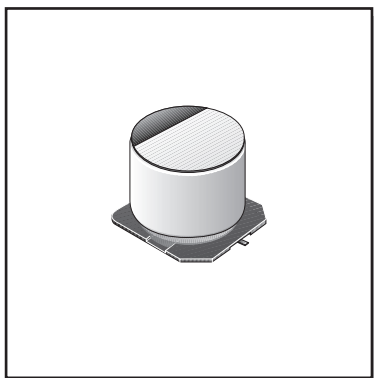


NOVER type VE



Surface mount, aluminium electrolytic capacitors giving an excellent operational specification within a small package and designed for general purpose use. The VE series 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 wave & 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
All case sizes	0.35	0.26	0.20	0.16	0.14	0.12	0.12

Marking

Printed on top surface of case, except case sizes 8.0 x 10.0 and 10.0 x 10.0 which are printed on a case sleeve around the body.

Capacitance value

Voltage

Bar to indicate negative terminal

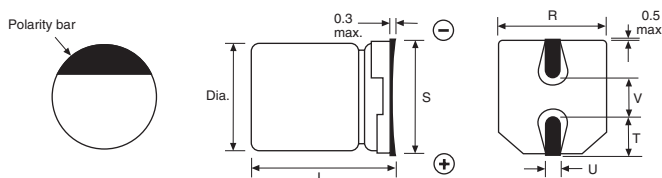
Packaging

TAPE :

Case Size	Width mm	Pitch mm
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 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
4.0 x 5.3	4.0	5.3 ± 0.2	4.3	5.5 max.	1.8	0.65	1.0
5.0 x 5.3	5.0	5.3 ± 0.2	5.3	6.5 max.	2.1	0.65	1.3
6.3 x 5.3	6.3	5.3 ± 0.2	6.6	7.8 max.	2.4	0.65	2.2
6.3 x 7.7	6.3	7.7 ± 0.3	6.6	7.8 max.	2.4	0.65	2.2
8.0 x 10.0	8.0	10.0 ± 0.5	8.4	10.0 max.	3.3	0.9	3.1
10.0 x 10.0	10.0	10.0 ± 0.5	10.4	13.0 max.	3.3	0.9	4.5



For the very latest information and product news
 on the full range of Nover products,
 refer to the Nover website:

www.nover.com

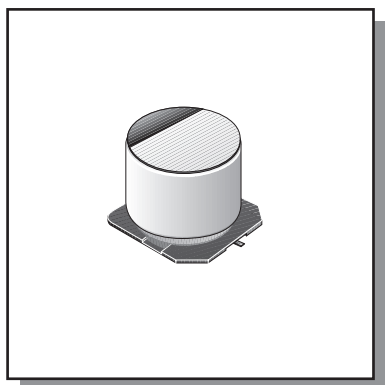
NOVER type VE

Value (µF)	Ripple Current (mA)	Case Size Dia. x L	Manf. Part No.	Anglia Order Code
4 Volt				
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
330	150	6.3 x 7.7	VE0J331MMR	VJ331
470	300	8.0 x 10.0	VE0J471MF4R	VJ471
1000	330	10.0 x 10.0	VE0J102MF5R	VJ102
10 Volt				
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
330	280	8.0 x 10.0	VE1A331MF4R	VA331
470	300	8.0 x 10.0	VE1A471MF4R	VA471
16 Volt				
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	330	10.0 x 10.0	VE1C471MF5R	VC471
25 Volt				
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
220	250	8.0 x 10.0	VE1E221MF4R	VE221
330	310	8.0 x 10.0	VE1E331MF4R	VE331
35 Volt				
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
100	120	6.3 x 7.7	VE1V101MMR	VX101
220	270	10.0 x 10.0	VE1V221MF5R	VX221
50 Volt				
0.1	1	4.0 x 5.3	VE1H0R1MF1R	VH0R1
0.22	2.3	4.0 x 5.3	VE1HR22MF1R	VHR22
0.33	3.5	4.0 x 5.3	VE1HR33MF1R	VHR33
0.47	5	4.0 x 5.3	VE1HR47MF1R	VHR47
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
47	90	6.3 x 7.7	VE1H470MMR	VH470
100	200	8.0 x 10.0	VE1H101MF4R	VH101

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.


NEW

- ◆ **Standard range**
- ◆ **Endurance** **2000 hours at 85°C**
- ◆ Excellent performance/size characteristics
- ◆ Suitable for wave & 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 A	0.37	0.28	—	0.18	0.16	0.14	0.14	—	—
Case size B, C, D	0.35	0.26	0.20	0.16	0.14	0.12	0.12	—	—
Case size E, F, G	—	0.35	0.30	0.26	0.16	0.14	0.12	0.18	0.18

Marking

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

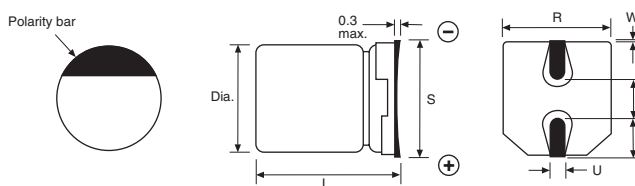
Packaging

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
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.	2.4	0.65	2.2	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	3.2	0.7
G	10.0	10.2	10.3	12.0 max.	3.5	0.9	4.6	0.7

Panasonic

For the very latest information on the full range of Panasonic products available from Anglia refer to our Panasonic technical guide, available upon request.

Alternatively the guide may be viewed or downloaded from the Anglia website:

www.angliac.co.uk

PANASONIC type VS

Value (μ F)	Ripple Current (mA)	Case Size	Manf. Part No. & Anglia Order Code
4 Volt			
22	19	A	ECEV0GS220SR
33	26	B	ECEV0GA330SR
47	34	B	ECEV0GA470SR
100	61	C	ECEV0GA101SR
220	82	D	ECEV0GA221SP
330	80	D	ECEV0GA331WP
6.3 Volt			
22	20	A	ECEV0JA220WR
22	29	B	ECEV0JA220SR
33	29	B	ECEV0JA330WR
47	36	B	ECEV0JA470WR
47	46	C	ECEV0JA470SR
100	47	C	ECEV0JA101WR
100	71	D	ECEV0JA101SP
220	74	D	ECEV0JA221WP
330	300	E	ECEV0JA331P
470	380	F	ECEV0JA471P
1000	500	F	ECEV0JA102UP
1000	700	G	ECEV0JA102P
1500	700	G	ECEV0JA152P
10 Volt			
22	28	B	ECEV1AA220WR
33	29	B	ECEV1AA330WR
33	43	C	ECEV1AA330SR
47	43	C	ECEV1AA470WR
100	50	C	ECEV1AA101WR
100	70	D	ECEV1AA101SP
220	250	E	ECEV1AA221P
330	330	F	ECEV1AA331P
470	330	F	ECEV1AA471UP
470	400	G	ECEV1AA471P
1000	580	G	ECEV1AA102P
16 Volt			
10	20	A	ECEV1CS100SR
10	28	B	ECEV1CA100SR
22	28	B	ECEV1CA220WR
22	39	C	ECEV1CA220SR
33	35	C	ECEV1CA330WR
47	39	C	ECEV1CA470WR
47	70	D	ECEV1CA470SP
100	70	D	ECEV1CA101WP
100	200	E	ECEV1CA101P
220	280	F	ECEV1CA221P
330	320	F	ECEV1CA331UP
330	380	G	ECEV1CA331P
470	320	F	ECEV1CA471UP
470	420	G	ECEV1CA471P
25 Volt			
4.7	12	A	ECEV1ES4R7SR
4.7	22	B	ECEV1EA4R7SR
10	22	B	ECEV1EA100WR
10	28	C	ECEV1EA100SR
22	35	C	ECEV1EA220WR
22	55	D	ECEV1EA220SP
33	42	C	ECEV1EA330WR
33	65	D	ECEV1EA330SP
47	70	D	ECEV1EA470WP
100	91	E	ECEV1EA101UP
100	180	F	ECEV1EA101P
220	140	F	ECEV1EA221UP
220	310	G	ECEV1EA221P
330	150	F	ECEV1EA331UP
330	340	G	ECEV1EA331P
470	360	G	ECEV1EA471P

Value (μ F)	Ripple Current (mA)	Case Size	Manf. Part No. & Anglia Order Code
35 Volt			
2.2	8	A	ECEV1VS2R2SR
3.3	10	A	ECEV1VS3R3SR
4.7	22	B	ECEV1VA4R7SR
10	22	B	ECEV1VA100WR
10	30	C	ECEV1VA100SR
22	36	C	ECEV1VA220WR
22	60	D	ECEV1VA220SP
33	60	D	ECEV1VA330WP
33	130	E	ECEV1VA330P
47	70	D	ECEV1VA470WP
47	165	E	ECEV1VA470P
100	140	F	ECEV1VA101UP
100	210	G	ECEV1VA101P
220	200	F	ECEV1VA221UP
220	310	G	ECEV1VA221P
330	320	G	ECEV1VA331P
50 Volt			
0.1	1	A	ECEV1HS0R1SR
0.1	1	B	ECEV1HA0R1SR
0.22	2	A	ECEV1HSR22SR
0.22	2	B	ECEV1HAR22SR
0.33	3	A	ECEV1HSR33SR
0.33	3	B	ECEV1HAR33SR
0.47	5	A	ECEV1HSR47SR
0.47	5	B	ECEV1HAR47SR
1.0	8	A	ECEV1HS010SR
1.0	10	B	ECEV1HA010SR
2.2	16	B	ECEV1HA2R2SR
3.3	16	B	ECEV1HA3R3SR
4.7	18	B	ECEV1HA4R7WR
4.7	23	C	ECEV1HA4R7SR
10	27	C	ECEV1HA100WR
10	35	D	ECEV1HA100SP
22	60	D	ECEV1HA220WP
22	120	E	ECEV1HA220P
33	130	E	ECEV1HA330UP
33	140	F	ECEV1HA330P
47	150	F	ECEV1HA470UP
47	160	G	ECEV1HA470P
100	200	F	ECEV1HA101UP
100	250	G	ECEV1HA101P
220	300	G	ECEV1HA221P
63 Volt			
22	40	F	ECEV1JA220P
33	45	F	ECEV1JA330P
37	45	F	ECEV1JA470P
100	60	G	ECEV1JA101P
100 Volt			
3.3	50	E	ECEV2AA3R3P
4.7	80	F	ECEV2AA4R7P
10	85	F	ECEV2AA100P
22	90	G	ECEV2AA220P
33	90	G	ECEV2AA330P