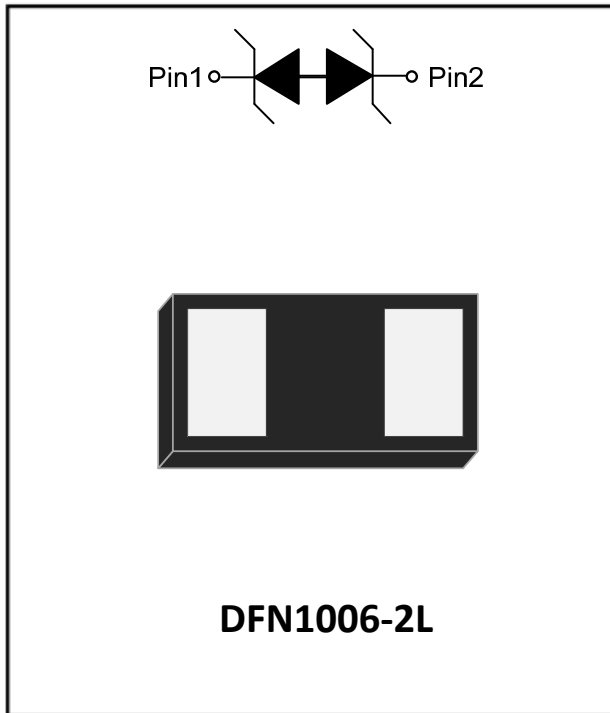


1- Line, Bi-directional, Ultra-low Capacitance, ESD protection diode



Features

- Transient protection for each line according to IEC61000-4-2(ESD): $\pm 15\text{kV}$ contact, $\pm 15\text{kV}$ air IEC61000-4-5:2A($t_p=8/20\mu\text{s}$)
- Ultra Low leakage current
- Ultra low clamping voltage
- Ultra low capacitance
- RoHS Compliant
- Part no. with suffix "Q" means AEC-Q101 qualified

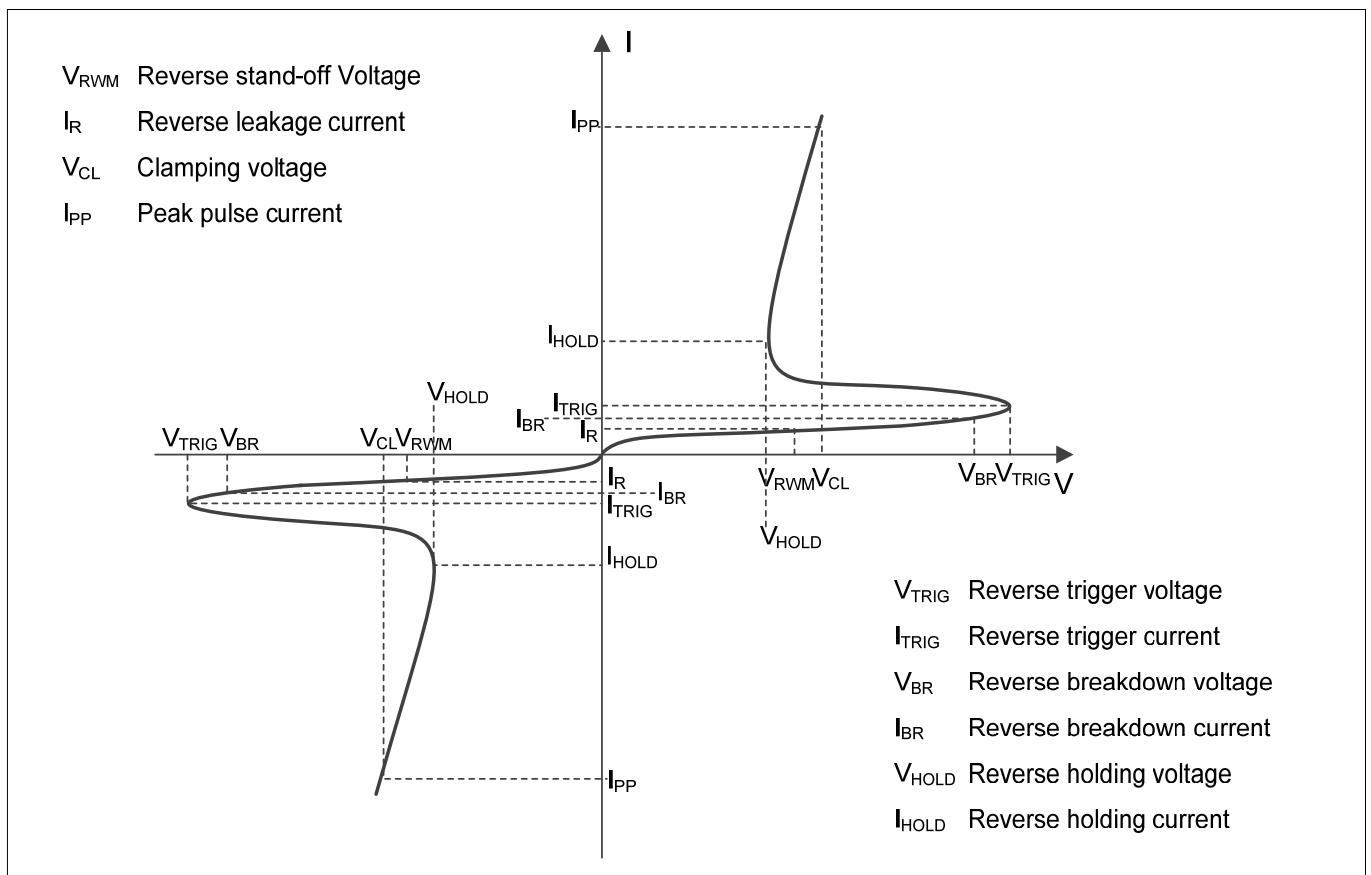
Applications

- Automotive applications

Mechanical Data

- Package: DFN1006-2L
- Lead Finish: Matte Tin
- Case Material: "Green" Molding Compound
- Moisture Sensitivity: Level 1 per J-STD-020

■ Definitions of electrical characteristics





ESDSLC18VLBQ

■Maximum Ratings

PARAMETER	SYMBOL	LIMITS	UNIT
Peak pulse power ($t_p = 8/20\mu s$)	P_{pk}	16	W
ESD according to IEC61000-4-2 air discharge	V_{ESD}	± 15	KV
ESD according to IEC61000-4-2 contact discharge		± 15	
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				18
Reverse breakdown voltage	V_{BR}	V	$I_{BR} = 1mA$	18.5	20	25
Reverse leakage current	I_R	nA	$V_{RWM} = 18V$		<1	50
Clamping voltage ¹⁾	V_C	V	$I_{PP} = 1A, t_p = 8/20\mu s$		5	7
			$I_{PP} = 2A, t_p = 8/20\mu s$		5.7	8
Dynamic resistance ²⁾	R_{DYN}	Ω			0.33	
Peak Pulse Current	I_{PP}	A	$t_p = 8/20\mu s$			2
Junction capacitance	C_J	pF	$V_R = 0V, f = 1MHz$		0.45	0.55

Notes:

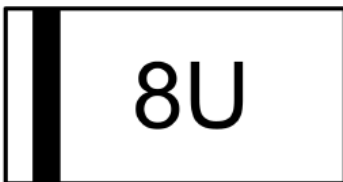
(1). Non-repetitive current pulse, according to IEC61000-4-5.

(2). TLP parameter: $Z_0 = 50\Omega$, $t_p = 100ns$, $t_r = 2ns$, averaging window from 60ns to 80ns. R_{DYN} is calculated from 4A to 16A

■Ordering Information (Example)

PREFERRED P/N	PACKING CODE	UNIT WEIGHT(mg)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
ESDSLC18VLBQ	F1	Approximate 0.9	10K	100K	400K	Tape&Reel

■ Marking Information



Note:

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



■ Characteristics (Typical)

Fig.1: 8/20 μ s Pulse Waveform

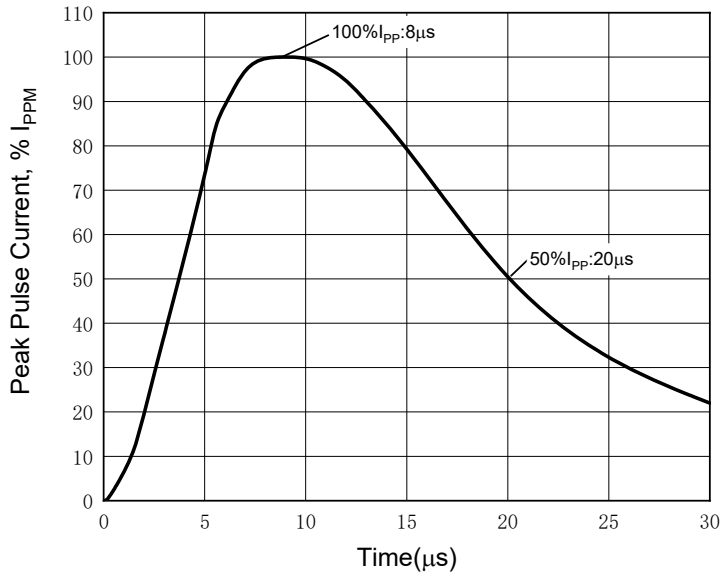


Fig.2: Peak Pulse Current vs Clamping Voltage

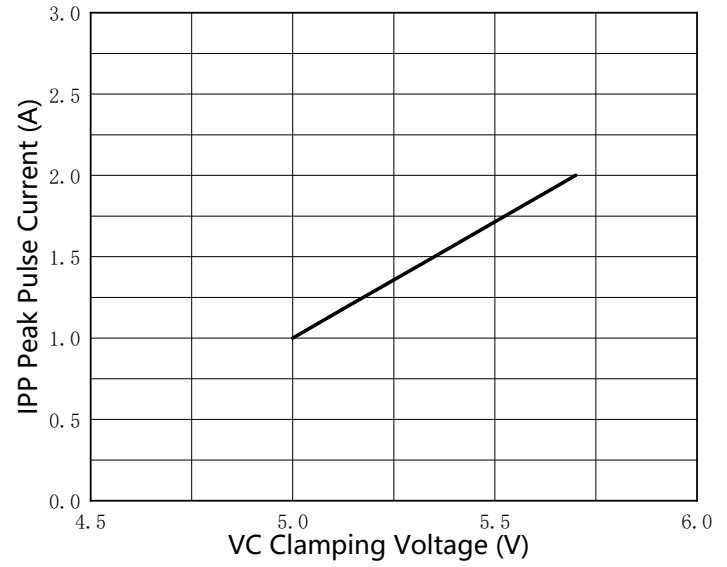


Fig.3: Capacitance vs. Bias

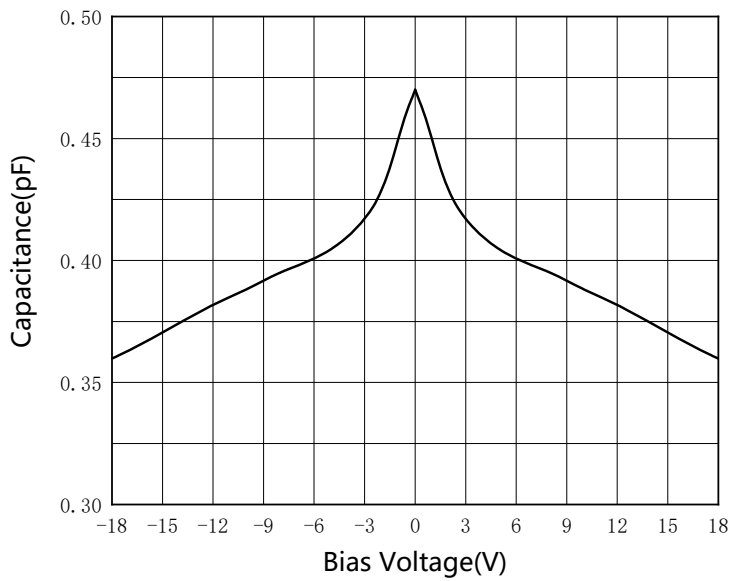
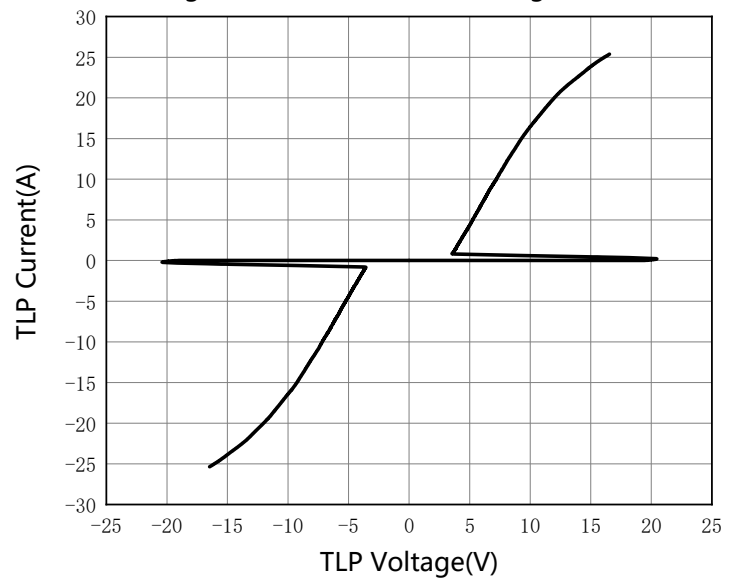


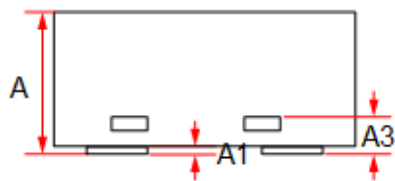
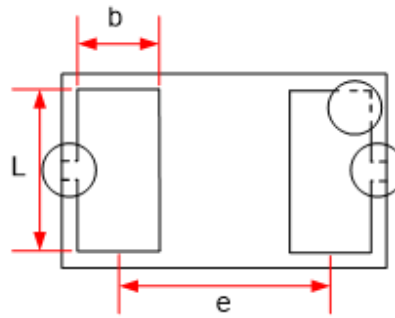
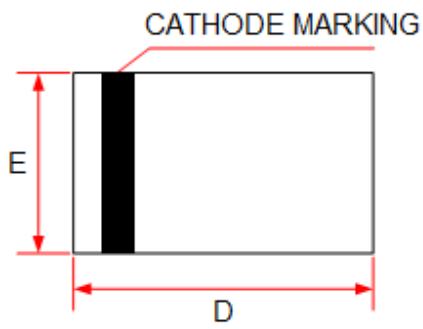
Fig.4: Transmission Line Pulsing (TLP) Plot





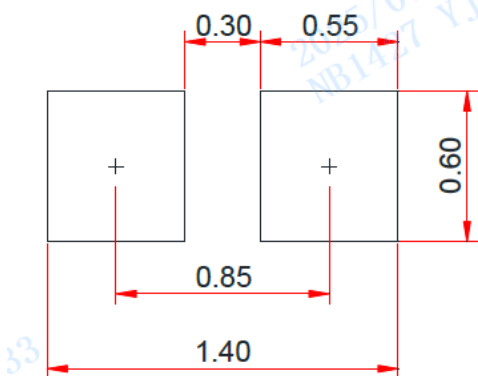
ESDSL18VLBQ

■ Outline Dimensions



Symbol	Dimensions in Millimeters		
	Min.	Typ.	Max.
A	0.340	0.450	0.530
A1	0.000	0.020	0.050
A3	0.125 Ref.		
D	0.950	1.000	1.080
E	0.550	0.600	0.680
b	0.200	0.250	0.300
L	0.450	0.500	0.550
e	0.650 BSC		

■ Recommended PCB Layout



Unit: mm



ESDSLC18VLBQ

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