ESDBL24CX-A

ESD Protection Diode

Features

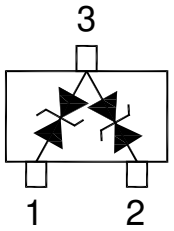
- AEC-Q101 Qualified
- Low clamping voltage
- Ultra low leakage current
- Double Bi-direction high reliability
- Halogen and Antimony Free(HAF), RoHS compliant



1. Anode 2. Anode 3. Anode
SOT-23 Plastic Package

Application

- ESD protection for low-speed interfaces in automotive, communication, consumer and computing devices.



Absolute Maximum Ratings (T_a = 25℃)

Parameter		Symbol	Value	Unit
Peak Pulse Power (tp = 8/20 μs)		P_{PK}	200	W
Peak Pulse Current (tp = 8/20 μs)		I_{PP}	3	A
ESD per IEC 61000-4-2	Air Contact	V_{ESD}	± 25	KV
Junction Temperature		T_j	150	°C
Storage Temperature Range		T_{stg}	- 55 to + 150	°C

Characteristics at T_a = 25℃

Parameter	Symbol	Min.	Typ.	Max.	Unit
Working Peak Reverse Voltage	V_{RWM}	-	-	24	V
Reverse Breakdown Voltage at I_R = 5 mA	$V_{(BR)R}$	25.4	-	30.3	V
Reverse Current at V_{RWM} = 24 V	I_R	-	-	50	nA
Clamping Voltage at I_{PP} = 1 A, tp = 8/20 μs at I_{PP} = 3 A, tp = 8/20 μs	V_C	- -	- -	40 70	V
ESD Clamping Voltage at I_{TLP} = 4 A, tp = 0.2/100 ns at I_{TLP} =16 A, tp = 0.2/100 ns	V_{CL}	- -	39.5 46.3	- -	V
Junction Capacitance at V_R = 0 V, f = 1 MHz	C_j	-	16	-	pF
Dynamic Resistance [1)]	R_{dyn}	-	0.57	-	Ω

[1)] Dynamic Resistance calculated from I_{TLP} = 4A to I_{TLP} = 16 A .

Electrical Characteristics Curves

Fig 1. Pulse Waveform

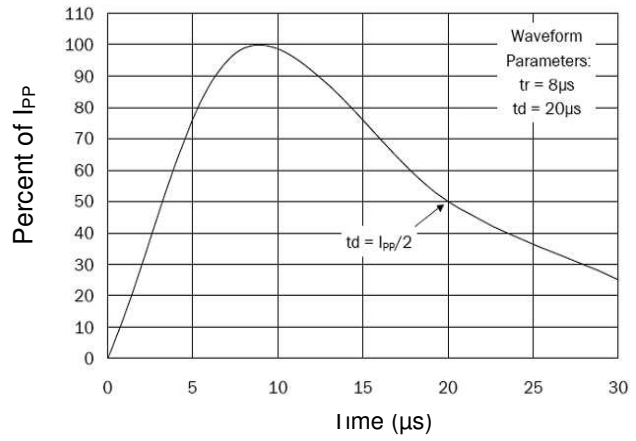


Fig 2. Power Derating Curve

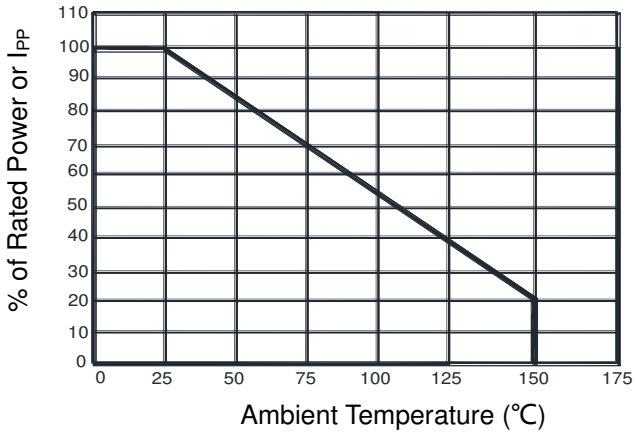


Fig 3. Clamping Voltage Curve

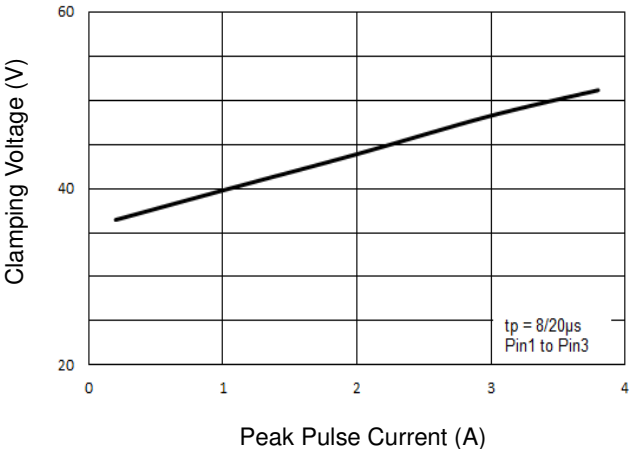


Fig 4. Junction Capacitance

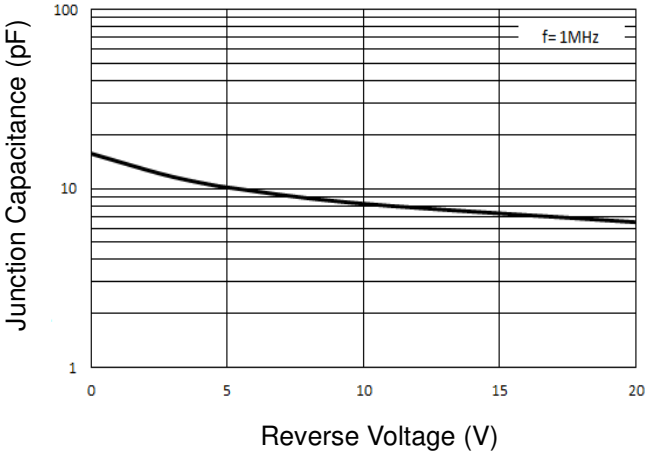
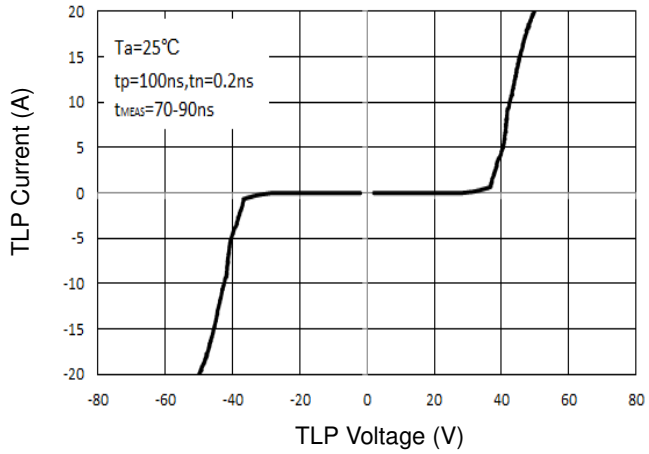
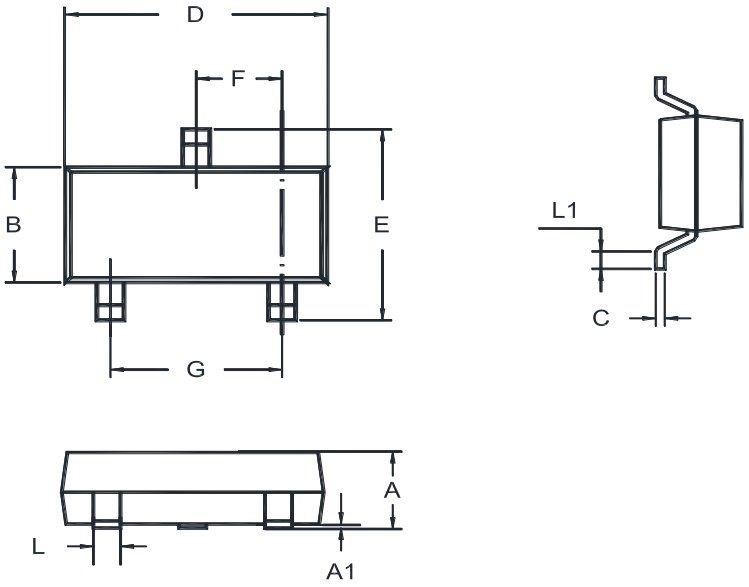


Fig. 5 TLP Curve



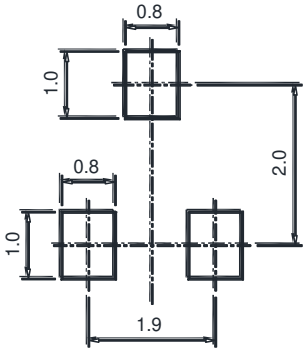
Package Outline (Dimensions in mm)

SOT-23



Unit	A	A1	B	C	D	E	F	G	L	L1
mm	1.20 0.89	0.100 0.013	1.40 1.20	0.19 0.08	3.04 2.80	2.6 2.2	1.02 0.89	2.04 1.78	0.51 0.37	0.2 MIN

Recommended Soldering Footprint



Packing information

Package	Tape Width (mm)	Pitch		Reel Size		Per Reel Packing Quantity
		mm	inch	mm	inch	
SOT-23	8	4 ± 0.1	0.157 ± 0.004	178	7	3,000

Marking information

" W3 " = Part No.
" • " = HAF (Halogen and Antimony Free)
" YM " = Date Code Marking
" Y " = Year
" M " = Month
Font type: Arial

