



# 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 <sub>RMS</sub> )	DC (V)			(A)	(V)		
<b>Unit Condition</b>			1mA (V)	8/20 $\mu$ s (A)	(A)	(V)	10/1000 $\mu$ 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





# SMD Transient Voltage Suppressors

## Surface Mount Multi layer 1210,1812 C Type Performance

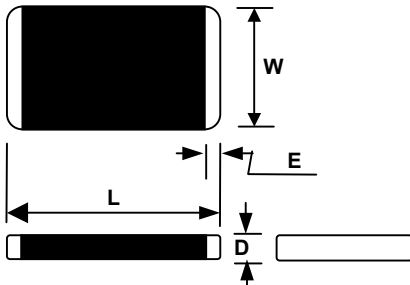
SFI Model Number	Working Voltage (MAX)		Breakdown Voltage	Peak Current (MAX)	Clamping Voltage (MAX)		Energy Absorption (MAX)	Typical Capacitance
	AC (V <sub>RMS</sub> )	DC (V)			(A)	(V)		
Unit Condition			1mA (V)	8/20μs (A)			10/1000μs (J)	1KHz (pF)
VTS5.5 MLC1210	4	5.5	8(6.4~9.6)	250	2.5	16	0.4	6200
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



# SMD Transient Voltage Suppressors

## Surface Mount Multi Layer 2220 C Type Performance

SFI Model Number	Working Voltage (MAX)		Breakdown Voltage	Peak Current (MAX)	Clamping Voltage (MAX)		Energy Absorption (MAX)	Typical Capacitance
	AC (V <sub>RMS</sub> )	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 :

- Tolerance of breakdown Voltage : 5~8V=±20%, 12~15V=±15%;18V~110V=±10%
- Tolerance of capacitance Voltage : ±20
- Typical leakage at 25°C < 50 μA, maximum leakage 100 μA.
- 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.