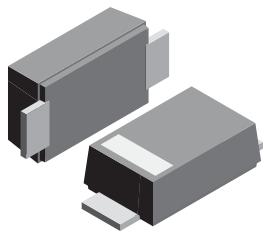
DFLT5V0A - DFLT51A

SURFACE MOUNT TRANSIENT VOLTAGE SUPPESSOR DIODE

VOLTAGE RANGE: 5.0 - 51V
POWER: 225Watts



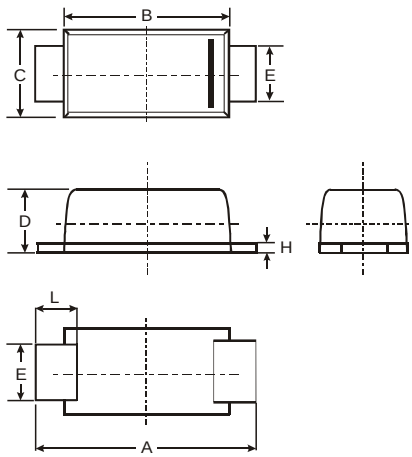
Features

- 225W Peak Pulse Power Dissipation (10μs x 1000μs waveform)
- 5.0V - 51V Standoff Voltages
- Excellent Clamping Capability

Mechanical Data

- Case: SOD-123FL
  plastic body over passivated junction
- Terminals: Plated axial leads,
- solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Mounting Position : Any
- Weight:0.0007 ounce, 0.02 grams

RoHS COMPLIANT



SOD-123FL			
Dim	Min	Max	Typ
A	3.58	3.72	3.65
B	2.72	2.78	2.75
C	1.77	1.83	1.80
D	1.02	1.08	1.05
E	0.097	1.03	1.00
H	0.13	0.17	0.15
L	0.53	0.57	0.55
All Dimensions in mm			

Maximum Ratings @ T_A = 25°C unless otherwise specified

Characteristic	Symbol	Value	Unit
Peak Pulse Power Dissipation (Note 1) 10/1000μs (Note 2) 8/20μs	P_{PK}	225 1125	W
Peak Forward Surge Current, 8.3ms Single Half Sine Wave	I_{FSM}	50	A
Instantaneous Forward Voltage @ I_{PP} = 12A (Note 5)	V_F	3.5	V
Operating Temperature Range	T_j	-65 to +150	°C
Storage Temperature Range	T_{STG}	-65 to +150	°C

Thermal Characteristics @ T_A = 25°C unless otherwise specified

Characteristic	Symbol	Value	Unit
DC Steady-State Power Dissipation	P_D	1.0	W
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	125	°C/W
Thermal Resistance, Junction to Soldering Point	$R_{\theta JS}$	6	°C/W

Notes: 1. Non-Repetitive current pulse as shown in figure 3 and derated above T_A = 25°C as per figure 1.
2. Non-Repetitive current pulse as shown in figure 5 and derated above T_A = 25°C as per figure 1.

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
	V_{RWM} (V)	$V_{BR\ MIN}$(V)	$V_{BR\ MAX}$(V)	I_T (mA)	I_R(uA)	V_C(V)	I_{PP}(A)
DFLT5V0A	5.0	6.40	7.0	10	400	9.2	24.5
DFLT6V0A	6.0	6.67	7.37	10	400	10.3	21.8
DFLT6V5A	6.5	7.22	7.98	10	250	11.2	20.1
DFLT7V0A	7.0	7.78	8.60	10	100	12.0	18.8
DFLT7V5A	7.5	8.33	9.21	1.0	50	12.9	17.4
DFLT8V0A	8.0	8.89	9.83	1.0	25	13.6	16.5
DFLT8V5A	8.5	9.44	10.4	1.0	10	14.4	15.6
DFLT9V0A	9.0	10.0	11.1	1.0	5.0	15.4	14.6
DFLT10A	10	11.1	12.3	1.0	2.5	17.0	13.2
DFLT11A	11	12.2	13.5	1.0	2.5	18.2	12.4
DFLT12A	12	13.3	14.7	1.0	2.5	19.9	11.3
DFLT13A	13	14.4	15.9	1.0	1.0	21.5	10.5
DFLT14A	14	15.6	17.2	1.0	1.0	23.2	9.7
DFLT15A	15	16.7	18.5	1.0	1.0	24.4	9.22
DFLT16A	16	17.8	19.7	1.0	1.0	26.0	8.65
DFLT17A	17	18.9	20.9	1.0	1.0	27.6	8.15
DFLT18A	18	20.0	22.1	1.0	1.0	29.2	7.71
DFLT20A	20	22.2	24.5	1.0	1.0	32.4	6.94
DFLT22A	22	24.4	26.9	1.0	1.0	35.5	6.34
DFLT24A	24	26.7	29.5	1.0	1.0	38.9	5.78
DFLT26A	26	28.9	31.9	1.0	1.0	42.1	5.35
DFLT27A	27	30	33.15	1.0	1.0	43.7	5.15
DFLT28A	28	31.1	34.4	1.0	1.0	45.4	4.96
DFLT30A	30	33.3	36.8	1.0	1.0	48.4	4.65
DFLT33A	33	36.7	40.6	1.0	1.0	53.3	4.22
DFLT36A	36	40.0	44.2	1.0	1.0	58.1	3.87
DFLT40A	40	44.4	49.1	1.0	1.0	64.5	3.49
DFLT43A	43	47.8	52.8	1.0	1.0	69.4	3.24
DFLT45A	45	50.0	55.3	1.0	1.0	72.7	3.10
DFLT48A	48	53.3	58.9	1.0	1.0	77.4	2.91
DFLT51A	51	56.7	62.7	1.0	1.0	82.4	2.73

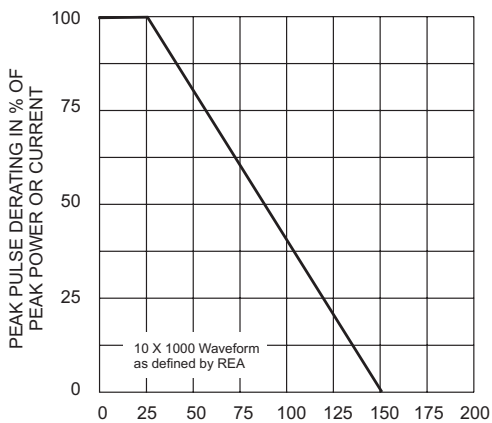


Fig. 1 Pulse Derating Curve

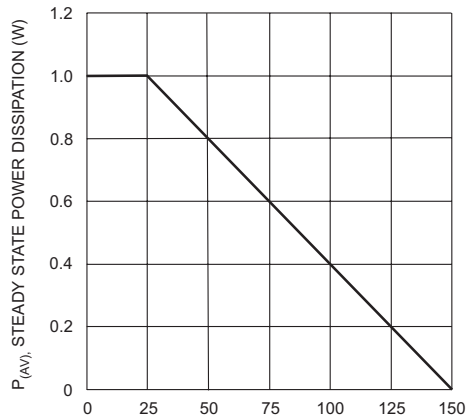


Fig. 2 Steady State Power Derating Curve

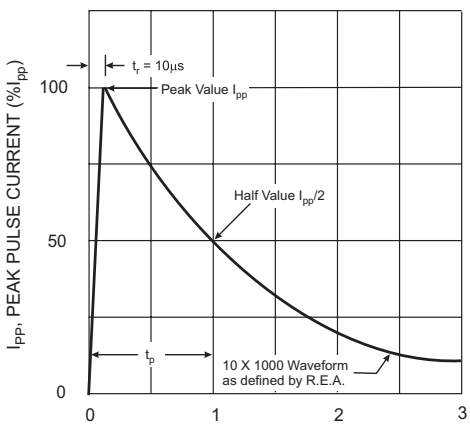


Fig. 3 Pulse Waveform

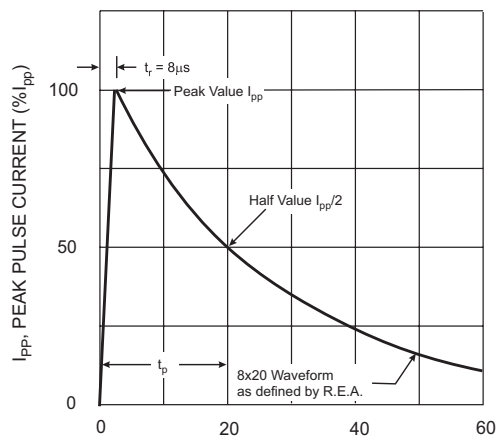


Fig. 4 Pulse Waveform

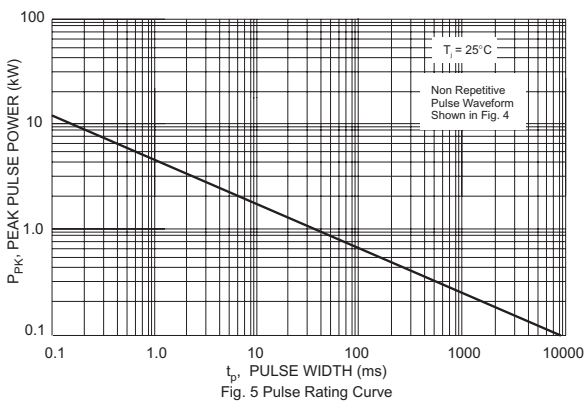


Fig. 5 Pulse Rating Curve

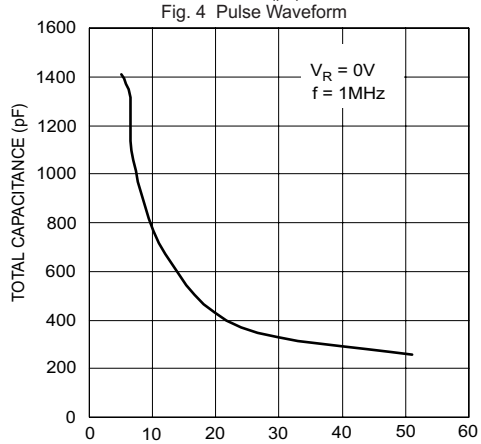


Fig. 6 V_{RWM} (V)