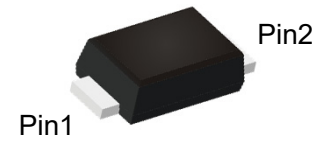


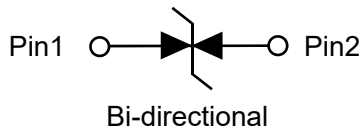
Description

TVS diodes can be used in a wide range of applications which like consumer electronic products, automotive industries, munitions, telecommunications, aerospace industries, and intelligent control systems.

Bi-directional: PTVSHC1JFxxVBH
 Uni-directional: PTVSHC1JFxxVUH

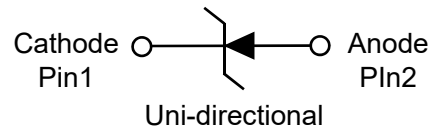


Top View



Bi-directional

Circuit Diagram



Uni-directional

Circuit Diagram

Feature

- Glass passivated junction
- Low profile package and low inductance
- 400W Peak Pulse power capability at 10/1000μs waveform.
- Plastic package has Underwriters Laboratory Flammability.
- For surface mounted applications in order to optimize board space.

Mechanical Characteristics

- Package: SOD-123FL
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 15mg/0.00048oz

Absolute maximum rating@25°C

Rating	Symbol	Value	Units
Peak pulse power dissipation on 10/1000μs waveform	P_{PP}	400	W
Peak Forward Surge Current	I_{FSM}	40	A
Steady State Power Dissipation @ $T_L=75^{\circ}C$	$P_{M(AV)}$	2.8	W
Typical Thermal Resistance	$R_{\theta JA}$	180	$^{\circ}C/W$
Junction and Storage Temperature Range	T_J, T_{STG}	-55~+150	$^{\circ}C$

Electrical characteristics per line@25°C(unless otherwise specified)

Part Number		V_{RMW}	$V_{BR@I_T}$		I_T	$I_R@V_{RWM}$	$V_C@I_{PP}$	I_{PP}
Uni	Bi	V	min(V)	max(V)	mA	μA	V	A
PTVSHC1JF5VUH	PTVSHC1JF5VBH	5.0	6.4	7.0	10	800	9.2	40.1
PTVSHC1JF6VUH	PTVSHC1JF6VBH	6.0	6.67	7.37	10	800	10.3	35.9
PTVSHC1JF6V5UH	PTVSHC1JF6V5BH	6.5	7.22	7.98	10	500	11.2	33.1
PTVSHC1JF7VUH	PTVSHC1JF7VBH	7.0	7.78	8.6	10	200	12	30.9
PTVSHC1JF7V5UH	PTVSHC1JF7V5BH	7.5	8.33	9.21	1.0	100	12.9	28.7
PTVSHC1JF8VUH	PTVSHC1JF8VBH	8.0	8.89	9.83	1.0	50	13.6	27.2
PTVSHC1JF9VUH	PTVSHC1JF9VBH	9.0	10	11.1	1.0	10	15.4	24.1
PTVSHC1JF10VUH	PTVSHC1JF10VBH	10	11.1	12.3	1.0	5.0	17	23.5
PTVSHC1JF11VUH	PTVSHC1JF11VBH	11	12.2	13.5	1.0	1.0	18.2	22
PTVSHC1JF12VUH	PTVSHC1JF12VBH	12	13.3	14.7	1.0	1.0	19.9	20.1
PTVSHC1JF13VUH	PTVSHC1JF13VBH	13	14.4	15.9	1.0	1.0	21.5	18.6
PTVSHC1JF14VUH	PTVSHC1JF14VBH	14	15.6	17.2	1.0	1.0	23.2	17.2
PTVSHC1JF15VUH	PTVSHC1JF15VBH	15	16.7	18.5	1.0	1.0	24.4	16.4
PTVSHC1JF17VUH	PTVSHC1JF17VBH	17	18.9	20.9	1.0	1.0	27.6	14.5
PTVSHC1JF18VUH	PTVSHC1JF18VBH	18	20	22.1	1.0	1.0	29.2	13.7
PTVSHC1JF20VUH	PTVSHC1JF20VBH	20	22.2	24.5	1.0	1.0	32.4	12.3
PTVSHC1JF22VUH	PTVSHC1JF22VBH	22	24.4	26.9	1.0	1.0	35.5	11.3
PTVSHC1JF24VUH	PTVSHC1JF24VBH	24	26.7	29.5	1.0	1.0	38.9	10.3
PTVSHC1JF26VUH	PTVSHC1JF26VBH	26	28.9	31.9	1.0	1.0	42.1	9.5
PTVSHC1JF28VUH	PTVSHC1JF28VBH	28	31.1	34.4	1.0	1.0	45.4	8.8
PTVSHC1JF30VUH	PTVSHC1JF30VBH	30	33.3	36.8	1.0	1.0	48.4	8.3
PTVSHC1JF33VUH	PTVSHC1JF33VBH	33	36.7	40.6	1.0	1.0	53.3	7.5
PTVSHC1JF36VUH	PTVSHC1JF36VBH	36	40	44.2	1.0	1.0	58.1	6.9
PTVSHC1JF40VUH	-	40	44.4	49.1	1.0	1.0	64.5	6.2
PTVSHC1JF43VUH	-	43	47.8	52.8	1.0	1.0	69.4	5.8
PTVSHC1JF45VUH	-	45	50	55.3	1.0	1.0	72.7	5.5
PTVSHC1JF48VUH	-	48	53.3	58.9	1.0	1.0	77.4	5.2

Part Number		V_{RWM}	$V_{BR}@I_T$		I_T	$I_R@V_{RWM}$	$V_C@I_{PP}$	I_{PP}
Uni	Bi	V	min(V)	max(V)	mA	μA	V	A
PTVSHC1JF51VUH	-	51	56.7	62.7	1.0	1.0	82.4	4.9
PTVSHC1JF58VUH	-	58	64.4	71.2	1.0	1.0	93.6	4.3
PTVSHC1JF60VUH	-	60	66.7	73.7	1.0	1.0	96.8	4.1
PTVSHC1JF64VUH	-	64	71.1	78.6	1.0	1.0	103	3.9
PTVSHC1JF70VUH	-	70	77.8	86	1.0	1.0	113	3.5
PTVSHC1JF75VUH	-	75	83.3	92.1	1.0	1.0	121	3.3
PTVSHC1JF78VUH	-	78	86.7	95.8	1.0	1.0	126	3.2
PTVSHC1JF85VUH	-	85	94.4	104	1.0	1.0	137	2.9

Typical Characteristics

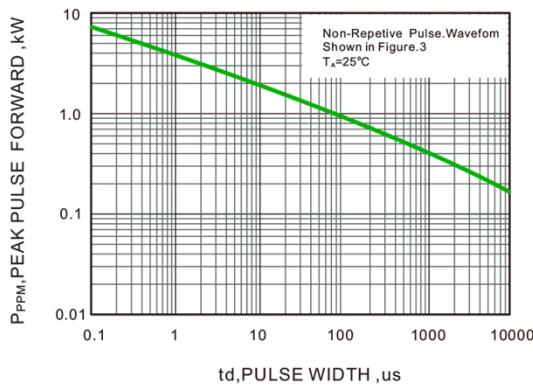


Fig.1 Peak Pulse Power Rating Curve

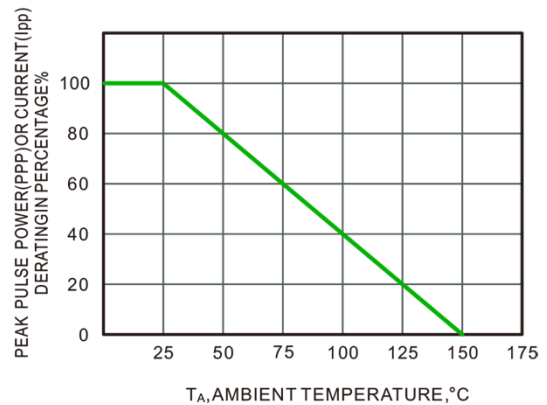


Fig.2 Forward Current Derating Curve

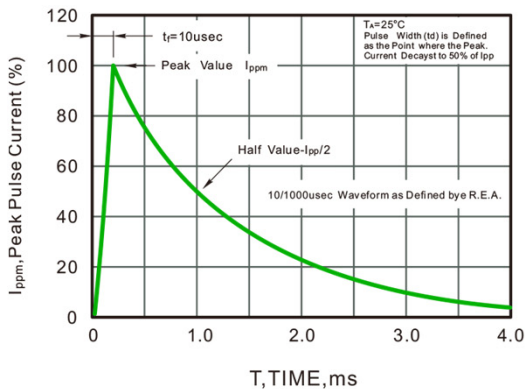


Fig.3 Pulse Waveform

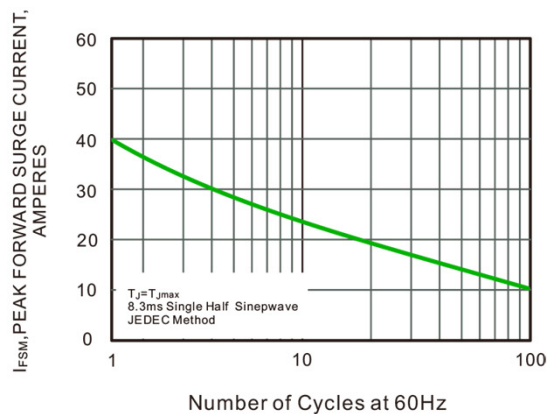
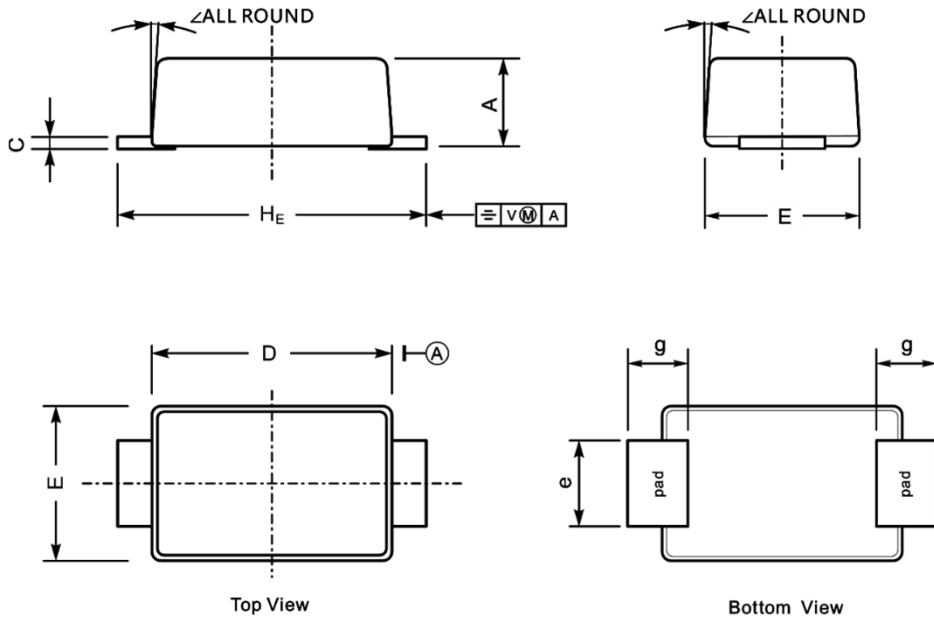


Fig.4 Maximum Non-Repetitive Peak Forward Surge Current

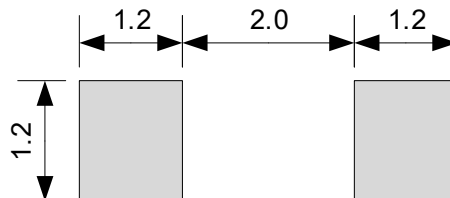
400W Transient Voltage Suppressor

PTVSHC1JFxxVUH/VBH

Product dimension (SOD-123FL)




Dim	Millimeters		Inches	
	Min	Max	Min	Max
A	0.90	1.10	0.035	0.043
C	0.12	0.20	0.005	0.008
D	2.60	2.90	0.102	0.114
E	1.70	1.90	0.067	0.075
e	0.80	1.10	0.031	0.043
g	0.70	0.90	0.028	0.035
H _E	3.50	3.80	0.138	0.150
∠	7°			



Unit:mm

Suggested PCB Layout


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