F2TVS5.0A thru F2TVS190A

Surface Mount Transient Voltage Suppressors

Peak Pulse Power 200W Stand-off Voltage 5.0 to 190V

Features

- Glass passivated junction
- Excellent clamping capability and Fast response time
- 200W peak pulse power capability with a 10/1000us waveform
- Moisture sensitivity: level 1, per J-STD-020
- Solder dip 260 °C, 10 s
- Low profile， typical thickness 1.0mm
- Unidirectional configurations

RoHS COMPLIANT



eSGA

Typical Applications

Use in sensitive electronics protection against voltage transients induced by inductive load switching and lighting on Ics,MOSFET,signal lines of sensor units for consumer,computer,industrial and telecommunication

Maximum Ratings and Thermal Characteristics

(TA = 25 °C unless otherwise noted)

PARAMETER	SYMBOL	Value	UNIT
Peak power dissipation with a 10/1000us waveform	P_{PPM}	Minimum 200	W
Peak pulse current with a 10/1000us waveform	I_{PPM}	See Next Table	A
Steady state power dissipation on infinite heatsink	$P_{M(AV)}$	1	W
Peak forward surge current,8.3ms single half sine-wave	I_{FSM}	30.0	A
Maximum instantaneous forward voltage at 25A	V_F	3.5	V
Thermal resistance junction to ambient air	Rthja	90	℃/W
Operating junction and storage temperature range	TJ, TSTG	-65 to +175	℃

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Part Number	Reverse Stand-off Voltage	Breakdown Voltage		Test Current	Reverse Leakage	Max. Clamp Voltage	Peak Pulse
	VRWM	VBR @ IT		IT	IR @ VRWM	Vc @ IPP	IPP
		Min	Max				
	V	V	V	mA	μA	V	A
F2TVS5.0A	5	6.4	7.07	10	800	9.2	21.7
F2TVS6.0A	6	6.67	7.37	10	800	10.3	19.4
F2TVS6.5A	6.5	7.22	7.98	10	500	11.2	17.9
F2TVS7.0A	7	7.78	8.6	10	200	12	16.7
F2TVS7.5A	7.5	8.33	9.21	1	100	12.9	15.5
F2TVS8.0A	8	8.89	9.83	1	50	13.6	14.7
F2TVS8.5A	8.5	9.44	10.4	1	10	14.4	13.9
F2TVS9.0A	9	10	11.1	1	5	15.4	13
F2TVS10A	10	11.1	12.3	1	5	17	11.8
F2TVS11A	11	12.2	13.5	1	5	18.2	11
F2TVS12A	12	13.3	14.7	1	5	19.9	10.1
F2TVS13A	13	14.4	15.9	1	5	21.5	9.3
F2TVS14A	14	15.6	17.2	1	5	23.2	8.62
F2TVS15A	15	16.7	18.5	1	5	24.4	8.2
F2TVS16A	16	17.8	19.7	1	5	26	7.69
F2TVS17A	17	18.9	20.9	1	5	27.6	7.25
F2TVS18A	18	20	22.1	1	5	29.2	6.85
F2TVS19A	19	21.1	23.3	1	5	30.6	6.54
F2TVS20A	20	22.2	24.5	1	5	32.4	6.17
F2TVS22A	22	24.4	26.9	1	5	35.5	5.63
F2TVS24A	24	26.7	29.5	1	5	38.9	5.14
F2TVS26A	26	28.9	31.9	1	5	42.1	4.75
F2TVS28A	28	31.1	34.4	1	5	45.4	4.41
F2TVS30A	30	33.3	36.8	1	5	48.4	4.13
F2TVS33A	33	36.7	40.6	1	5	53.3	3.75
F2TVS36A	36	40	44.2	1	5	58.1	3.44
F2TVS40A	40	44.4	49.1	1	5	64.5	3.1
F2TVS43A	43	47.8	52.8	1	5	69.4	2.88
F2TVS45A	45	50	55.3	1	5	72.7	2.75
F2TVS48A	48	53.3	58.9	1	5	77.4	2.58
F2TVS51A	51	56.7	62.7	1	5	82.4	2.43
F2TVS54A	54	60	66.3	1	5	87.1	2.3
F2TVS58A	58	64.4	71.2	1	5	93.6	2.14
F2TVS60A	60	66.7	73.7	1	5	96.8	2.07
F2TVS64A	64	71.1	78.6	1	5	103	1.94
F2TVS70A	70	77.8	86	1	5	113	1.77
F2TVS75A	75	83.3	92.1	1	5	121	1.65

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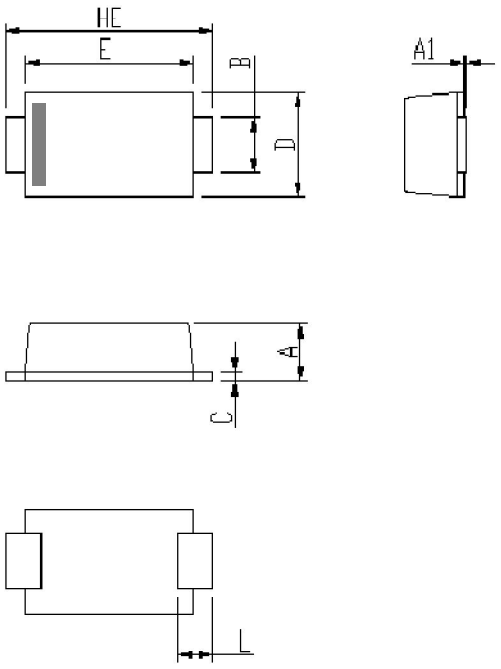
	VRWM	VBR @ IT		IT	IR @ VRWM	Vc @ IPP	IPP
		Min	Max				
	V	V	V	mA	μA	V	A
F2TVS78A	78	86.7	95.8	1	5	126	1.59
F2TVS80A	80	88.8	97.6	1	5	129	1.55
F2TVS85A	85	94.4	104	1	5	137	1.46
F2TVS90A	90	100	111	1	5	146	1.37
F2TVS100A	100	111	123	1	5	162	1.23
F2TVS110A	110	122	135	1	5	177	1.13
F2TVS120A	120	133	147	1	5	193	1.04
F2TVS130A	130	144	159	1	5	209	0.96
F2TVS140A	140	155	171	1	5	224	0.89
F2TVS150A	150	167	185	1	5	243	0.82
F2TVS160A	160	178	197	1	5	259	0.77
F2TVS170A	170	189	209	1	5	275	0.73
F2TVS180A	180	201	222	1	5	292	0.69
F2TVS190A	190	211	232	1	5	324	0.62

PACKAGE OUTLINE DIMENSIONS (in millimeters)



DIM	Unit: mm		Unit: inch	
	MIN	MAX	MIN	MAX
A	0.9	1.08	0.035	0.043
A1	0	0.1	0.000	0.004
B	0.85	1.05	0.033	0.041
C	0.1	0.25	0.004	0.010
D	1.7	2	0.067	0.079
E	2.9	3.1	0.114	0.122
L	0.43	0.83	0.017	0.033
HE	3.5	3.9	0.138	0.154

Soldering footprint

