



SMD Transient Voltage Suppressors

Surface Mount Multi layer 0402,0603 C Type Performance

SFI Model Number	Working Voltage (MAX)		Breakdown Voltage	Peak Current (MAX)	Clamping Voltage (MAX)		Energy Absorption (MAX)	Typical Capacitance
	AC (V _{RMS})	DC (V)			(A)	(V)		
Unit Condition			1mA (V)	8/20 μ s (A)			10/1000 μ s (J)	1KHz (pF)
VTS3.3MLC0402	2.5	3.3	5(4.0~6.0)	20	1	10	0.05	390
VTS5.5 MLC0402	4	5.5	8(6.4~9.6)	20	1	16	0.05	295
VTS9 MLC0402	6	9	12(9.6~14.4)	20	1	20	0.05	190
VTS11 MLC0402	8	11	15(12.75~17.25)	20	1	25	0.05	160
VTS14 MLC0402	11	14	18(15.3~20.7)	20	1	30	0.05	135
VTS16.5 MLC0402	12	16.5	22(19.8~24.2)	20	1	36	0.05	105
VTS18 MLC0402	14	18	24(21.6~27)	20	1	40	0.05	93
VTS22 MLC0402	17	22	27(24.3~29.8)	20	1	45	0.05	75
VTS26 MLC0402	20	26	33(29.7~36.3)	20	1	54	0.05	54
VTS30 MLC0402	25	30	39(35.1~42.9)	20	1	65	0.05	45
VTS38 MLC0402	30	38	47(42.3~51.7)	20	1	77	0.05	27
VTS3.3 MLC0603	2.5	3.3	5(4.0~6.0)	30	1	10	0.1	1250
VTS5.5 MLC0603	4	5.5	8(6.4~9.6)	30	1	16	0.1	800
VTS9 MLC0603	6	9	12(9.6~14.4)	30	1	20	0.1	680
VTS11 MLC0603	8	11	15(12.75~17.25)	30	1	25	0.1	460
VTS14 MLC0603	11	14	18(15.3~20.7)	30	1	30	0.1	350
VTS16.5 MLC0603	12	16.5	22(19.8~24.2)	30	1	36	0.1	300
VTS18 MLC0603	14	18	24(21.6~27)	30	1	39	0.1	270
VTS22 MLC0603	17	22	27(24.3~29.8)	30	1	44	0.1	235
VTS26 MLC0603	20	26	33(29.7~36.3)	30	1	54	0.1	200
VTS30 MLC0603	25	30	39(35.1~42.9)	30	1	65	0.1	120
VTS38 MLC0603	30	38	47(42.3~51.7)	30	1	77	0.1	100
VTS45 MLC0603	35	45	56(50.4~61.6)	30	1	90	0.1	80



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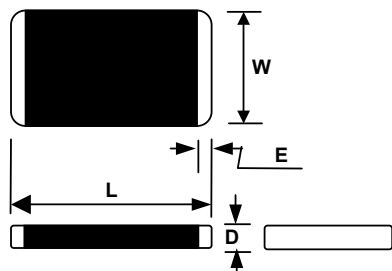
Surface Mount Multi layer 0805, 1206 C Type Performance

SFI Model Number	Working Voltage (MAX)		Breakdown Voltage	Peak Current (MAX)	Clamping Voltage (MAX)		Energy Absorption (MAX)	Typical Capacitance
	AC (V _{RMS})	DC (V)			(A)	(V)		
Unit Condition			1mA (V)	8/20 μ s (A)			10/1000 μ s (J)	1KHz (pF)
VTS3.3 MLC0805	2.5	3.3	5(4.0~6.0)	40	1	10	0.1	2450
VTS5.5 MLC0805	4	5.5	8(6.4~9.6)	80	1	16	0.1	1600
VTS8 MLC0805	6	8	12(9.6~14.4)	80	1	20	0.1	1180
VTS9 MLC0805	6	9	12(9.6~14.4)	80	1	20	0.1	1180
VTS11 MLC0805	8	11	15(12.75~17.25)	100	1	25	0.1	1050
VTS14 MLC0805	11	14	18(15.3~20.7)	100	1	30	0.1	750
VTS16.5 MLC0805	12	16.5	22(19.8~24.2)	100	1	36	0.2	680
VTS18 MLC0805	14	18	24(21.6~27)	100	1	39	0.2	550
VTS22 MLC0805	17	22	27(24.3~29.8)	100	1	44	0.2	400
VTS26 MLC0805	20	26	33(29.7~36.3)	100	1	54	0.3	350
VTS30 MLC0805	25	30	39(35.1~42.9)	100	1	65	0.3	310
VTS38 MLC0805	30	38	47(42.3~51.7)	100	1	77	0.3	280
VTS45 MLC0805	35	45	56(50.4~61.6)	80	1	90	0.3	195
VTS56 MLC0805	40	56	68(61.2~74.8)	80	1	110	0.3	145
VTS65 MLC0805	50	65	82(73.8~90.2)	60	1	135	0.3	85
VTS3.3 MLC1206		3.3	5(4.0~6.0)	60	1	10	0.1	3850
VTS5.5 MLC1206	4	5.5	8(6.4~9.6)	100	1	16	0.2	3200
VTS9 MLC1206	6	9	12(9.6~14.4)	100	1	20	0.2	2200
VTS11 MLC1206	8	11	15(12.75~17.25)	100	1	25	0.2	1300
VTS14 MLC1206	11	14	18(15.3~20.7)	100	1	30	0.3	1150
VTS16.5 MLC1206	12	16.5	22(19.8~24.2)	100	1	36	0.3	1000
VTS18 MLC1206	14	18	24(21.6~27)	100	1	38	0.3	900
VTS22 MLC1206	17	22	27(24.3~29.8)	100	1	44	0.4	840
VTS26 MLC1206	20	26	33(29.7~36.3)	100	1	54	0.5	490
VTS30 MLC1206	25	30	39(35.1~42.9)	100	1	65	0.6	440
VTS38 MLC1206	30	38	47(42.3~51.7)	100	1	77	0.7	400
VTS45 MLC1206	35	45	56(50.4~61.6)	100	1	90	0.8	310
VTS56 MLC1206	40	56	68(61.2~74.8)	100	1	110	1.0	280
VTS65 MLC1206	50	65	82(73.8~90.2)	100	1	135	0.5	240
VTS85 MLC1206	60	85	100(90~110)	100	1	165	0.6	160
VTS90 MLC1206	70	90	110(99~121)	100	1	180	0.6	120

Surface Mount Multi layer 1210,1812 C Type Performance

SFI Model Number	Working Voltage (MAX)		Breakdown Voltage	Peak Current (MAX)	Clamping Voltage (MAX)		Energy Absorption (MAX)	Typical Capacitance
	AC (V _{RMS})	DC (V)			(A)	(V)		
Unit Condition			1mA (V)	8/20 μ s (A)			10/1000 μ s (J)	1KHz (pF)
VTS5.5 MLC1210	4	5.5	8(6.4~9.6)	250	2.5	16	0.4	6200
VTS9 MLC1210	6	9	12(9.6~14.4)	250	2.5	20	0.5	4400
VTS11 MLC1210	8	11	15(12.75~17.25)	250	2.5	25	0.6	3520
VTS14 MLC1210	11	14	18(15.3~20.7)	250	2.5	30	0.7	3260
VTS16.5 MLC1210	12	16.5	22(19.8~24.2)	250	2.5	36	0.8	2100
VTS18 MLC1210	14	18	24(21.6~27)	250	2.5	38	0.8	1950
VTS22 MLC1210	17	22	27(24.3~29.8)	250	2.5	44	1.0	1720
VTS26 MLC1210	20	26	33(29.7~36.3)	250	2.5	54	1.2	1090
VTS30 MLC1210	25	30	39(35.1~42.9)	250	2.5	65	1.4	920
VTS38 MLC1210	30	38	47(42.3~51.7)	250	2.5	77	1.6	780
VTS45 MLC1210	35	45	56(50.4~61.6)	250	2.5	90	2.0	470
VTS56 MLC1210	40	56	68(61.2~74.8)	250	2.5	110	2.3	390
VTS65 MLC1210	50	65	82(73.8~90.2)	250	2.5	135	1.2	320
VTS85 MLC1210	60	85	100(90~110)	200	2.5	165	1.4	220
VTS90 MLC1210	70	90	110(99~121)	200	2.5	180	1.4	200
VTS9 MLC1812	6	9	12(9.6~14.4)	500	5	20	0.9	9150
VTS11 MLC1812	8	11	15(12.75~17.25)	500	5	25	1.2	7320
VTS14 MLC1812	11	14	18(15.3~20.7)	500	5	30	1.4	6100
VTS16.5 MLC1812	12	16.5	22(19.8~24.2)	500	5	36	1.6	4300
VTS18 MLC1812	14	18	24(21.6~27)	500	5	38	1.7	3930
VTS22 MLC1812	17	22	27(24.3~29.8)	500	5	44	2.0	3500
VTS26 MLC1812	20	26	33(29.7~36.3)	500	5	54	2.5	2900
VTS30 MLC1812	25	30	39(35.1~42.9)	500	5	65	2.9	2500
VTS38 MLC1812	30	38	47(42.3~51.7)	500	5	77	3.5	2200
VTS45 MLC1812	35	45	56(50.4~61.6)	500	5	90	4.2	1950
VTS56 MLC1812	40	56	68(61.2~74.8)	500	5	110	4.8	1650
VTS65 MLC1812	50	65	82(73.8~90.2)	400	5	135	4.5	1060
VTS85 MLC1812	60	85	100(90~110)	400	5	165	5.8	870
VTS90 MLC1812	70	90	110(99~121)	400	5	180	5.8	790
VTS127 MLC1812	95	127	150(135~165)	300	5	248	5.8	420

SFI Model Number	Working Voltage (MAX)		Breakdown Voltage	Peak Current (MAX)	Clamping Voltage (MAX)		Energy Absorption (MAX)	Typical Capacitance
	AC (V _{RMS})	DC (V)			(A)	(V)		
VTS9 MLC2220	6	9	12(9.6~14.4)	1000	10	20	1.9	36500
VTS11 MLC2220	8	11	15(12.75~17.25)	1000	10	25	2.3	18400
VTS14 MLC2220	11	14	18(15.3~20.7)	1000	10	30	2.7	15300
VTS16.5 MLC2220	12	16.5	22(19.8~24.2)	1000	10	36	2.9	12500
VTS18 MLC2220	14	18	24(21.6~27)	1000	10	38	3.1	11800
VTS22 MLC2220	17	22	27(24.3~29.8)	1000	10	44	3.8	10400
VTS26 MLC2220	20	26	33(29.7~36.3)	1000	10	54	4.3	8900
VTS30 MLC2220	25	30	39(35.1~42.9)	1000	10	65	5.5	7500
VTS38 MLC2220	30	38	47(42.3~51.7)	1000	10	77	6.3	4600
VTS45 MLC2220	35	45	56(50.4~61.6)	1000	10	90	7.7	4000
VTS56 MLC2220	40	56	68(61.2~74.8)	1000	10	110	8.8	3500
VTS65 MLC2220	50	65	82(73.8~90.2)	800	10	135	5.6	2850
VTS85 MLC2220	60	85	100(90~110)	800	10	165	6.8	1800
VTS90 MLC2220	70	90	110(99~121)	800	10	180	6.8	1500



Type	L mm	W Mm	D mm	E mm
0402	1.0 ± 0.10	0.5 ± 0.10	0.6 max	0.25+0.1/-0.1
0603	1.6 ± 0.15	0.8 ± 0.10	0.9 max	0.3+0.1/-0.1
0805	2.0 ± 0.20	1.25 ± 0.15	1.2max	0.3+0.1/-0.1
1206	3.2 ± 0.20	1.6 ± 0.15	1.5 max.	0.5 +0.2/-0.2
1210	3.2 ± 0.20	2.5 ± 0.20	1.5 max.	0.5 +0.2/-0.2
1812	4.5 ± 0.20	3.2 ± 0.20	2.0 max.	0.5 +0.3/-0.1
2220	5.7 ± 0.20	5.0 ± 0.20	2.5 max.	0.5 +0.3/-0.1

NOTES :

4. Tolerance of breakdown Voltage : 5~8V=±20%, 12~15V=±15%;18V~110V=±10%
5. Tolerance of capacitance Voltage : ±20
6. Typical leakage at 25°C < 50 μA, maximum leakage 100 μA.
5. In order to satisfy the applications of customer in various fields, the capacitance range can be designed during manufacturing according to the request, please contact our sales department if needed.