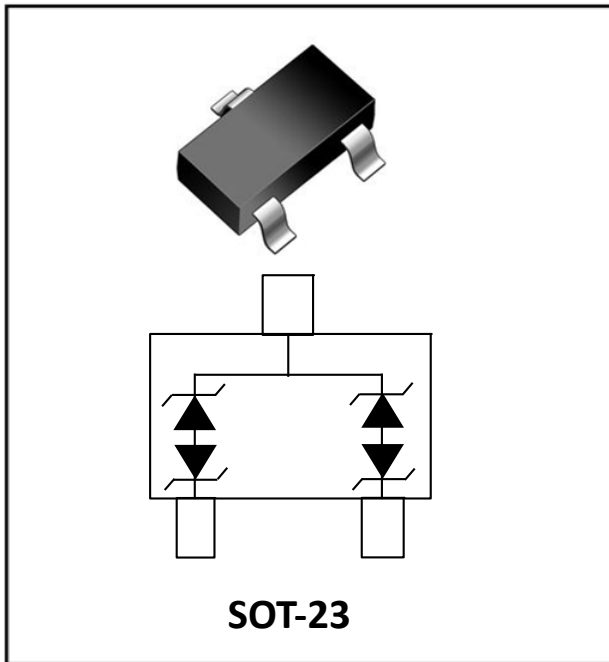


2-Line, Bi-directional, Ultra-low Capacitance, ESD protection diode



Features

- Transient protection for each line according to IEC61000-4-2(ESD): $\pm 16\text{kV}$ contact, $\pm 16\text{kV}$ air IEC61000-4-5:4A($t_p=8/20\mu\text{s}$)
- Ultra Low leakage current
- Ultra low clamping voltage
- Ultra low capacitance
- RoHS Compliant
- Part no. with suffix "Q" means AEC-Q101 qualified

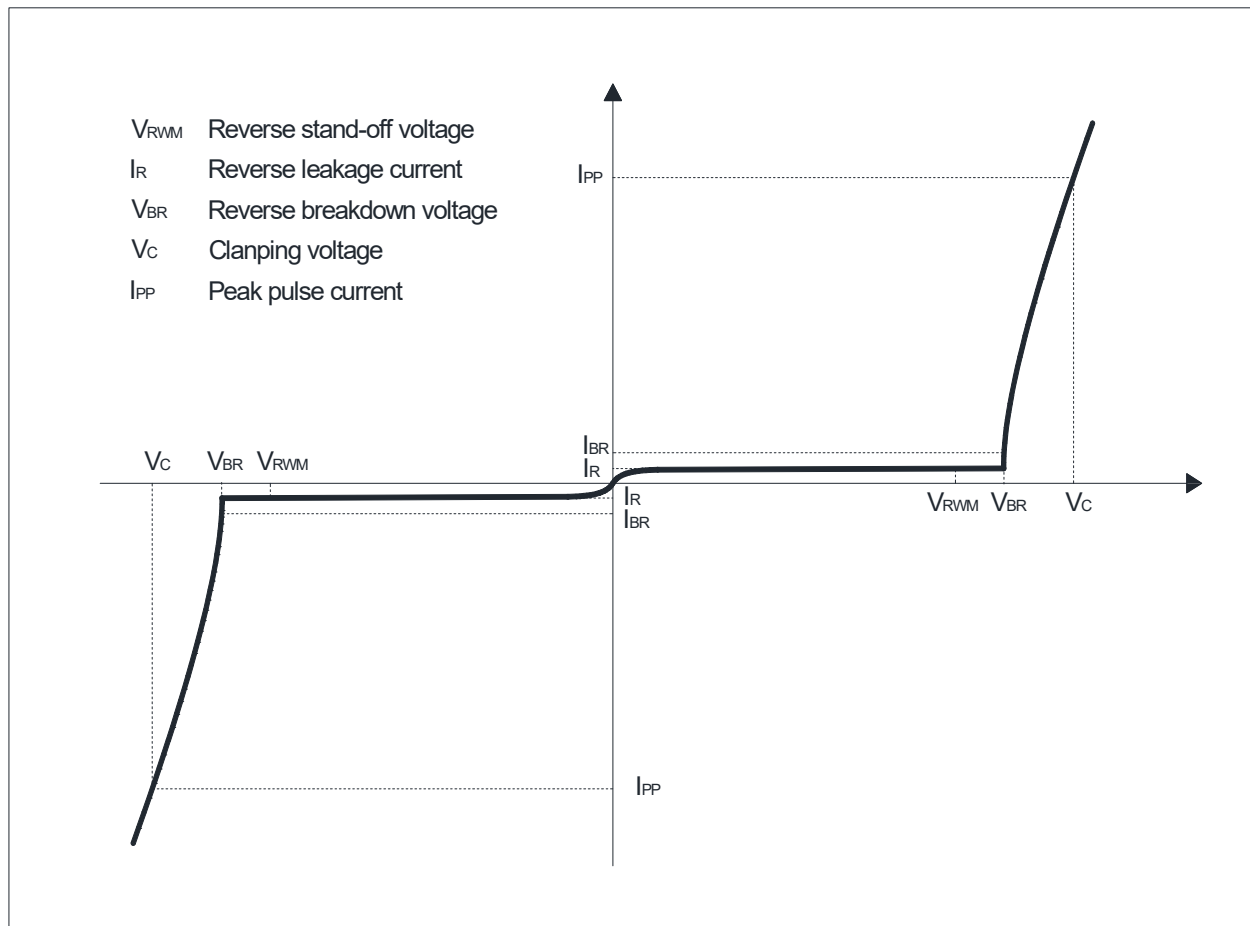
Applications

- Automotive applications

Mechanical Data

- Package: SOT-23
- Lead Finish: Matte Tin
- Case Material: "Green" Molding Compound
- Moisture Sensitivity: Level 1 per J-STD-020

■ Definitions of electrical characteristics





ESDSL0502EBQ

■Maximum Ratings

PARAMETER	SYMBOL	LIMITS	UNIT
Peak pulse power ($t_p = 8/20\mu s$)	P_{pk}	100	W
ESD according to IEC61000-4-2 air discharge	V_{ESD}	± 16	KV
ESD according to IEC61000-4-2 contact discharge		± 16	
Junction temperature	T_J	-55~150	$^{\circ}C$
Storage temperature	T_{STG}	-55~150	$^{\circ}C$

Notes:

CAUTION: Stresses above those listed in "Absolute Maximum Ratings" may cause permanent damage to the component. This is a stress only rating and operation of the component at these or any other conditions above those indicated in the operational sections of this specification is not implied.

■Electrical Characteristics ($T_J=25^{\circ}C$)

PARAMETER	Symbol	UNIT	Conditions	Min	Typ	Max
Reverse Standoff Voltage	V_{RWM}	V				5
Reverse breakdown voltage	V_{BR}	V	$I_{BR} = 1mA$	5.8		9.5
Reverse leakage current	I_R	nA	$V_{RWM} = 5V$			100
Clamping voltage ¹⁾	V_C	V	$I_{PP} = 1A, t_p = 8/20\mu s$			15
			$I_{PP} = 4A, t_p = 8/20\mu s$			25
Peak Pulse Current	I_{PP}	A	$t_p = 8/20\mu s$			4
Junction capacitance(pin1 to 3 or 2 to 3)	C_J	pF	$V_R = 0V, f = 1MHz$		0.4	0.6

Notes:

(1). Non-repetitive current pulse, according to IEC61000-4-5.

■Ordering Information (Example)

PREFERRED P/N	PACKING CODE	UNIT WEIGHT(mg)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
ESDSL0502EBQ	F2	Approximate 10	3000	30000	120000	7 reel



■ Characteristics (Typical)

Fig.1: 8/20 μ s Pulse Waveform

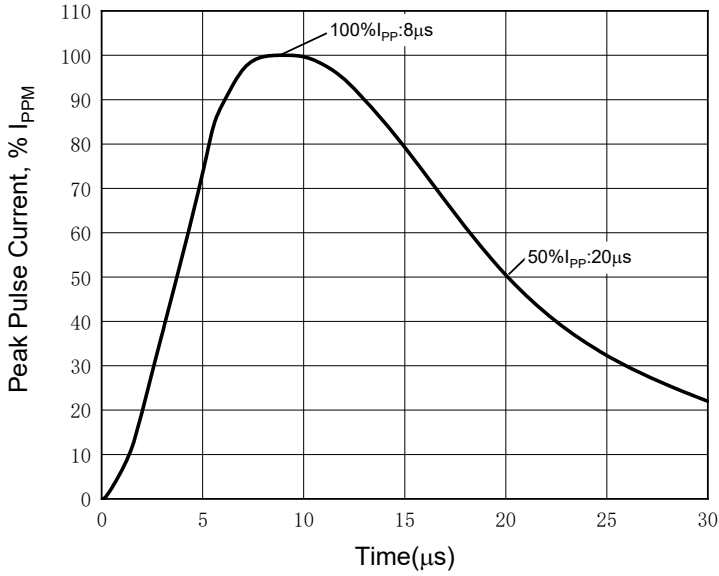


Fig.2 :Peak Pulse Current vs Clamping Voltage

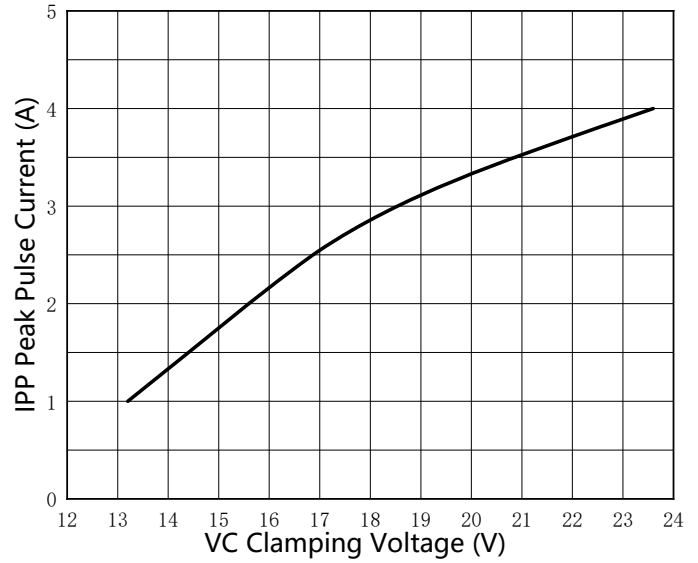


Fig.3: Power Derating Curve

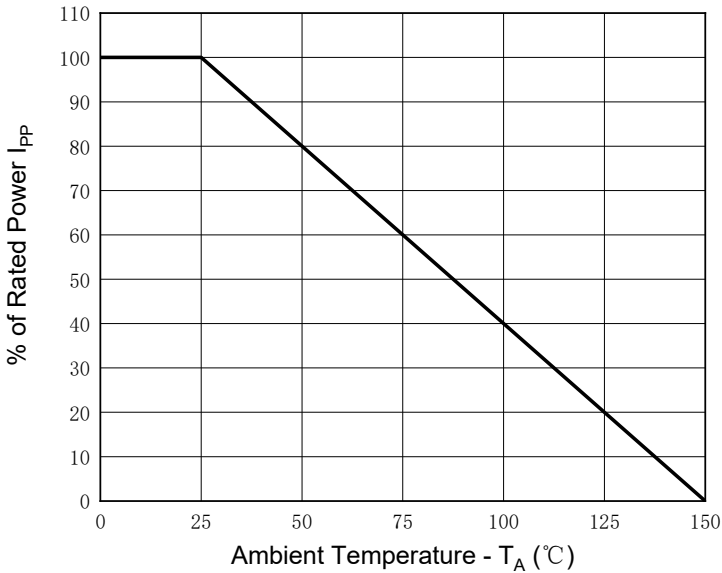


Fig.4: Capacitance vs. Bias

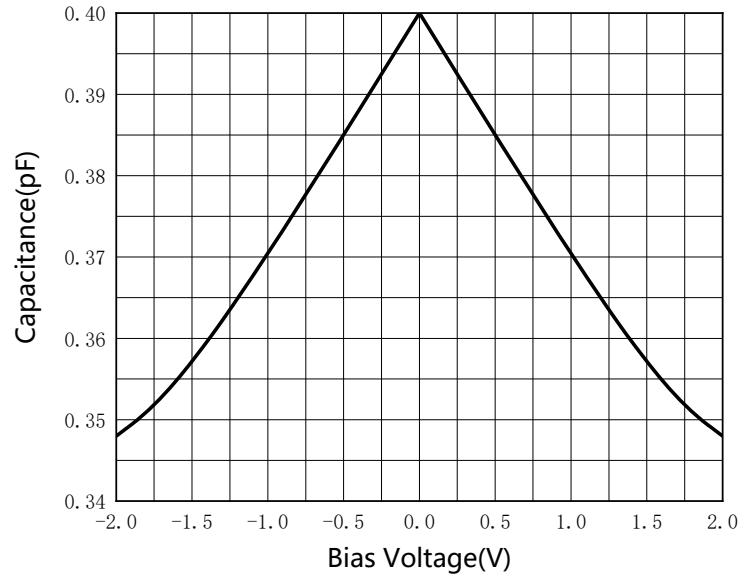
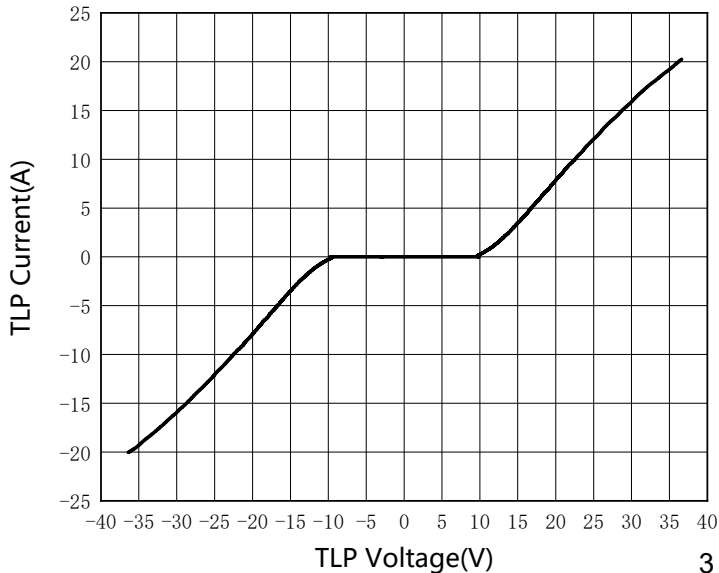


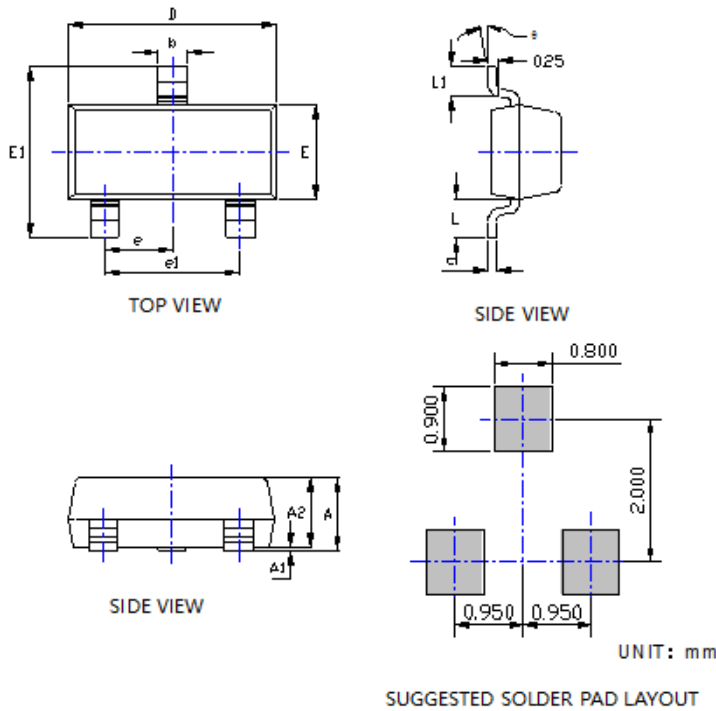
Fig.5: Transmission Line Pulsing (TLP) Plot





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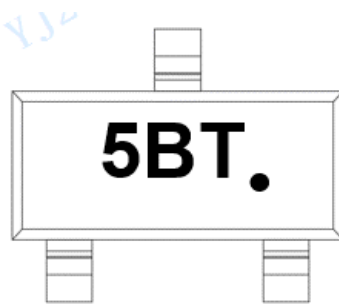
Outline Dimensions



SYMBOL	DIMENSIONS			
	INCHES		Millimeter	
	MIN.	MAX.	MIN.	MAX.
A	0.035	0.045	0.900	1.150
A1	0.000	0.004	0.000	0.100
A2	0.035	0.041	0.900	1.050
b	0.012	0.020	0.300	0.500
c	0.004	0.008	0.100	0.200
D	0.110	0.118	2.800	3.000
E	0.047	0.055	1.200	1.400
E1	0.089	0.100	2.250	2.550
e	0.037TYP		0.950TYP	
e1	0.071	0.079	1.800	2.000
L	0.022REF		0.550REF	
L1	0.012	0.020	0.300	0.500
θ	0°	8°	0°	8°

NOTE:
 1. PACKAGE BODY SIZES EXCLUDE MOLD FLASH AND GATE BURRS.
 2. TOLERANCE 0.1mm UNLESS OTHERWISE SPECIFIED.
 3. THE PAD LAYOUT IS FOR REFERENCE PURPOSES ONLY.

Marking Information



Note:

1. All marking is at middle of the product body
2. All marking is in laser marking
3. Body color: Black



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