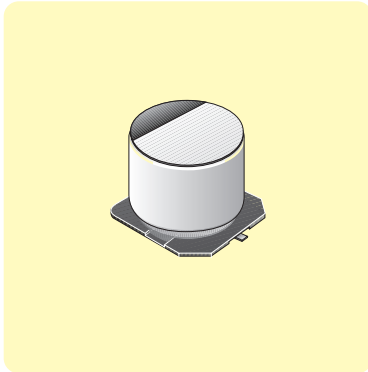




NOVER type VE

Surface mount, aluminium electrolytic capacitors giving an excellent operational specification within a small package and designed for general purpose use. The VE series has an endurance test of 2000 hours at 85°C and is available in a wide range of values and voltages, which are listed on the opposite page. Supplied taped and reeled.



- ◆ Standard range
- ◆ Endurance **2000 hours at 85°C**
- ◆ Excellent performance/size characteristics
- ◆ Ideal for general purpose use
- ◆ Suitable for reflow soldering
- ◆ Capacitance tolerance **20%**
- ◆ Leakage current **≤0.01CV**
- ◆ Supplied taped & reeled

Specification

Endurance test 2000 hours at 85°C
 Capacitance tolerance ±20% at 120Hz, 20°C
 Ripple current (as listed) measured at 120Hz, 85°C
 Operating temperature range -40°C to +85°C
 Leakage current ≤0.01CV or 3μA
 (whichever is greater) after 2 min.

Tan δ (max.) at 120Hz, 20°C

Rated voltage (dc)	4V	6.3V	10V	16V	25V	35V	50V	63V	100V
Case size 3.0 x 5.3	0.42	0.30	0.24	0.22	0.16	0.14	0.12	—	—
Case size 6.3 x 7.7	0.42	0.42	0.32	0.26	0.18	0.14	0.12	—	—
All other case sizes	0.42	0.28	0.24	0.20	0.14	0.12	0.10	0.10	0.10

Marking

Printed on top surface of case, except largest case sizes which may be printed on a case sleeve around the body.

Capacitance value
 Voltage
 Bar to indicate negative terminal

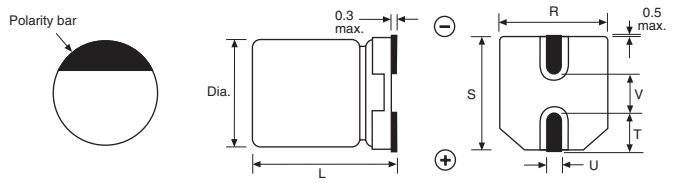
Packaging

TAPE :

Case Size	Width mm	Pitch mm
3.0 x 5.3	12.0	8.0
4.0 x 5.3	12.0	8.0
5.0 x 5.3	12.0	12.0
6.3 x 5.3	16.0	12.0
6.3 x 7.7	16.0	12.0
8.0 x 6.5	16.0	12.0
8.0 x 10.0	24.0	16.0
10.0 x 10.0	24.0	16.0

REEL : 380mm dia.

Dimensions (mm)



Case Size	Dia.	L	R	S	T	U	V
3.0 x 5.3	3.0	5.3	3.3	3.3	1.5	0.6	0.8
4.0 x 5.3	4.0	5.3	4.3	4.3	2.0	0.65	1.0
5.0 x 5.3	5.0	5.3	5.3	5.3	2.3	0.65	1.5
6.3 x 5.3	6.3	5.3	6.6	6.6	2.7	0.65	2.0
6.3 x 7.7	6.3	7.7	6.6	6.6	2.7	0.65	2.0
8.0 x 6.5	8.0	6.5	8.4	8.4	3.4	0.65	2.3
8.0 x 10.0	8.0	10.0	8.4	8.4	3.0	0.9	3.1
10.0 x 10.0	10.0	10.0	10.4	10.4	3.3	0.9	4.7



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Alternatively, contact our Sales Desk to discuss your specific requirements.



NOVER type VE

Value (µF)	Ripple Current (mA)	Case Size Dia. x L	Manf. Part No.	anglia Order Code
4 Volt				
22	14	3.0 x 5.3	VE0G220MG1R	VG220
33	26	4.0 x 5.3	VE0G330MF1R	VG330
47	34	4.0 x 5.3	VE0G470MF1R	VG470
100	61	5.0 x 5.3	VE0G101MF2R	VG101
220	95	6.3 x 5.3	VE0G221MF3R	VG221
330	102	6.3 x 7.7	VE0G331MMR	VG331
470	150	6.3 x 7.7	VE0G471MMR	VG471
6.3 Volt				
22	31	4.0 x 5.3	VE0J220MF1R	VJ220
33	39	5.0 x 5.3	VE0J330MF2R	VJ330
47	47	5.0 x 5.3	VE0J470MF2R	VJ470
100	71	6.3 x 5.3	VE0J101MF3R	VJ101
220	95	6.3 x 7.7	VE0J221MMR	VJ221
220	155	8.0 x 6.5	VE0J221MG2R	VJ229
330	150	6.3 x 7.7	VE0J331MMR	VJ331
330	155	8.0 x 6.5	VE0J331MG2R	VJ339
470	300	8.0 x 10.0	VE0J471MF4R	VJ471
1000	458	10.0 x 10.0	VE0J102MF5R	VJ102
10 Volt				
10	23	4.0 x 5.3	VE1A100MF1R	VA100
22	35	5.0 x 5.3	VE1A220MF2R	VA220
33	43	5.0 x 5.3	VE1A330MF2R	VA330
47	59	6.3 x 5.3	VE1A470MF3R	VA470
100	76	6.3 x 5.3	VE1A101MF3R	VA101
220	150	6.3 x 7.7	VE1A221MMR	VA221
220	155	8.0 x 6.5	VE1A221MG2R	VA229
330	280	8.0 x 10.0	VE1A331MF4R	VA331
470	360	8.0 x 10.0	VE1A471MF4R	VA471
16 Volt				
10	18	3.0 x 5.3	VE1C100MG1R	VC109
10	25	4.0 x 5.3	VE1C100MF1R	VC100
22	39	5.0 x 5.3	VE1C220MF2R	VC220
33	57	6.3 x 5.3	VE1C330MF3R	VC330
47	68	6.3 x 5.3	VE1C470MF3R	VC470
100	86	6.3 x 5.3	VE1C101MF3R	VC101
220	150	6.3 x 7.7	VE1C221MMR	VC221
330	280	8.0 x 10.0	VE1C331MF4R	VC331
470	458	10.0 x 10.0	VE1C471MF5R	VC471
25 Volt				
4.7	11	3.0 x 5.3	VE1E4R7MG1R	VE478
4.7	19	4.0 x 5.3	VE1E4R7MF1R	VE4R7
10	28	5.0 x 5.3	VE1E100MF2R	VE100
22	52	6.3 x 5.3	VE1E220MF3R	VE220
33	63	6.3 x 5.3	VE1E330MF3R	VE330
47	68	6.3 x 5.3	VE1E470MF3R	VE470
100	130	6.3 x 7.7	VE1E101MMR	VE101
100	155	8.0 x 6.5	VE1E101MG2R	VE109
220	250	8.0 x 10.0	VE1E221MF4R	VE221
330	458	10.0 x 10.0	VE1E331MF5R	VE331
35 Volt				
2.2	8	3.0 x 5.3	VE1V2R2MG1R	VX2R2
3.3	9	3.0 x 5.3	VE1V3R3MG1R	VX3R3
4.7	20	4.0 x 5.3	VE1V4R7MF1R	VX4R7
10	30	5.0 x 5.3	VE1V100MF2R	VX100
22	54	6.3 x 5.3	VE1V220MF3R	VX220
33	60	6.3 x 5.3	VE1V330MF3R	VX330
47	70	6.3 x 5.3	VE1V470MF3R	VX470
47	155	8.0 x 6.5	VE1V470MG2R	VX479
100	252	8.0 x 10.0	VE1V101MF4R	VX109
220	458	10.0 x 10.0	VE1V221MF5R	VX221

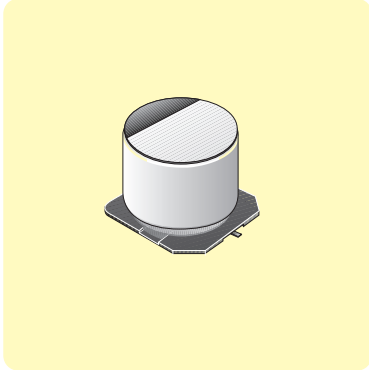
Value (µF)	Ripple Current (mA)	Case Size Dia. x L	Manf. Part No.	anglia Order Code
50 Volt				
0.1	1	3.0 x 5.3	VE1H0R1MG1R	VH018
0.1	1	4.0 x 5.3	VE1H0R1MF1R	VH0R1
0.22	2	3.0 x 5.3	VE1HR22MG1R	VH228
0.22	2.3	4.0 x 5.3	VE1HR22MF1R	VHR22
0.33	3	3.0 x 5.3	VE1HR33MG1R	VH338
0.33	3.5	4.0 x 5.3	VE1HR33MF1R	VHR33
0.47	4	3.0 x 5.3	VE1HR47MG1R	VH478
0.47	5	4.0 x 5.3	VE1HR47MF1R	VHR47
1.0	6	3.0 x 5.3	VE1H1R0MG1R	VH108
1.0	10	4.0 x 5.3	VE1H1R0MF1R	VH1R0
2.2	15	4.0 x 5.3	VE1H2R2MF1R	VH2R2
3.3	18	4.0 x 5.3	VE1H3R3MF1R	VH3R3
4.7	23	5.0 x 5.3	VE1H4R7MF2R	VH4R7
10	34	6.3 x 5.3	VE1H100MF3R	VH100
22	45	6.3 x 5.3	VE1H220MF3R	VH220
33	85	6.3 x 7.7	VE1H330MMR	VH330
33	155	8.0 x 6.5	VE1H330MG2R	VH339
47	90	6.3 x 7.7	VE1H470MMR	VH470
100	200	8.0 x 10.0	VE1H101MF4R	VH101
63 Volt				
22	139	8.0 x 10.0	VE1J220MF4R	VF220
33	139	8.0 x 10.0	VE1J330MF4R	VF330
47	226	10.0 x 10.0	VE1J470MF5R	VF470
100 Volt				
10	94	8.0 x 10.0	VE2A100MF4R	VT100
22	189	10.0 x 10.0	VE2A220MF5R	VT220
33	189	10.0 x 10.0	VE2A330MF5R	VT330

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PANASONIC type VS



Surface mount, aluminium electrolytic capacitors giving an excellent operational specification within a small package and designed for general purpose use. The VS series offers long life with an endurance test of 2000 hours at 85°C and available in a wide range of values and voltages, which are listed on the opposite page. Supplied taped and reeled.



- ◆ **Standard range**
- ◆ **Endurance** **2000 hours at 85°C**
- ◆ **Excellent performance/size characteristics**
- ◆ **Suitable for reflow soldering**
- ◆ **Capacitance tolerance** **20%**
- ◆ **Leakage current** **≤0.01CV**
- ◆ **Supplied taped & reeled**

Specification

Endurance test 2000 hours at 85°C
 Capacitance tolerance ±20% at 120Hz, 20°C
 Ripple current (as listed) measured at 120Hz, 85°C
 Tan δ max. (as listed) measured at 120Hz, 20°C
 Operating temperature range -40°C to +85°C
 Leakage current ≤0.01CV or 3µA
 (whichever is greater) after 2 min.

Marking

Capacitance value
 Voltage + series code letter
 Bar to indicate negative terminal

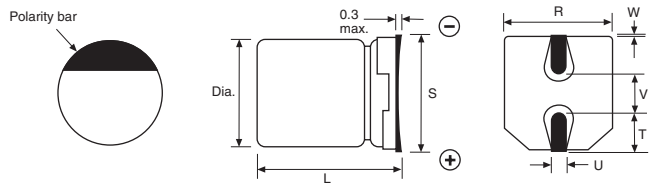
Packaging

TAPE :

Case Size	Width mm	Pitch mm
A	12.0	8.0
B	12.0	8.0
C	12.0	12.0
D	16.0	12.0
D8	16.0	12.0
E	16.0	12.0
F	24.0	16.0
G	24.0	16.0

REEL : 380mm dia.

Dimensions (mm)



Case Size	Dia.	L	R	S	T	U	V	W
A	3.0	5.4	3.3	4.5 max.	1.5	0.55	0.6	0.35
B	4.0	5.4	4.3	5.5 max.	1.8	0.65	1.0	0.35
C	5.0	5.4	5.3	6.5 max.	2.2	0.65	1.5	0.35
D	6.3	5.4	6.6	7.8 max.	2.6	0.65	1.8	0.35
D8	6.3	7.7	6.6	7.8 max.	2.6	0.65	1.8	0.35
E	8.0	6.2	8.3	9.5 max.	3.4	0.65	2.2	0.35
F	8.0	10.2	8.3	10.0 max.	3.4	0.9	3.1	0.7
G	10.0	10.2	10.3	12.0 max.	3.5	0.9	4.6	0.7

Panasonic

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PANASONIC type VS

Value (µF)	Ripple Current (mA)	Tan δ	Case Size	Manf. Part No. & anglia Order Code	Value (µF)	Ripple Current (mA)	Tan δ	Case Size	Manf. Part No. & anglia Order Code
4 Volt					35 Volt				
22	19	0.37	A	EEE0GS220SR	2.2	8.4	0.14	A	EEE1VS2R2SR
33	28	0.35	B	EEE0GA330SR	3.3	10	0.14	A	EEE1VS3R3SR
47	34	0.35	B	EEE0GA470SR	4.7	24	0.12	B	EEE1VA4R7SR
100	61	0.35	C	EEE0GA101SR	10	22	0.16	B	EEE1VA100WR
220	96	0.35	D	EEE0GA221SP	10	30	0.12	C	EEE1VA100SR
330	80	0.50	D	EEE0GA331WP	22	39	0.16	C	EEE1VA220WR
470	200	0.35	D8	EEE0GA471XP	22	60	0.12	D	EEE1VA220SP
6.3 Volt					50 Volt				
22	21	0.35	A	EEE0JA220WR	0.1	1	0.14	A	EEE1HS0R1SR
22	29	0.26	B	EEE0JA220SR	0.1	1	0.12	B	EEE1HA0R1SR
33	34	0.35	B	EEE0JA330WR	0.22	2	0.14	A	EEE1HSR22SR
47	40	0.35	B	EEE0JA470WR	0.22	2	0.12	B	EEE1HAR22SR
47	46	0.26	C	EEE0JA470SR	0.33	3	0.14	A	EEE1HSR33SR
100	47	0.35	C	EEE0JA101WR	0.33	3	0.12	B	EEE1HAR33SR
100	71	0.26	D	EEE0JA101SP	0.47	5	0.14	A	EEE1HSR47SR
220	74	0.35	D	EEE0JA221WP	0.47	5	0.12	B	EEE1HAR47SR
330	188	0.26	D8	EEE0JA331XP	1.0	8	0.14	A	EEE1HS010SR
330	300	0.35	E	EEE0JA331P	1.0	10	0.12	B	EEE1HA010SR
470	380	0.35	F	EEE0JA471P	2.2	16	0.12	B	EEE1HA2R2SR
1000	500	0.35	F	EEE0JA102UP	3.3	17	0.12	B	EEE1HA3R3SR
1000	700	0.35	G	EEE0JA102P	4.7	18	0.14	B	EEE1HA4R7WR
1500	750	0.35	G	EEE0JA152P	4.7	23	0.12	C	EEE1HA4R7SR
10 Volt					63 Volt				
22	30	0.30	B	EEE1AA220WR	22	43	0.14	D	EEE1HA220WP
33	34	0.30	B	EEE1AA330WR	22	65	0.12	E	EEE1HA220P
33	43	0.20	C	EEE1AA330SR	33	110	0.12	E	EEE1HA330UP
47	47	0.30	C	EEE1AA470WR	33	110	0.12	F	EEE1HA330P
100	54	0.30	C	EEE1AA101WR	47	105	0.12	D8	EEE1HA470XP
100	76	0.26	D	EEE1AA101SP	47	110	0.12	F	EEE1HA470UP
220	173	0.20	D8	EEE1AA221XP	47	130	0.12	G	EEE1HA470P
220	250	0.26	E	EEE1AA221P	100	200	0.12	F	EEE1HA101UP
330	330	0.26	F	EEE1AA331P	100	250	0.12	G	EEE1HA101P
470	330	0.26	F	EEE1AA471UP	220	300	0.12	G	EEE1HA221P
470	400	0.26	G	EEE1AA471P	100 Volt				
1000	580	0.26	G	EEE1AA102P	3.3	50	0.18	E	EEE2AA3R3P
16 Volt					100 Volt				
10	20	0.18	A	EEE1CS100SR	4.7	80	0.18	F	EEE2AA4R7P
10	28	0.16	B	EEE1CA100SR	10	85	0.18	F	EEE2AA100P
22	30	0.26	B	EEE1CA220WR	22	85	0.18	G	EEE2AA220P
22	39	0.16	C	EEE1CA220SR	33	90	0.18	G	EEE2AA330P
33	44	0.26	C	EEE1CA330WR					
47	52	0.26	C	EEE1CA470WR					
47	70	0.16	D	EEE1CA470SP					
100	86	0.26	D	EEE1CA101WP					
100	200	0.20	E	EEE1CA101P					
220	162	0.16	D8	EEE1CA221XP					
220	280	0.20	F	EEE1CA221P					
330	320	0.20	F	EEE1CA331UP					
330	380	0.20	G	EEE1CA331P					
470	350	0.20	F	EEE1CA471UP					
470	420	0.20	G	EEE1CA471P					
25 Volt									
4.7	12	0.16	A	EEE1ES4R7SR					
4.7	22	0.14	B	EEE1EA4R7SR					
10	24	0.20	B	EEE1EA100WR					
10	28	0.14	C	EEE1EA100SR					
22	38	0.20	C	EEE1EA220WR					
22	55	0.14	D	EEE1EA220SP					
33	46	0.20	C	EEE1EA330WR					
33	65	0.14	D	EEE1EA330SP					
47	70	0.20	D	EEE1EA470WP					
100	143	0.14	D8	EEE1EA101XP					
100	91	0.16	E	EEE1EA101UP					
100	180	0.16	F	EEE1EA101P					
220	230	0.16	F	EEE1EA221UP					
220	310	0.16	G	EEE1EA221P					
330	270	0.16	F	EEE1EA331UP					
330	340	0.16	G	EEE1EA331P					
470	380	0.16	G	EEE1EA471P					