

Features

- Protects One Data or Power Line
- Ultra Low Leakage
- Ultra Low Clamping Voltage
- Moisture Sensitivity Level 1
- Epoxy Meets UL 94 V-0 Flammability Rating
- Halogen Free Available Upon Request By Adding Suffix "-HF"
- Lead Free Finish/RoHS Compliant ("P" Suffix Designates RoHS Compliant. See Ordering Information)

Maximum Ratings

- Operating Junction Temperature Range: -55°C to +125°C
- Storage Temperature Range: -55°C to +150°C

MCC Part Number	Device Marking
SD05CH	05
SD08CH	08
SD15CH	15
SD36CH	36

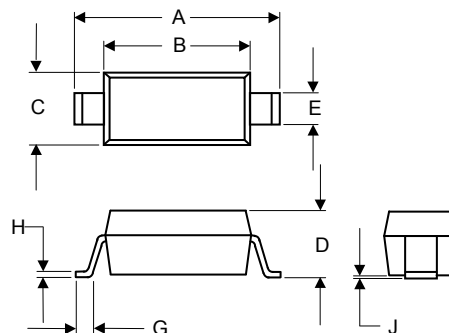
IEC61000-4-2(ESD)	Air Contact	±30KV ±30KV
Peak Pulse Power (8/20µs)	P _{PK}	500W

Internal Structure



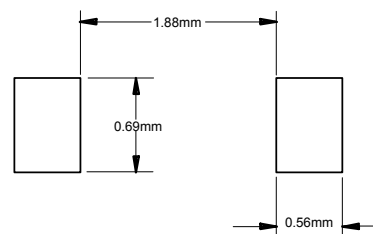
ESD Protection Device

SOD-323



DIM	DIMENSIONS				NOTE
	INCHES		MM		
	MIN	MAX	MIN	MAX	
A	0.090	0.107	2.30	2.70	
B	0.063	0.071	1.60	1.80	
C	0.045	0.053	1.15	1.35	
D	0.031	0.045	0.80	1.15	
E	0.010	0.016	0.25	0.40	
G	0.004	0.018	0.10	0.45	
H	0.004	0.010	0.10	0.25	
J	----	0.006	----	0.15	

Suggested Solder Pad Layout



Electrical Characteristics @ 25°C (Unless Otherwise Specified)

SD05CH

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Reverse Working Voltage	V_{RWM}				5	V
Reverse Breakdown Voltage	V_{BR}	$I_T = 1mA$	6			V
Reverse Leakage Current	I_R	$V_{RWM} = 5V$			0.2	μA
Peak Pulse Current	I_{PP}	$t_p = 8/20\mu s$			34	A
Clamping Voltage	V_C	$I_{PP} = 5A, t_p = 8/20\mu s$			9.5	V
Clamping Voltage	V_C	$I_{PP} = 34A, t_p = 8/20\mu s$			15	V
Junction Capacitance	C_J	$V_R = 0V, f = 1MHz$			200	pF

SD08CH

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Reverse Working Voltage	V_{RWM}				8	V
Reverse Breakdown Voltage	V_{BR}	$I_T = 1mA$	8.5			V
Reverse Leakage Current	I_R	$V_{RWM} = 8V$			0.2	μA
Peak Pulse Current	I_{PP}	$t_p = 8/20\mu s$			30	A
Clamping Voltage	V_C	$I_{PP} = 1A, t_p = 8/20\mu s$			11	V
Clamping Voltage	V_C	$I_{PP} = 30A, t_p = 8/20\mu s$			18	V
Junction Capacitance	C_J	$V_R = 0V, f = 1MHz$			120	pF

SD15CH

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Reverse Working Voltage	V_{RWM}				15	V
Reverse Breakdown Voltage	V_{BR}	$I_T = 1mA$	16.7			V
Reverse Leakage Current	I_R	$V_{RWM} = 15V$			0.2	μA
Peak Pulse Current	I_{PP}	$t_p = 8/20\mu s$			16	A
Clamping Voltage	V_C	$I_{PP} = 1A, t_p = 8/20\mu s$			20	V
Clamping Voltage	V_C	$I_{PP} = 16A, t_p = 8/20\mu s$			31	V
Junction Capacitance	C_J	$V_R = 0V, f = 1MHz$			80	pF

Electrical Characteristics @ 25°C (Unless Otherwise Specified)

SD36CH

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Reverse Working Voltage	V_{RWM}				36	V
Reverse Breakdown Voltage	V_{BR}	$I_T = 1mA$	38			V
Reverse Leakage Current	I_R	$V_{RWM} = 36V$			0.2	μA
Peak Pulse Current	I_{PP}	$t_p = 8/20\mu s$			6	A
Clamping Voltage	V_C	$I_{PP} = 1A, t_p = 8/20\mu s$			50	V
Junction Capacitance	C_J	$V_R = 0V, f = 1MHz$			30	pF

Curve Characteristics

Fig. 1 - 8 X 20 μs Pulse Waveform

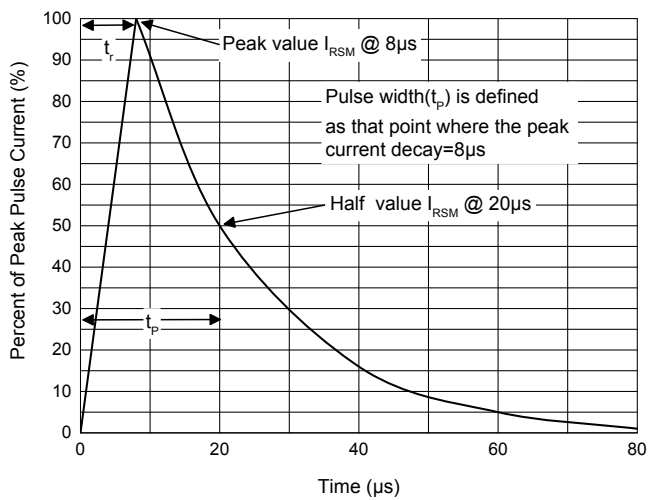


Fig. 2 - Non-Repetitive Peak Pulse Power

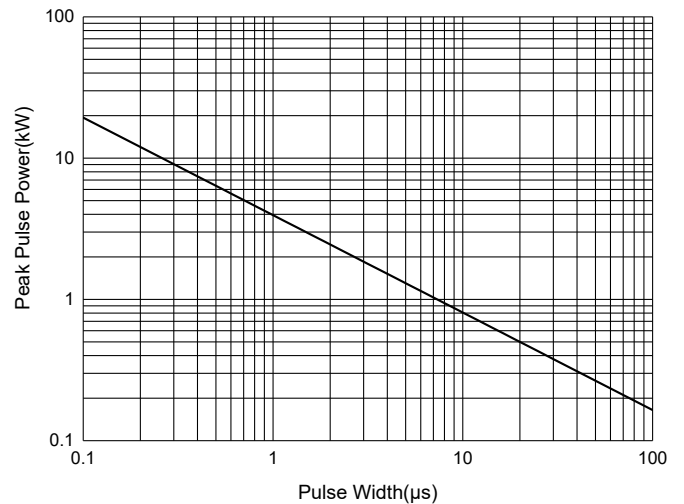
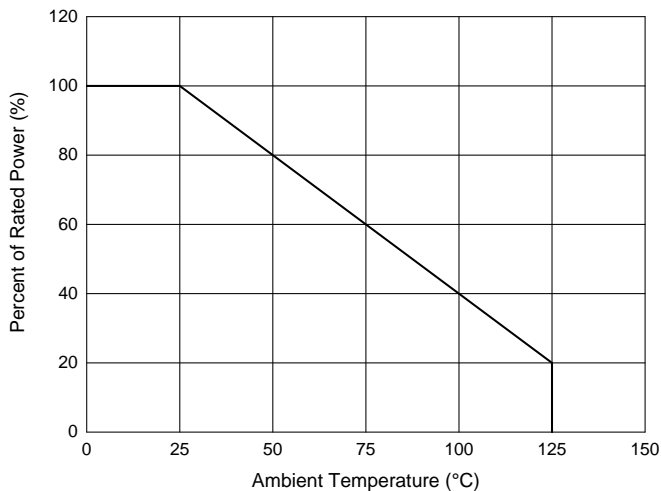


Fig. H - Pulse Derating Curve



Ordering Information

Device	Packing
Part Number-TP	Tape&Reel: 3Kpcs/Reel

Note : Adding "-HF" Suffix for Halogen Free, eg. Part Number-TP-HF

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