



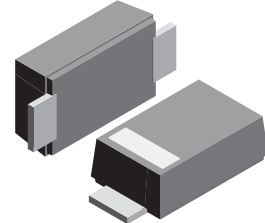
F2TVS5.0A(CA) - F2TVS170A(CA)

SURFACE MOUNT TRANSIENT VOLTAGE SUPPRESSOR DIODE

VOLTAGE RANGE: 5.0 - 170V
POWER: 200Watts

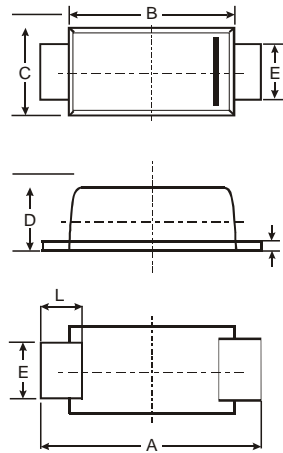
Features

- For surface mounted applications
- Low profile package
- Low incremental surge resistance, excellent clamping capability
- 200W peak pulse power capability with a 10/1000 μ s wave from, repetition rate (duty cycle): 0.01%
- High temperature soldering guaranteed: 260 /10 seconds, at terminals



Mechanical Data

- Case: JEDEC SOD-123FL, molded plastic over passivated chip
- Polarity: Color band denotes positive end (cathode) except for bidirectional
- Mounting position: Any
- Weight: 0.006 ounces, 0.02 gram



SOD-123FL			
Dim	Min	Max	Typ
A	3.50	3.80	3.65
B	2.60	2.90	2.75
C	1.70	1.90	1.80
D	0.09	1.10	1.00
E	0.08	1.10	0.095
H	0.12	0.20	0.16
L	0.07	0.09	0.08

All Dimensions in mm

Maximum Ratings $T_A = 25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	Value	Unit
Maximum P_{PK} Dissipation (PW - 10/1000 μ s)	P_{PK}	200	W
Maximum P_{PK} Dissipation @ $T_a = 25^\circ\text{C}$ (PW - 8/10 μ s) (Note 2)	P_{PK}	1000	W
DC Power Dissipation @ $T_a = 25^\circ\text{C}$ (Note 3)	P_D	385	mW
Derate above 25°C		4.0	mW/ $^\circ\text{C}$
Thermal Resistance, Junction to Ambient (Note 3)	$R_{\theta JA}$	325	$^\circ\text{C}/\text{W}$
Thermal Resistance, Junction to Lead (Note 3)	$R_{\theta JL}$	26	$^\circ\text{C}/\text{W}$
Operating Junction and Storage Temperature Range	T_J, T_{STG}	-55 to +150	$^\circ\text{C}$

Notes :

- (1) Non-repetitive current pulse at $T_a = 25^\circ\text{C}$, per waveform of Fig. 2.
- (2) Non-repetitive current pulse at $T_a = 25^\circ\text{C}$, per waveform of Fig. 5.
- (3) Mounted with recommended minimum pad size, DC board FR4.



TYPE		Reverse Stand-Off Voltage	Breakdown Voltage Min. @I _T	Breakdown Voltage Max. @ I _T	Test Current	Reverse Leakage @V _{RWM}	Maximum Clamping Voltage @I _{PP}	Peak Pulse Current
(Uni)	(Bi)	V _{RWM} (V)	V _{BR MIN} (V)	V _{BR MAX} (V)	I _T (mA)	I _R (uA)	V _C (V)	I _{PP} (A)
F2TVS5.0A	F2TVS5.0CA	5.0	6.40	7.00	10	400	9.2	21.7
F2TVS6.0A	F2TVS6.0CA	6.0	6.67	7.37	10	400	10.3	19.4
F2TVS6.5A	F2TVS6.5CA	6.5	7.22	7.98	10	250	11.2	17.9
F2TVS7.0A	F2TVS7.0CA	7.0	7.78	8.60	10	100	12.0	16.7
F2TVS7.5A	F2TVS7.5CA	7.5	8.33	9.21	1.0	50	12.9	15.5
F2TVS8.0A	F2TVS8.0CA	8.0	8.89	9.83	1.0	25	13.6	14.7
F2TVS8.5A	F2TVS8.5CA	8.5	9.44	10.4	1.0	10	14.4	13.9
F2TVS9.0A	F2TVS9.0CA	9.0	10.0	11.1	1.0	5.0	15.4	13.0
F2TVS10A	F2TVS10CA	10	11.1	12.3	1.0	2.5	17.0	11.8
F2TVS11A	F2TVS11CA	11	12.2	13.5	1.0	2.5	18.2	11.0
F2TVS12A	F2TVS12CA	12	13.3	14.7	1.0	2.5	19.9	10.1
F2TVS13A	F2TVS13CA	13	14.4	15.9	1.0	1.0	21.5	9.3
F2TVS14A	F2TVS14CA	14	15.6	17.2	1.0	1.0	23.2	8.6
F2TVS15A	F2TVS15CA	15	16.7	18.5	1.0	1.0	24.4	8.2
F2TVS16A	F2TVS16CA	16	17.8	19.7	1.0	1.0	26.0	7.7
F2TVS17A	F2TVS17CA	17	18.9	20.9	1.0	1.0	27.6	7.2
F2TVS18A	F2TVS18CA	18	20.0	22.1	1.0	1.0	29.2	6.8
F2TVS20A	F2TVS20CA	20	22.2	24.5	1.0	1.0	32.4	6.2
F2TVS22A	F2TVS22CA	22	24.4	26.9	1.0	1.0	35.5	5.6
F2TVS24A	F2TVS24CA	24	26.7	29.5	1.0	1.0	38.9	5.1
F2TVS26A	F2TVS26CA	26	28.9	31.9	1.0	1.0	42.1	4.8
F2TVS28A	F2TVS28CA	28	31.1	34.4	1.0	1.0	45.4	4.4
F2TVS30A	F2TVS30CA	30	33.3	36.8	1.0	1.0	48.4	4.1
F2TVS33A	F2TVS33CA	33	36.7	40.6	1.0	1.0	53.3	3.8
F2TVS36A	F2TVS36CA	36	40.0	44.2	1.0	1.0	58.1	3.4
F2TVS40A	F2TVS40CA	40	44.4	49.1	1.0	1.0	64.5	3.1
F2TVS43A	F2TVS43CA	43	47.8	52.8	1.0	1.0	69.4	2.9
F2TVS45A	F2TVS45CA	45	50.0	55.3	1.0	1.0	72.7	2.8
F2TVS48A	F2TVS48CA	48	53.3	58.9	1.0	1.0	77.4	2.6
F2TVS51A	F2TVS51CA	51	56.7	62.7	1.0	1.0	82.4	2.4
F2TVS54A	F2TVS54CA	54	60.0	66.3	1.0	1.0	87.1	2.3
F2TVS58A	F2TVS58CA	58	64.4	71.2	1.0	1.0	93.6	2.1
F2TVS60A	F2TVS60CA	60	66.7	73.7	1.0	1.0	96.8	1.8
F2TVS64A	F2TVS64CA	64	71.1	78.6	1.0	1.0	103	1.7
F2TVS70A	F2TVS70CA	70	77.8	86.0	1.0	1.0	113	1.5
F2TVS75A	F2TVS75CA	75	83.3	92.1	1.0	1.0	121	1.4
F2TVS78A	F2TVS78CA	78	86.7	95.8	1.0	1.0	126	1.4
F2TVS85A	F2TVS85CA	85	94.4	104	1.0	1.0	137	1.3
F2TVS90A	F2TVS90CA	90	100	111	1.0	1.0	146	1.2
F2TVS100A	F2TVS100CA	100	111	123	1.0	1.0	162	1.1
F2TVS110A	F2TVS110CA	110	122	135	1.0	1.0	177	1.0
F2TVS120A	F2TVS120CA	120	133	147	1.0	1.0	193	0.9
F2TVS130A	F2TVS130CA	130	144	159	1.0	1.0	209	0.8
F2TVS150A	F2TVS150CA	150	167	185	1.0	1.0	243	0.7
F2TVS160A	F2TVS160CA	160	178	197	1.0	1.0	259	0.7
F2TVS170A	F2TVS170CA	170	189	209	1.0	1.0	275	0.6

Fig.1 Peak Pulse Power Rating Curve

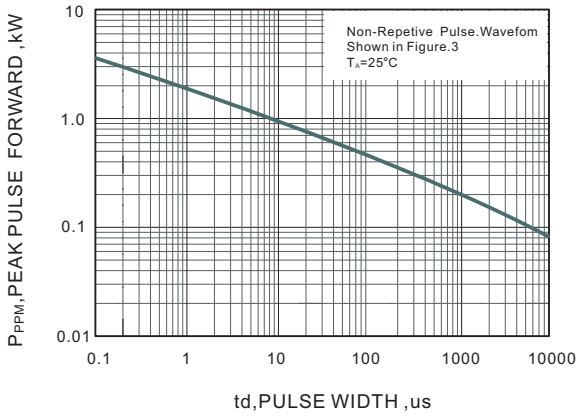


Fig.2 Forward Current Derating Curve

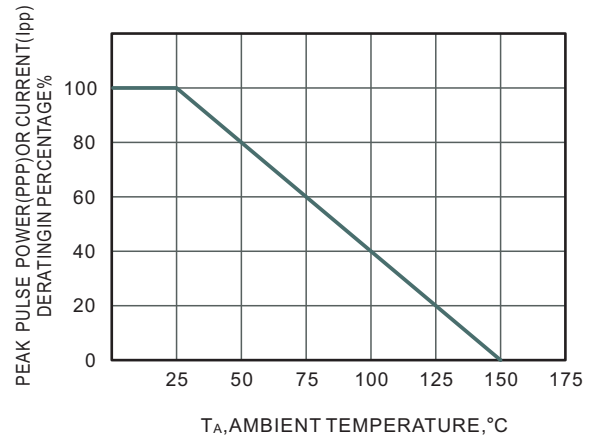


Fig.3 Pulse Waveform

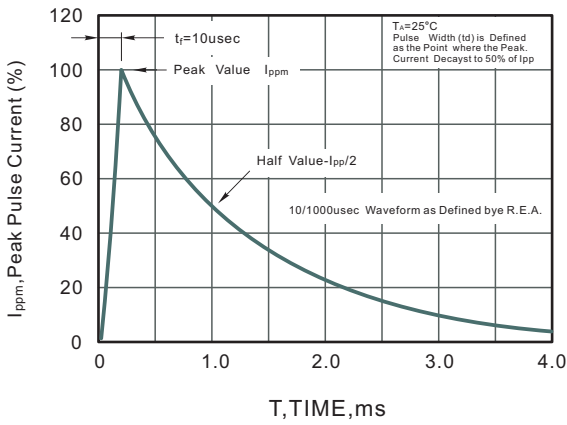


Fig.4 Maximum Non-Repetitive Peak Forward Surge Current

