LBB

85ºC Snap-Mount Aluminum Electrolytic Capacitors

FEATURES	Multiple Case Sizes - High Voltage – High Current
APPLICATIONS	Filtering – Switching Power Supplies

Operating Temperature Range		**-40°C to +85°C**												
Capacitance Tolerance		**±20% at 120 Hz, 20°C**												
Surge Voltage	**WVDC**	**16**	**25**	**35**	**50**	**63**	**80**	**100**	**160**	**200**	**250**	**350**	**400**	**450**
	SVDC	20	32	44	63	79	100	120	200	250	300	400	450	500
Dissipation Factor tan δ (120 Hz)	**WVDC**	**16**	**25**	**35**	**50**	**63**	**80**	**100**	**160**	**200**	**250**	**350**	**400**	**450**
	D≤30	.4	.3	.25	.2	.15	.15	.15	.1	.1	.1	.15	.15	.15
	D=35	.4	.3	.25	.2	.15	.15	.15	.15	.15	.15	.15	.15	.15
	D≥40	.5	.45	.4	.35	.3	.25	.2	--	--	--	--	--	--
		For capacitances above 33000uF, add to DF value (Capacitance-33000) *0.1 / 10000												
Leakage Current @20C, Rated WVDC applied		**Time**	**5 Minutes**											
			$3\sqrt{CV}$											
Impedance Ratio (120 Hz)	**WVDC**	**16**	**25**	**35**	**50**	**63**	**80**	**100**	**160**	**200**	**250**	**350**	**400**	**450**
	-25°C/+20°C	4	3	3	2	2	2	2	6	6	6	8	8	8
	-40°C/+20°C	15	10	8	6	6	5	5	9	9	9	12	12	12

Load Life	**3000 hours with rated voltage and rated ripple current applied at 85°C**	
	Capacitance Change	≤20% of initial measured value
	Dissipation Factor	≤200% of maximum specified value
	Leakage Current	≤100% of maximum specified value
Shelf Life	**1000 hours at 85°C with no voltage applied**	
	Capacitance Change	≤20% of initial measured value
	Dissipation Factor	≤200% of maximum specified value
	Leakage Current	≤100% of maximum specified value

Ripple Current Multipliers		**Frequency (Hz)**					**Temperature (°C)**			
	WVDC	60	120	400	1k	10k+	40	60	70	85
	≤100	0.8	1.0	1.1	1.15	1.25	1.8	1.4	1.2	1.2
	≥160	0.8	1.0	1.1	1.15	1.47	1.8	1.4	1.2	1.2

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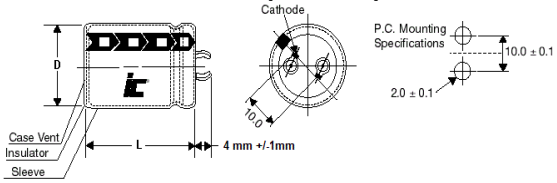
85ºC Snap-Mount Aluminum Electrolytic Capacitors

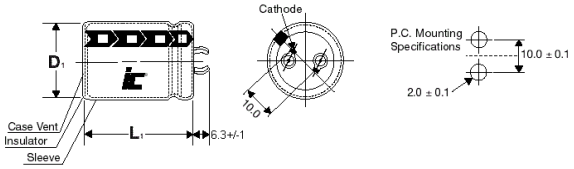
Lead Style Options

Code 2 (standard)



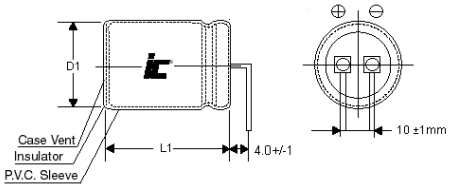
Diameter 20 to 40 mm

Code W



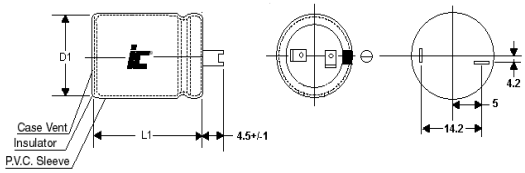
Diameter 20 to 40 mm

Code P



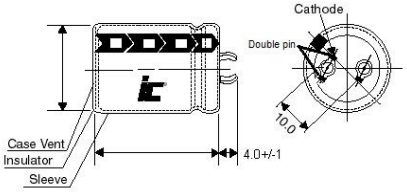
Diameter 22 to 35 mm

Code D



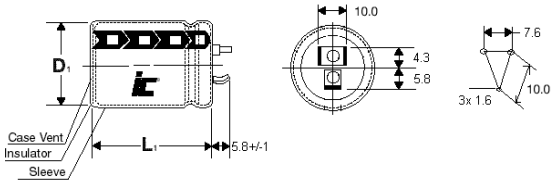
Diameter 30 to 40 mm

Code 9



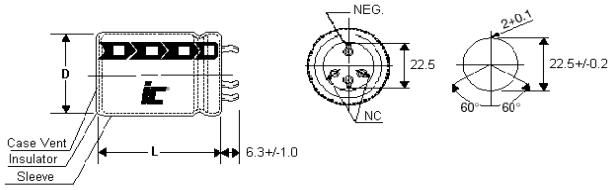
Diameter 25 to 35 mm

Code T



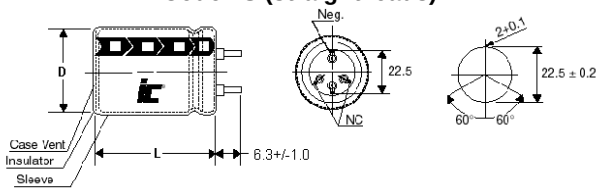
Diameter 25 to 35 mm

Code 4



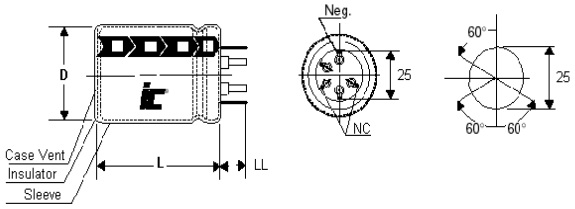
Diameter 35 to 45 mm

Code 4S (straight leads)



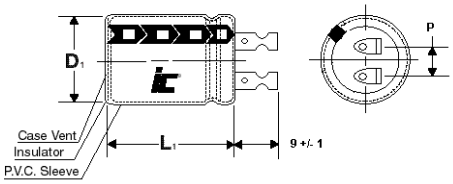
Diameter 35 to 45 mm

Code 5



Diameter 40 to 50 mm

Code G



D	35	40	50	63	76
P	14	14	18	25	25

Diameter 35 to 76 mm

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+85°C, Extended Life, 3000 hours

Capacitance (µF)	WVDC	IC PART NUMBER	Maximum ESR (mΩ) 120 Hz, +20°C	Maximum RMS Ripple Current (A) 120 Hz, +85°C	Dims DxL (mm)
82	400	826LBB400M2BC	3032.68	0.76	22x25
82	450	826LBB450M2BD	3032.68	0.83	22x30
100	350	107LBB350M2BC	2486.8	0.86	22x25
100	400	107LBB400M2BD	2486.8	0.91	22x30
100	400	107LBB400M2CC	2486.8	0.91	25x25
100	450	107LBB450M2BE	2486.8	0.97	22x35
100	450	107LBB450M2CC	2486.8	0.9	25x25
100	450	107LBB450M2CD	2486.8	0.98	25x30
100	450	107LBB450M2DC	2486.8	1.02	30x25
120	350	127LBB350M2BD	2072.33	0.86	22x30
120	350	127LBB350M2CC	2072.33	0.86	25x25
120	400	127LBB400M2CC	2072.33	1	25x25
120	400	127LBB400M2BD	2072.33	1	22x30
120	450	127LBB450M2CD	2072.33	1.08	25x30
120	450	127LBB450M2BF	2072.33	1.13	22x40
120	450	127LBB450M2DC	2072.33	1.12	30x25
150	350	157LBB350M2BD	1657.86	0.96	22x30
150	350	157LBB350M2CC	1657.86	1.1	25x25
150	400	157LBB400M2BE	1657.86	1.19	22x35
150	400	157LBB400M2CD	1657.86	1.2	25x30
150	400	157LBB400M2DC	1657.86	1.25	30x25
150	450	157LBB450M2DD	1657.86	1.34	30x30
150	450	157LBB450M2BG	1657.86	1.33	22x45
150	450	157LBB450M2CE	1657.86	1.28	25x35
180	350	187LBB350M2BE	1381.55	1.13	22x35
180	350	187LBB350M2CD	1381.55	1.14	25x30
180	350	187LBB350M2DC	1381.55	1.18	30x25
180	400	187LBB400M2BF	1381.55	1.38	22x40
180	400	187LBB400M2CE	1381.55	1.4	25x35
180	400	187LBB400M2DC	1381.55	1.37	30x25
180	450	187LBB450M2BH	1381.55	1.53	22x50
180	450	187LBB450M2DD	1381.55	1.47	30x30
180	450	187LBB450M2EC	1381.55	1.5	35x25
180	450	187LBB450M2CF	1381.55	1.49	25x40
220	200	227LBB200M2BC	753.57	1.25	22x25
220	250	227LBB250M2BC	753.57	1.31	22x25
220	350	227LBB350M2CE	1130.36	1.44	25x35
220	350	227LBB350M2DC	1130.36	1.3	30x25
220	350	227LBB350M2BF	1130.36	1.32	22x40
220	400	227LBB400M2DD	1130.36	1.62	30x30
220	400	227LBB400M2EC	1130.36	1.66	35x25
220	400	227LBB400M2CF	1130.36	1.64	25x40
220	400	227LBB400M2BH	1130.36	1.69	22x50
220	450	227LBB450M2CG	1130.36	1.73	25x45
220	450	227LBB450M2DE	1130.36	1.72	30x35
220	450	227LBB450M2ED	1130.36	1.78	35x30
270	200	277LBB200M2BC	614.02	1.67	22x25
270	250	277LBB250M2BD	614.02	1.57	22x30
270	250	277LBB250M2CC	614.02	1.57	25x25
270	350	277LBB350M2BH	921.04	1.61	22x50
270	350	277LBB350M2CF	921.04	1.57	25x40
270	350	277LBB350M2DD	921.04	1.55	30x30
270	350	277LBB350M2EC	921.04	1.59	35x25
270	400	277LBB400M2CG	921.04	1.92	25x45
270	400	277LBB400M2DE	921.04	1.91	30x35
270	400	277LBB400M2ED	921.04	1.97	35x30
270	450	277LBB450M2EE	921.04	2.1	35x35
270	450	277LBB450M2DF	921.04	2.02	30x40

Capacitance (µF)	WVDC	IC PART NUMBER	Maximum ESR (mΩ) 120 Hz, +20°C	Maximum RMS Ripple Current (A) 120 Hz, +85°C	Dims DxL (mm)
330	160	337LBB160M2BC	502.38	1.4	22x25
330	200	337LBB200M2BD	502.38	1.66	22x30
330	200	337LBB200M2CC	502.38	1.66	25x25
330	250	337LBB250M2BE	502.38	1.85	22x35
330	250	337LBB250M2CD	502.38	1.87	25x30
330	350	337LBB350M2DE	753.57	1.83	30x35
330	350	337LBB350M2CG	753.57	1.82	25x45
330	400	337LBB400M2CH	753.57	2.22	25x50
330	400	337LBB400M2ED	753.57	2.18	35x30
330	400	337LBB400M2DF	753.57	2.23	30x40
330	450	337LBB450M2DG	753.57	2.35	30x45
330	450	337LBB450M2EE	753.57	2.32	35x35
390	160	397LBB160M2BC	425.09	1.44	22x25
390	200	397LBB200M2BD	425.09	1.8	22x30
390	200	397LBB200M2CC	425.09	1.8	25x25
390	250	397LBB250M2BE	425.09	2.01	22x35
390	250	397LBB250M2CD	425.09	2.03	25x30
390	250	397LBB250M2DC	425.09	2.1	30x25
390	350	397LBB350M2DF	637.64	2.1	30x40
390	350	397LBB350M2ED	637.64	2.04	35x30
390	350	397LBB350M2CH	637.64	2.08	25x50
390	400	397LBB400M2DG	637.64	2.55	30x45
390	400	397LBB400M2EE	637.64	2.52	35x35
390	450	397LBB450M2EF	637.64	2.66	35x40
470	160	477LBB160M2BD	352.74	1.73	22x30
470	160	477LBB160M2CC	352.74	1.74	25x25
470	200	477LBB200M2CD	352.74	2.13	25x30
470	200	477LBB200M2DC	352.74	2.21	30x25
470	200	477LBB200M2BE	352.74	1.78	22x35
470	250	477LBB250M2EC	529.11	2.54	35x25
470	250	477LBB250M2CE	352.74	2.38	25x35
470	250	477LBB250M2DC	352.74	2.31	30x25
470	250	477LBB250M2BF	352.74	2.34	22x40
470	350	477LBB350M2DF	529.11	2.3	30x40
470	350	477LBB350M2EE	529.11	2.38	35x35
470	400	477LBB400M2EF	529.11	2.92	35x40
470	450	477LBB450M2EG	529.11	3.07	35x45
560	160	567LBB160M2CC	296.05	1.95	25x25
560	160	567LBB160M2BE	296.05	1.99	22x35
560	200	567LBB200M2BF	296.05	2.44	22x40
560	200	567LBB200M2DC	296.05	2.41	30x25
560	200	567LBB200M2CE	296.05	2.48	25x35
560	250	567LBB250M2EC	444.07	2.78	35x25
560	250	567LBB250M2BH	296.05	2.82	22x50
560	250	567LBB250M2DD	296.05	2.71	30x30
560	250	567LBB250M2CF	296.05	2.74	25x40
560	350	567LBB350M2DH	444.07	2.76	30x50
560	350	567LBB350M2EF	444.07	2.75	35x40
560	400	567LBB400M2EG	444.07	3.34	35x45
680	160	687LBB160M2BF	243.8	2.32	22x40
680	160	687LBB160M2CD	243.8	2.21	25x30
680	160	687LBB160M2DC	243.8	2.29	30x25
680	200	687LBB200M2CE	243.8	2.73	25x35
680	200	687LBB200M2DD	243.8	2.85	30x30
680	200	687LBB200M2BG	243.8	2.83	22x45
680	200	687LBB200M2EC	365.71	2.92	35x25
680	250	687LBB250M2CG	243.8	3.19	25x45
680	250	687LBB250M2DE	243.8	3.18	30x35

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+85°C, Extended Life, 3000 hours

Capacitance (µF)	WVDC	IC PART NUMBER	Maximum ESR (mΩ) 120 Hz, +20°C	Maximum RMS Ripple Current (A) 120 Hz, +85°C	Dims DxL (mm)
680	250	687LBB250M2ED	365.71	3.28	35x30
680	350	687LBB350M2EG	365.71	3.18	35x45
680	400	687LBB400M2EH	365.71	3.85	35x50
820	160	827LBB160M2DD	202.18	2.7	30x30
820	160	827LBB160M2CE	202.18	2.58	25x35
820	160	827LBB160M2BG	202.18	2.68	22x45
820	200	827LBB200M2DD	202.18	3.13	30x30
820	200	827LBB200M2CF	202.18	3.17	25x40
820	200	827LBB200M2EC	303.27	3.21	35x25
820	250	827LBB250M2DF	202.18	3.69	30x40
820	250	827LBB250M2CH	202.18	3.67	25x50
820	250	827LBB250M2ED	303.27	3.6	35x30
1000	80	108LBB080M2BC	248.68	1.5	22x25
1000	100	108LBB100M2BD	248.68	2	22x30
1000	100	108LBB100M2CC	248.68	2	25x25
1000	160	108LBB160M2EC	248.68	3.05	35x25
1000	160	108LBB160M2BH	165.79	3.11	22x50
1000	160	108LBB160M2CF	165.79	3.02	25x40
1000	160	108LBB160M2DD	165.79	2.98	30x30
1000	200	108LBB200M2CH	165.79	3.87	25x50
1000	200	108LBB200M2DE	165.79	3.68	30x35
1000	200	108LBB200M2ED	248.68	3.8	35x30
1000	250	108LBB250M2DG	165.79	4.28	30x45
1000	250	108LBB250M2EE	248.68	4.22	35x35
1200	100	128LBB100M2CC	207.233	2.1	25x25
1200	100	128LBB100M2BD	207.233	2.1	22x30
1200	160	128LBB160M2ED	207.23	3.59	35x30
1200	160	128LBB160M2DE	138.16	3.48	30x35
1200	160	128LBB160M2CG	138.16	3.49	25x45
1200	200	128LBB200M2DF	138.16	4.26	30x40
1200	200	128LBB200M2EE	207.23	4.42	35x35
1200	250	128LBB250M2DH	138.16	4.91	30x50
1200	250	128LBB250M2EF	207.23	4.88	35x40
1500	63	158LBB063M2BC	165.786	1.66	22x25
1500	80	158LBB080M2BD	165.786	2	22x30
1500	80	158LBB080M2CC	165.786	2	25x25
1500	100	158LBB100M2BE	165.786	2.41	22x35
1500	100	158LBB100M2CD	165.786	2.43	25x30
1500	100	158LBB100M2DC	165.786	2.46	30x25
1500	160	158LBB160M2EE	165.786	4.26	35x35
1500	160	158LBB160M2DF	110.52	4.11	30x40
1500	200	158LBB200M2EF	165.786	5.02	35x40
1500	250	158LBB250M2EH	165.786	5.74	35x50
1800	100	188LBB100M2DD	138.16	2.35	30x30
1800	100	188LBB100M2CE	138.16	2.75	25x35
1800	100	188LBB100M2BF	138.16	2.77	22x40
1800	160	188LBB160M2DG	92.1	4.73	30x45
1800	160	188LBB160M2EE	138.16	4.67	35x35
1800	200	188LBB200M2EG	138.16	4.32	35x45
2200	50	228LBB050M2BC	150.71	1.91	22x25
2200	63	228LBB063M2BD	113.04	2.31	22x30
2200	63	228LBB063M2CC	113.04	2.3	25x25
2200	80	228LBB080M2DC	113.04	2.49	30x25
2200	80	228LBB080M2CD	113.04	2.46	25x30
2200	80	228LBB080M2BF	113.04	2.44	22x40
2200	100	228LBB100M2BH	113.04	3.08	22x50
2200	100	228LBB100M2CF	113.04	3.13	25x40
2200	100	228LBB100M2DD	113.04	3.09	30x30

Capacitance (µF)	WVDC	IC PART NUMBER	Maximum ESR (mΩ) 120 Hz, +20°C	Maximum RMS Ripple Current (A) 120 Hz, +85°C	Dims DxL (mm)
2200	100	228LBB100M2EC	113.04	3.14	35x25
2200	160	228LBB160M2EG	113.04	4.96	35x45
2200	200	228LBB200M2EH	113.04	4.92	35x50
3300	35	338LBB035M2BC	125.6	2.05	22x25
3300	50	338LBB050M2BD	100.48	2.37	22x30
3300	50	338LBB050M2CC	100.48	2.38	25x25
3300	63	338LBB063M2CD	75.36	2.64	25x30
3300	63	338LBB063M2BE	75.36	2.62	22x35
3300	63	338LBB063M2DC	75.36	2.78	30x25
3300	80	338LBB080M2BH	75.36	3.16	22x50
3300	80	338LBB080M2CF	75.36	3.21	25x40
3300	80	338LBB080M2DD	75.36	3.17	30x30
3300	80	338LBB080M2EC	75.36	3.5	35x25
3300	100	338LBB100M2DF	75.36	4.05	30x40
3300	100	338LBB100M2CH	75.36	4.06	25x50
3300	100	338LBB100M2ED	75.36	4.05	35x30
4700	25	478LBB025M2BC	105.82	2.25	22x25
4700	35	478LBB035M2BD	88.18	2.41	22x30
4700	35	478LBB035M2CC	88.18	2.42	25x25
4700	50	478LBB050M2DC	70.55	2.81	30x25
4700	50	478LBB050M2CD	70.55	2.98	25x30
4700	50	478LBB050M2BE	70.55	2.72	22x35
4700	63	478LBB063M2BG	52.91	3.04	22x45
4700	63	478LBB063M2CE	52.91	2.79	25x35
4700	63	478LBB063M2DD	52.91	3.32	30x30
4700	63	478LBB063M2EC	52.91	3.36	35x25
4700	80	478LBB080M2CH	52.91	4.05	25x50
4700	80	478LBB080M2DF	52.91	4.05	30x40
4700	80	478LBB080M2ED	52.91	4.09	35x30
4700	100	478LBB100M2DH	52.91	5.13	30x50
4700	100	478LBB100M2EF	52.91	5.11	35x40
6800	16	688LBB016M2BC	121.9	2.4	22x25
6800	25	688LBB025M2BD	73.14	2.4	22x30
6800	25	688LBB025M2CC	73.14	2.56	25x25
6800	35	688LBB035M2CD	60.95	2.74	25x30
6800	35	688LBB035M2BE	60.95	2.82	22x35
6800	35	688LBB035M2DC	60.95	2.97	30x25
6800	50	688LBB050M2BH	48.76	3.81	22x50
6800	50	688LBB050M2CF	48.76	3.81	25x40
6800	50	688LBB050M2DD	48.76	3	30x30
6800	50	688LBB050M2EC	48.76	3.23	35x25
6800	63	688LBB063M2CH	36.57	4.27	25x50
6800	63	688LBB063M2ED	48.76	4.15	35x30
6800	63	688LBB063M2DE	48.76	3.46	30x35
6800	80	688LBB080M2DH	36.57	5.16	30x50
6800	80	688LBB080M2EF	36.57	5.14	35x40
6800	100	688LBB100M2EH	36.57	6.5	35x50
10000	16	109LBB016M2BC	82.89	2.77	22x25
10000	16	109LBB016M2CC	66.3	2.67	25x25
10000	25	109LBB025M2BE	49.736	3.2	22x35
10000	25	109LBB025M2CD	49.736	3.12	25x30
10000	25	109LBB025M2DC	49.736	3.21	30x25
10000	35	109LBB035M2BG	49.736	3.34	22x45
10000	35	109LBB035M2CE	41.45	3.06	25x35
10000	35	109LBB035M2DD	41.45	3.46	30x30
10000	35	109LBB035M2EC	41.45	3.02	35x25
10000	50	109LBB050M2CH	33.16	3.7	25x50
10000	50	109LBB050M2ED	33.16	3.64	35x30

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LBB

+85°C, Extended Life, 3000 hours

Capacitance (µF)	WVDC	IC PART NUMBER	Maximum ESR (mΩ) 120 Hz, +20°C	Maximum RMS Ripple Current (A) 120 Hz, +85°C	Dims DxL (mm)
10000	50	109LBB050M2DE	33.16	3.35	30x35
10000	63	109LBB063M2DG	24.87	3.72	30x45
10000	63	109LBB063M2EF	24.87	5.47	35x40
15000	16	159LBB016M2CD	55.26	3.46	25x30
15000	16	159LBB016M2BE	55.26	3.29	22x35
15000	16	159LBB016M2DC	55.26	3.66	30x25
15000	25	159LBB025M2BG	33.16	3.7	22x45
15000	25	159LBB025M2DD	33.16	4	30x30
15000	25	159LBB025M2CE	33.16	3.45	25x35
15000	25	159LBB025M2EC	33.16	3.95	35x25
15000	35	159LBB035M2ED	27.63	3.98	35x30
15000	35	159LBB035M2DE	27.63	3.67	30x35
15000	35	159LBB035M2CH	27.63	4.54	25x50
15000	50	159LBB050M2EF	22.1	4.83	35x40
15000	50	159LBB050M2DH	22.1	4.61	30x50
15000	63	159LBB063M2EH	16.58	5.3	35x50

Capacitance (µF)	WVDC	IC PART NUMBER	Maximum ESR (mΩ) 120 Hz, +20°C	Maximum RMS Ripple Current (A) 120 Hz, +85°C	Dims DxL (mm)
22000	16	229LBB016M2CF	37.68	4.26	25x40
22000	16	229LBB016M2EC	37.68	4.15	35x25
22000	16	229LBB016M2DD	37.68	4.21	30x30
22000	16	229LBB016M2BH	37.68	4.37	22x50
22000	25	229LBB025M2CG	22.61	4.48	25x45
22000	25	229LBB025M2DE	22.61	4.52	30x35
22000	25	229LBB025M2ED	22.61	4.61	35x30
22000	35	229LBB035M2DG	18.84	4.94	30x45
22000	35	229LBB035M2EF	18.84	5.41	35x40
33000	16	339LBB016M2DF	25.12	5.36	30x40
33000	16	339LBB016M2ED	25.12	5.15	35x30
33000	25	339LBB025M2DH	15.07	6.15	30x50
33000	25	339LBB025M2EF	15.07	6.33	35x40
33000	35	339LBB035M2EH	12.56	7.27	35x50
47000	16	479LBB016M2EF	17.64	6.76	35x40
47000	16	479LBB016M2DH	17.64	6.79	30x50

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108LBB250M2DG 108LBB080M2BC 687LBB250M2ED 337LBB200M2BD 109LBB016M2BC 338LBB035M2BC
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827LBB160M2CE 827LBB250M2CH 228LBB050M2BC 397LBB250M2DC 567LBB250M2BH 477LBB160M2CC
567LBB250M2DD 337LBB400M2ED 477LBB160M2BD 397LBB450M2EF 477LBB350M2DF 567LBB250M2EC
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