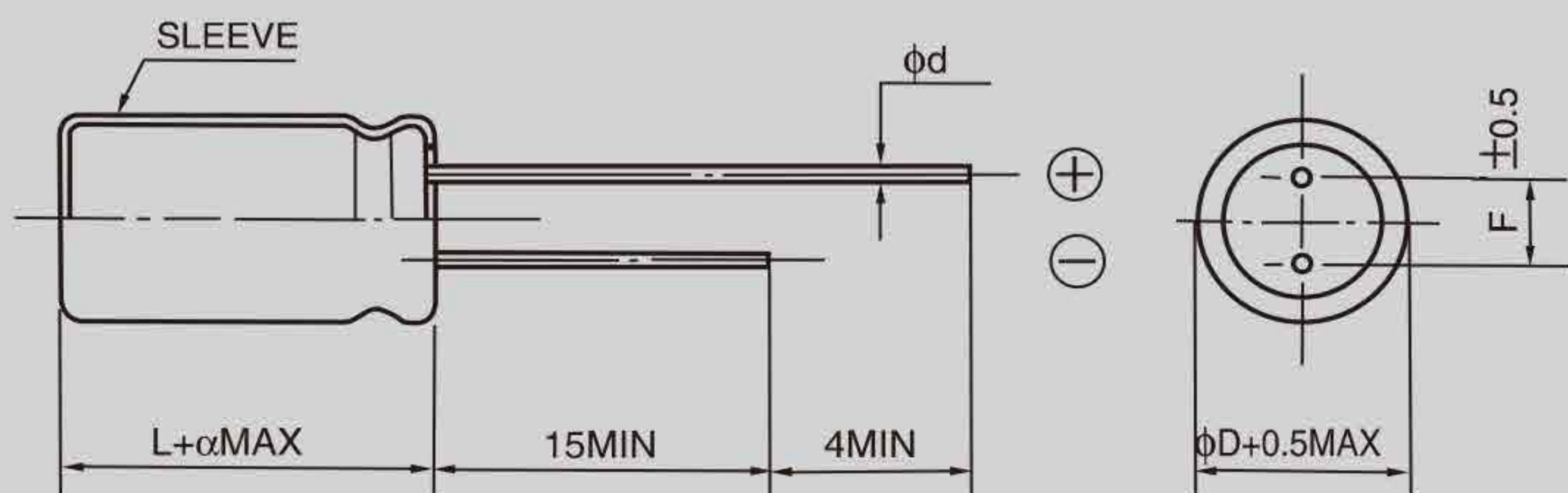
Items	Characteristics		
Category Temperature Range	-40~+85°C	-25~+85°C	
Rated Voltage Range	6.3~400V.DC	450V.DC	
Capacitance Tolerance	±20%(20°C, 120Hz)		
Leakage Current(MAX)	6.3~100V.DC	160~450V.DC	
	I=0.01CV or 3µA whichever is greater. (After 2 minutes application of rated voltage)	CV≤1000	CV>1000
		I=0.1CV+40µA (1minute) I=0.03CV+15µA (5minutes)	I=0.04CV+100µA (1minute) I=0.02CV+25µA (5minutes)
	I=Leakage Current(µA)	C=Rated Capacitance(µF) V=Rated Voltage(V)	
Dissipation Factor(MAX)	Rated Voltage (V)	6.3 10 16 25 35 50 63 100 160 200 250 350 400 450 (20°C, 120Hz)	
	tanδ	0.26 0.22 0.18 0.16 0.14 0.12 0.10 0.08 0.20 0.20 0.20 0.20 0.20 0.20	
	When rated capacitance is over 1000µF, tanδ shall be added 0.02 to the listed value with increase of every 1000µF.		
Endurance	After applying rated voltage with rated ripple current for 2000hrs at 85°C, the capacitors shall meet the following requirements.		
	Capacitance Change	Within±25% of the initial value.	
	Dissipation Factor	Not more than 200% of the specified value.	
	Leakage Current	Not more than the specified value.	
Low Temperature Stability Impedance Ratio(MAX)	Rated Voltage (V)	6.3 10 16 25 35 50 63 100 160 200 250 350 400 450 (120Hz)	
	Z(-25°C)/Z(20°C)	4 3 2 2 2 2 2 2 3 3 3 5 5 7	
	Z(-40°C)/Z(20°C)	8 6 4 4 3 3 3 3 - - - - -	

◆ DIMENSIONS

(mm)

◆ MULTIPLIER FOR RIPPLE CURRENT

Frequency coefficient



φD	6.3	8	10	12.5	16	18
φd	0.5	0.6		0.8		
F	2.5	3.5	5.0		7.5	
α	WV≤100:1.5 WV≥160:2.0				2.0	

Frequency (Hz)		60(50)	120	500	1k	10k≤
Coefficient	0.47~1µF	0.50	1.00	1.20	1.30	1.50
	2.2~4.7µF	0.65	1.00	1.20	1.30	1.50
	10~47µF	0.80	1.00	1.20	1.30	1.50
	100~1000µF	0.80	1.00	1.10	1.15	1.20
	2200~33000µF	0.80	1.00	1.05	1.10	1.15

◆ PART NUMBER



◆ STANDARD SIZE, RATED RIPPLE CURRENT

Size φDxL(mm), Ripple Current (mA r.m.s./85°C, 120Hz)

SM

WV(V.DC) Cap(μF)	6.3 (0J)		10 (1A)		16 (1C)		25 (1E)		35 (1V)		50 (1H)		63 (1J)		
	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	
0.1											5X11	1.1			
0.15											5X11	1.5			
0.22											5X11	2.5			
0.33											5X11	4			
0.47											5X11	7			
1											5X11	13			
2.2											5X11	23			
3.3											5X11	35			
4.7											5X11	41			
10											5X11	60	5X11	70	
22										5X11	90	5X11	95	5X11	110
33								5X11	98	5X11	110	5X11	130	6.3X11	140
47					5X11	115	5X11	120	5X11	135	6.3X11	160	6.3X11	190	
100	5X11	135	5X11	140	5X11	175	5X11	185	6.3X11	215	8X11.5	270	8X11.5	290	
220	5X11	220	5X11	230	6.3X11	280	6.3X11	310	8X11.5	370	10X12.5	435	10X16	490	
330	6.3X11	280	6.3X11	310	8X11.5	380	8X11.5	410	10X12.5	500	10X16	590	10X20	680	
470	6.3X11	360	6.3X11	400	8X11.5	460	10X12.5	550	10X16	680	10X20	760	12.5X20	880	
1000	8X11.5	590	10X12.5	660	10X16	800	10X20	970	12.5X20	1180	12.5X25	1350	16X25	1350	
2200	10X16	920	10X20	1090	12.5X20	1320	12.5X25	1570	16X25	1810	16X35.5	2110	18X35.5	2300	
3300	10X20	1200	12.5X20	1440	12.5X25	1670	16X25	2000	16X35.5	2300	18X35.5	2540			
4700	12.5X20	1550	12.5X25	1800	16X25	2120	16X31.5	2440	18X35.5	2740					
6800	12.5X25	1920	16X25	2250	16X31.5	2540	18X35.5	2900							
10000	16X25	2370	16X35.5	2710	18X35.5	2950									
15000	16X35.5	2880	18X35.5	3110											
22000	18X40	3350													

WV(V.DC) Cap(μF)	100 (2A)		160 (2C)		200 (2D)		250 (2E)		350 (2V)		400 (2G)		450 (2W)	
	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple
0.47	5X11	8					6.3X11	8	6.3X11	8	6.3X11	8	8X11.5	8
1	5X11	16					6.3X11	16	6.3X11	16	6.3X11	16	8X11.5	16
2.2	5X11	35					6.3X11	30	8X11.5	31	10X12.5	31	10X12.5	29
3.3	5X11	45			6.3X11	36	8X11.5	45	10X12.5	45	10X12.5	43	10X16	40
4.7	5X11	50	6.3X11	45	8X11.5	51	8X11.5	54	10X12.5	56	10X16	56	10X20	56
10	5X11	75	8X11.5	83	10X12.5	85	10X16	90	10X20	100	12.5X20	90	12.5X20	84
22	6.3X11	135	10X16	133	10X20	135	12.5X20	150	12.5X25	185	12.5X25	180	16X25	140
33	8X11.5	185	10X20	180	12.5X20	205	12.5X20	205	16X25	230	16X25	230	16X31.5	180
47	10X12.5	235	12.5X20	230	12.5X20	230	12.5X25	260	16X31.5	280	16X31.5	280	16X35.5	220
100	10X20	380	12.5X25	385	16X25	400	16X31.5	450	18X40	420	18X40	420		
220	12.5X25	629	16X35.5	645	18X35.5	680								
330	12.5X25	760	18X35.5	760										
470	16X25	950												
1000	18X40	1350												