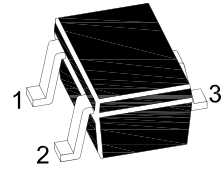
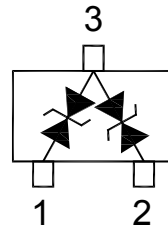


ESDBL0523E

ESD Protection Diode

Features

- Low capacitance



SOT-523 Plastic Package
Marking Code: F8

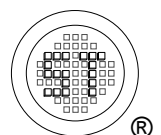
Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Value	Unit
Peak Pulse Power ($t_p = 8/20 \mu\text{s}$)	P_{PK}	84	W
Peak Pulse Current ($t_p = 8/20 \mu\text{s}$)	I_{PP}	6	A
ESD Discharge (IEC61000-4-2)	Air Contact V_{ESD}	± 30 ± 30	KV
Power Dissipation ¹⁾	P_D	200	mW
Thermal Resistance Junction to Ambient ¹⁾	$R_{\theta JA}$	625	$^\circ\text{C/W}$
Junction Temperature	T_j	- 55 to + 150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	- 55 to + 150	$^\circ\text{C}$

¹⁾ Device mounted on FR-4 PCB pad layout (2oz copper) as shown on Diodes.

Characteristics at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Min.	Max.	Unit
Reverse Working Voltage	V_{RWM}	-	5	V
Reverse Breakdown Voltage at $I_T = 1 \text{ mA}$	$V_{(BR)R}$	6	8	V
Reverse Current at $V_R = 5 \text{ V}$	I_R	-	100	nA
Clamping Voltage at $I_{PP} = 1 \text{ A}$, $t_p = 8/20 \mu\text{s}$ at $I_{PP} = 3 \text{ A}$, $t_p = 8/20 \mu\text{s}$ at $I_{PP} = 5 \text{ A}$, $t_p = 8/20 \mu\text{s}$ at $I_{PP} = 6 \text{ A}$, $t_p = 8/20 \mu\text{s}$	V_C	-	9 10.7 12 14	V
Total Capacitance at $V_R = 0 \text{ V}$, $f = 1 \text{ MHz}$	C_T	-	20	pF



Electrical characteristic curves

Fig 1. Pulse Waveform

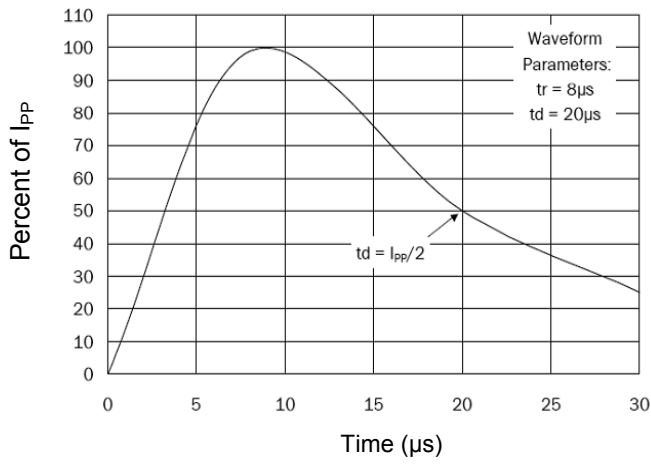


Fig 2. Power Derating Curve

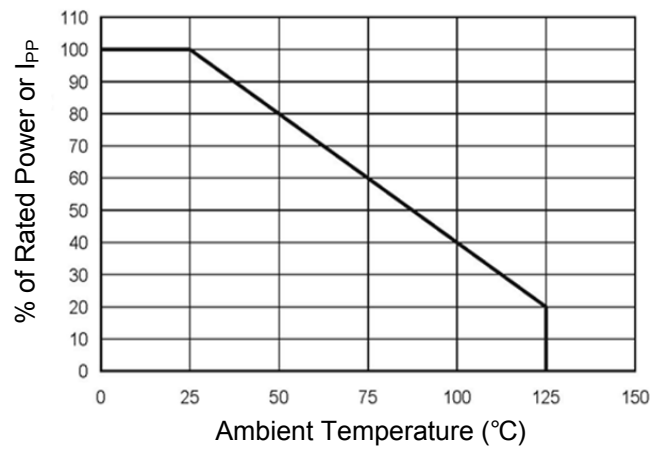


Fig 3. Clamping Voltage Curve

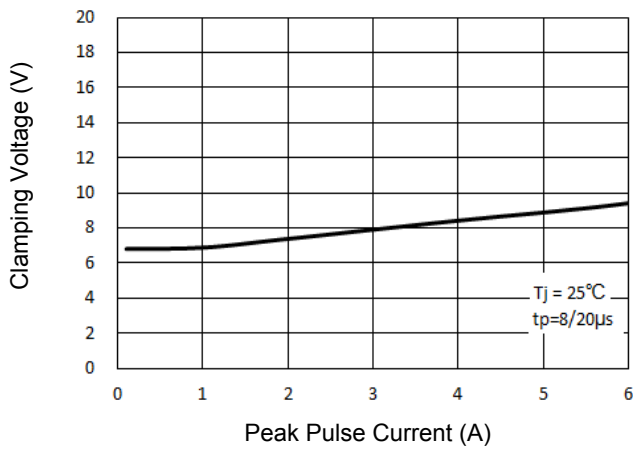


Fig 4. Junction Capacitance

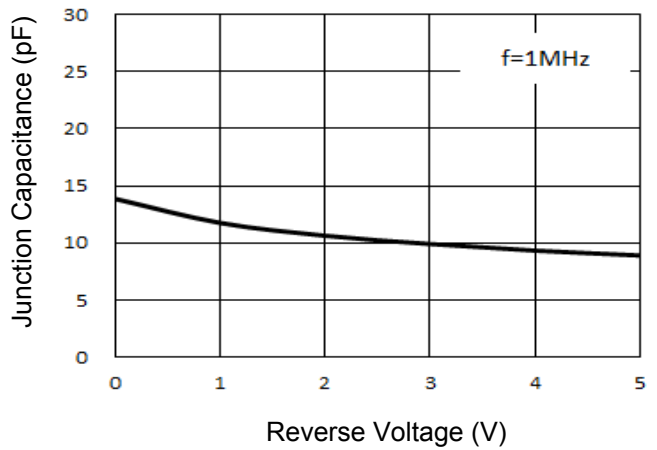
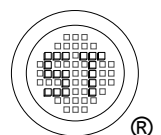
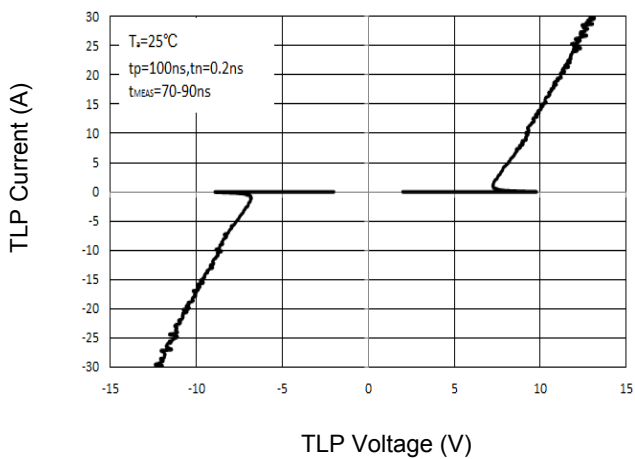
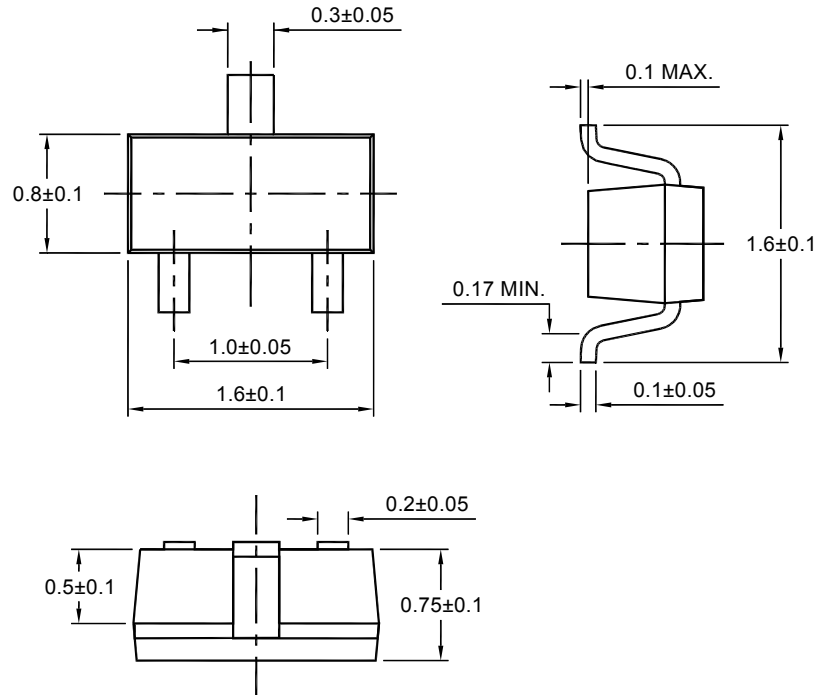
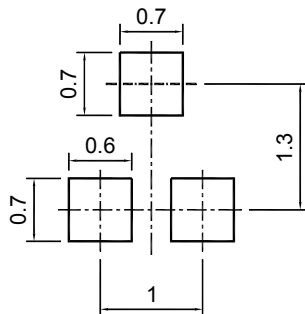


Fig 5 TLP Curve





Recommended Soldering Footprint



Packing information

Package	Tape Width (mm)	Pitch		Reel Size		Per Reel Packing Quantity
		mm	inch	mm	inch	
SOT-523	8	4 ± 0.1	0.157 ± 0.004	178	7	4,000

Marking information

- " F8 " = Part No.
- " YM " = Date Code Marking
- " Y " = Year
- " M " = Month
- Font type: Arial

