ESD Suppressor
5V 160W SOD-323

MEP51B160S323

MERITEK

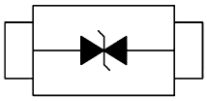
FEATURES

- IEC 61000-4-2 ESD: ±30KV (Air), ±30KV (Contact)
- IEC 61000-4-5 Lightning: 12A (8/20μs)
- ESD Protection for one Bidirectional Channel
- Low Clamping Voltage



APPLICATIONS

- Industrial , IoT, Smart Devices and Portable Electronics
- Computing Peripheral: USB, Thunderbolt, Type-C interface
- Telecommunications, Networking, High-Speed Data Transmission



RoHS

MAXIMUM RATINGS

Parameter		Symbol	Value	Unit
Peak Pulse Power	tp = 8/20μs	P_{PP}	160	W
Peak Pulse Current	tp = 8/20μs	I_{PP}	12	A
ESD Voltage, IEC61000-4-2	Air Discharge	V_{ESD}	±30	KV
	Contact Discharge		±30	
Operating Junction Temperature Range		T_J	-55 to +125	°C
Storage Temperature Range		T_{STG}	-55 to +150	°C

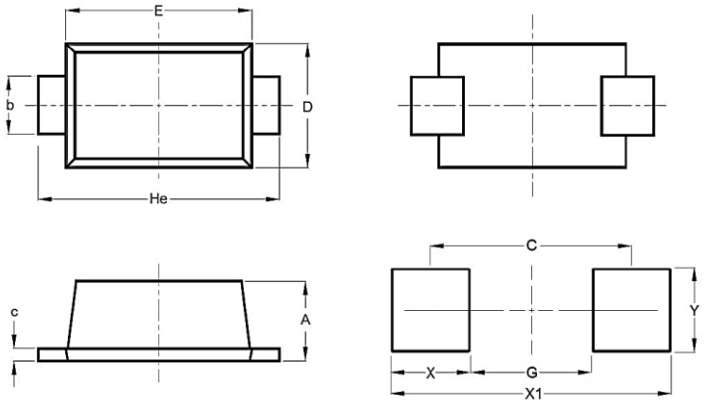
ELECTRICAL CHARACTERISTICS

Parameter	Conditions	Symbol	Min	Typ.	Max	Units
Reverse Stand-off Voltage	--	V_{RWM}	-	-	5.0	V
Reverse Breakdown Voltage	I_{BR}=1mA	V_{BR}	5.5	-	9.5	V
Reverse Leakage Current	V_{RWM}=5V	I_R	-	-	0.1	μA
Dynamic Impedance	I_{TLP} from 4A to 16A	R_{DYN}	-	0.06	-	Ω
Clamping Voltage	I_{PP}=1A, tp=8/20μs	V_C	-	-	10	V
	I_{PP}=12A, tp=8/20μs		-	-	14	
Clamping Voltage TLP	I_{TLP}=4A, tp=0.2/100ns	V_C	-	7.4	-	V
	I_{TLP}=16A, tp=0.2/100ns		-	8.1	-	
Junction Capacitance	V_R=0V, f=1MHz	C_d	-	-	45	pF

Note: T_A=25°C unless otherwise noted

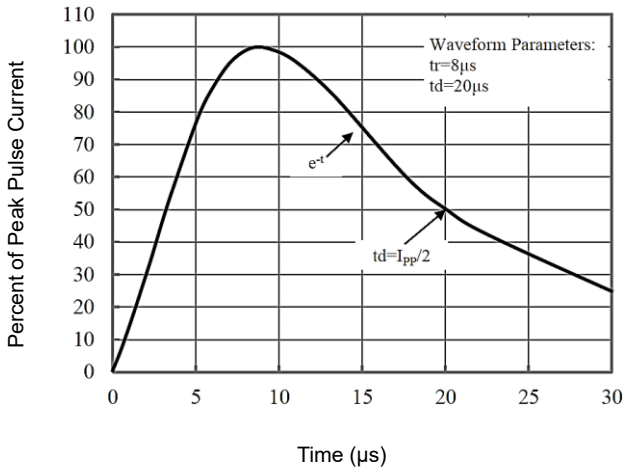
DIMENSIONS

Item	Min (mm)	Max (mm)
A	0.80	1.10
b	0.25	0.40
c	0.05	0.25
D	1.15	1.35
E	1.60	1.80
He	2.30	2.80
C	2.10	
G	1.30	
X	0.80	
X1	2.90	
Y	0.90	

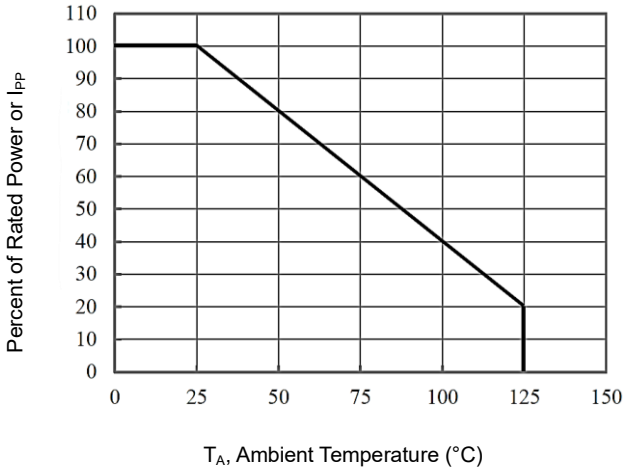


CHARACTERISTIC CURVES

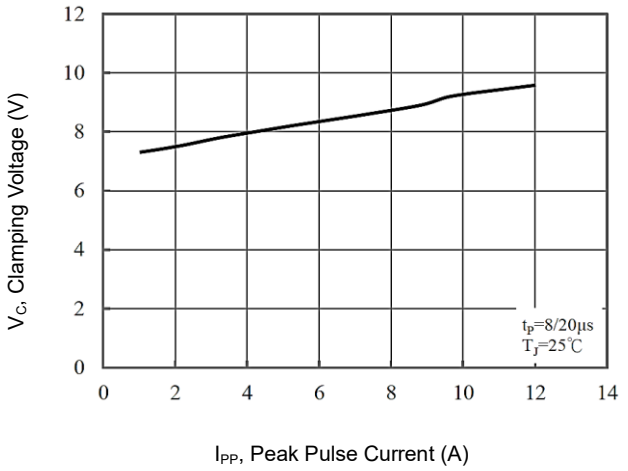
8/20μs Pulse Waveform



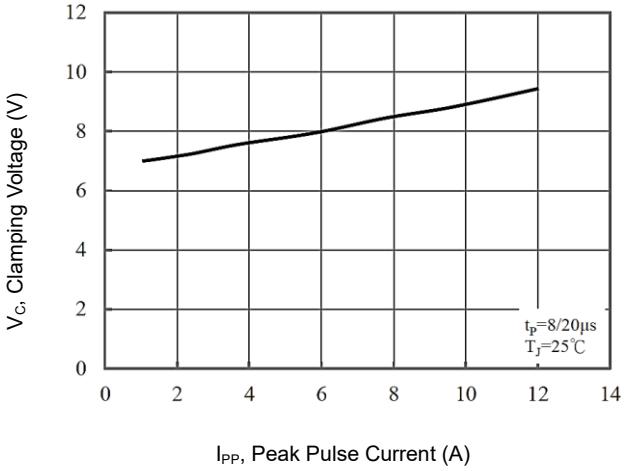
Power Derating Curve



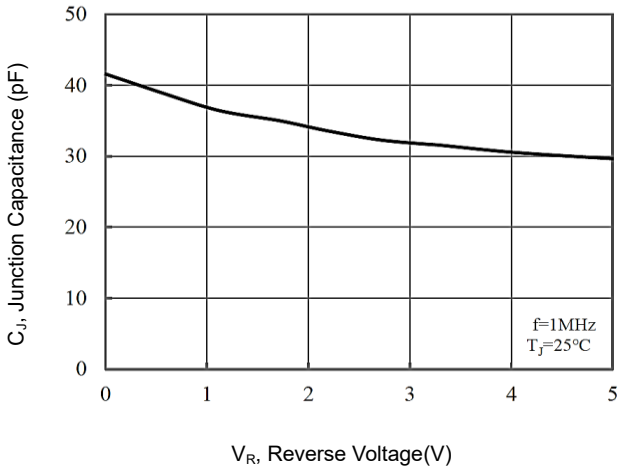
Clamping Voltage vs. Peak Pulse Current (Pin 1 to Pin 2)



Clamping Voltage vs. Peak Pulse Current (Pin 2 to Pin 1)



Typical Junction Capacitance



TLP Characteristic

