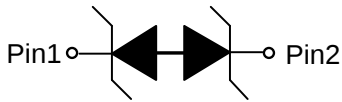


1- Line, Bi-directional, Low Capacitance, ESD protection diode



DFN1006-2L

Features

- Transient protection for each line according to IEC61000-4-2(ESD): $\pm 12\text{kV}$ contact, $\pm 15\text{kV}$ air IEC61000-4-5 (surge): $6.5\text{A}(t_p=8/20\mu\text{s})$
- Ultra Low leakage current
- Ultra low clamping voltage
- Low capacitance
- RoHS Compliant
- Part no. with suffix "Q" means AEC-Q101 qualified

Applications

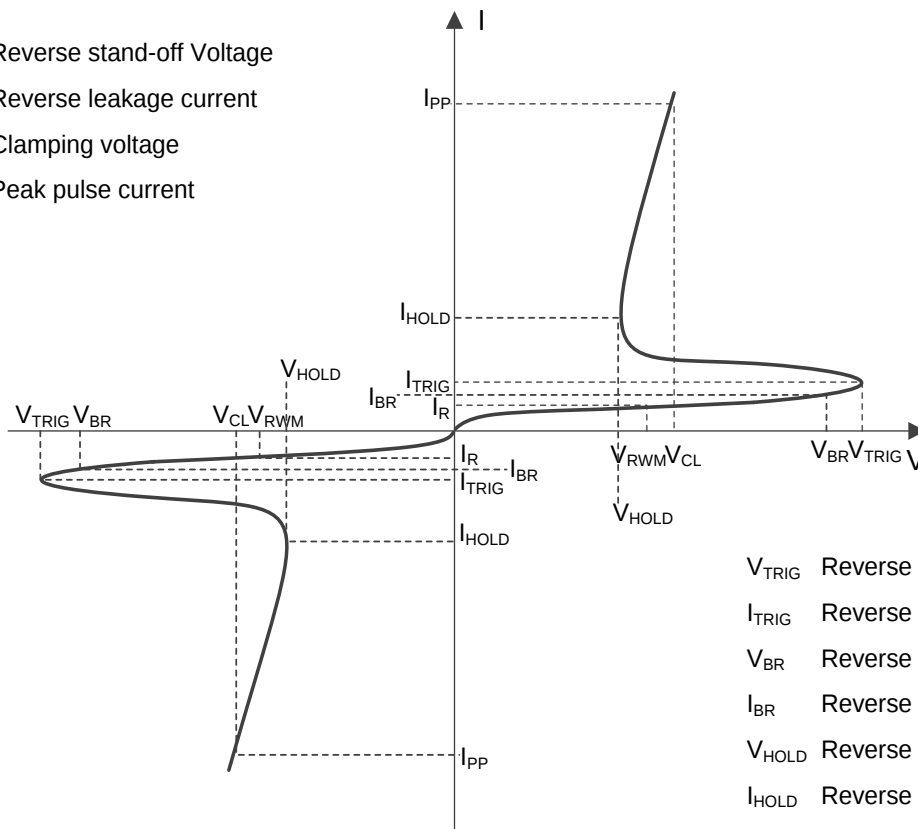
- Automotive applications

Mechanical Data

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

■ Definitions of electrical characteristics

V_{RWM} Reverse stand-off Voltage
 I_R Reverse leakage current
 V_{CL} Clamping voltage
 I_{PP} Peak pulse current



V_{TRIG} Reverse trigger voltage
 I_{TRIG} Reverse trigger current
 V_{BR} Reverse breakdown voltage
 I_{BR} Reverse breakdown current
 V_{HOLD} Reverse holding voltage
 I_{HOLD} Reverse holding current



SESDSLC5V5LBQ

■ Maximum Ratings

PARAMETER	SYMBOL	LIMITS	UNIT
Peak pulse power ($t_p = 8/20\mu s$)	P_{pk}	55	W
Peak Pulse Current($t_p = 8/20\mu s$)	I_{PP}	6.5	A
ESD according to IEC61000-4-2 air discharge	V_{ESD}	± 15	KV
ESD according to IEC61000-4-2 contact discharge		± 12	
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		-	-	5.5
Reverse breakdown voltage	V_{BR}	V	$I_{BR} = 1mA$	8	9	11
Reverse leakage current	I_R	nA	$V_{RWM} = 5.5V$	-	-	100
Clamping voltage ¹⁾	V_C	V	$I_{PP}=16A, t_p=100ns$	-	9.7	-
Dynamic resistance ¹⁾	R_{DYN}	Ω		-	0.4	-
Clamping voltage ²⁾	V_C	V	$V_{ESD}=8KV$	-	10	-
Clamping voltage ³⁾	V_C	V	$I_{PP}=5A, t_p=8/20\mu s$	-	5.5	7
			$I_{PP}=6.5A, t_p=8/20\mu s$	-	6.8	8.5
Junction capacitance	C_J	pF	$V_R = 0V, f = 1MHz$	-	0.35	0.45

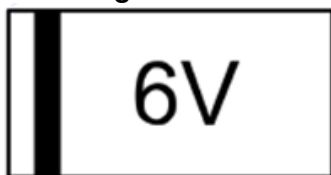
Notes:

- 1) 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.
- 2) Contact discharge mode, according to IEC61000-4-2.
- 3) 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
SESDSLC5V5LBQ	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

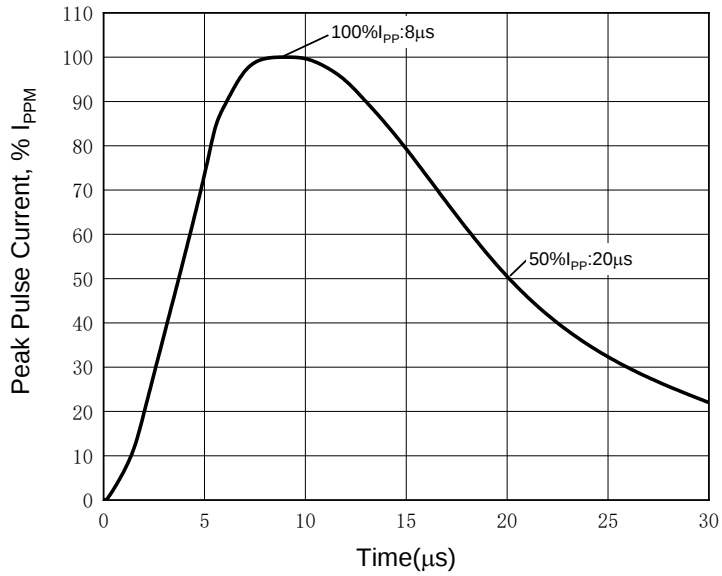


Fig2: Peak Pulse Current vs Clamping Voltage

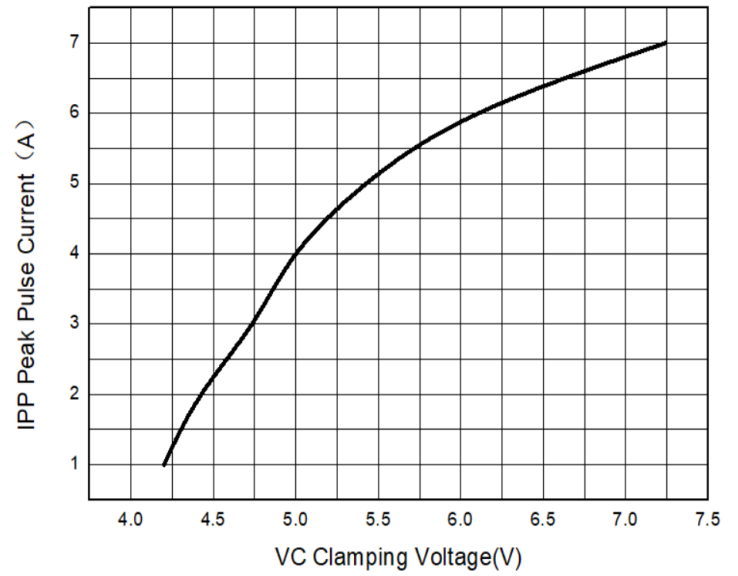


Fig3: Capacitance vs Bias

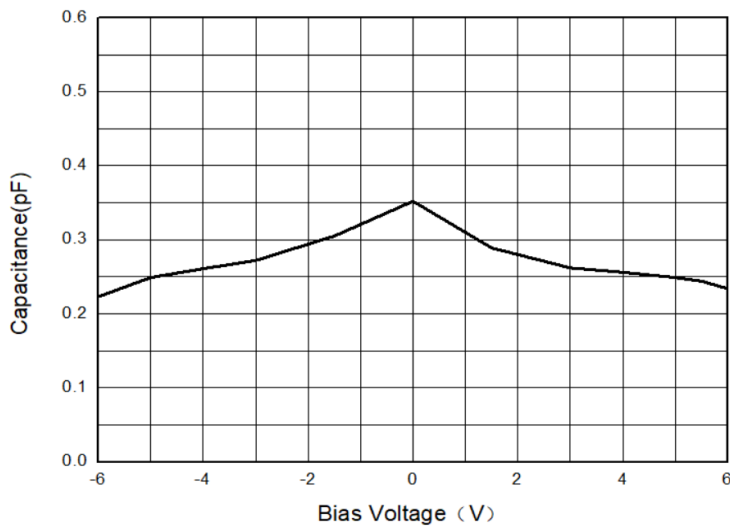
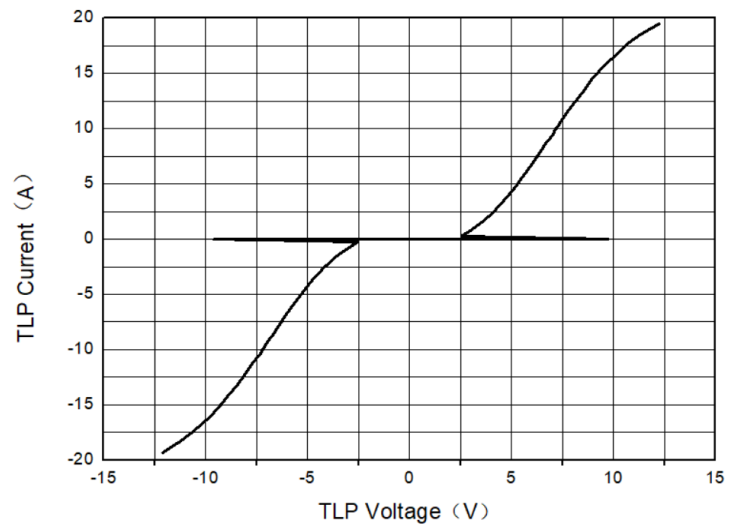


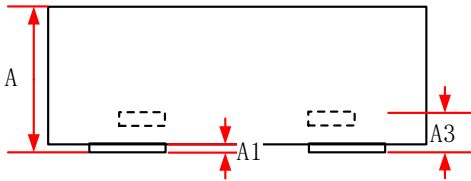
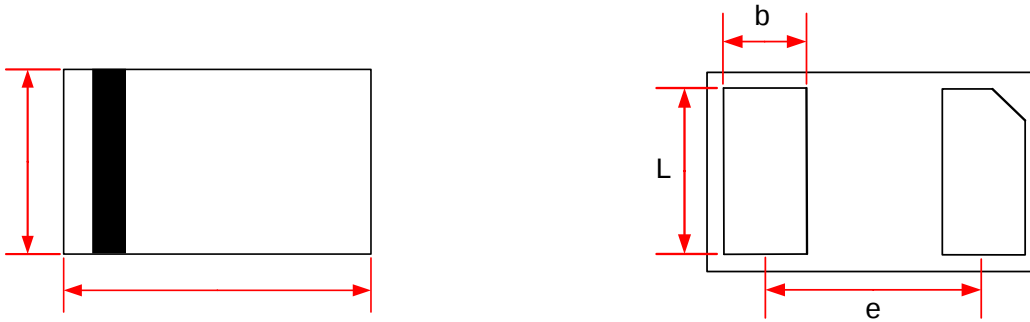
Fig4: Transmission Line Pulsing TLP Plot





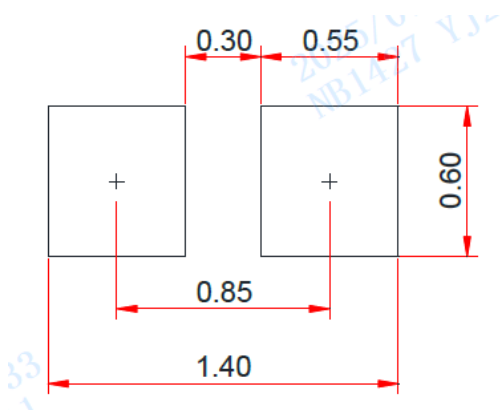
SESDSLC5V5LBQ

■ Outline Dimensions



Symbol	Dimensions in Millimeters		
	Min.	Typ.	Max.
A	0.400	0.450	0.500
A1	0.000	0.020	0.050
A3	0.125 Ref.		
D	0.950	1.000	1.050
E	0.550	0.600	0.650
b	0.200	0.250	0.300
L	0.450	0.500	0.550
e	0.650 BSC		

■ Recommended PCB Layout



Notes:

This recommended land pattern is for reference purposes only. Please consult your manufacturing group to ensure your PCB design guidelines are met.

Unit: mm



SESDSLC5V5LBQ

Disclaimer

The information presented in this document is for reference only. Yangzhou Yangjie Electronic Technology Co., Ltd. reserves the right to make changes without notice for the specification of the products displayed herein to improve reliability, function or design or otherwise.

The product listed herein is designed to be used with automotive electronics, are not designed for use in medical, life-saving, lifesustaining, or military. Yangjie or anyone on its behalf, assumes no responsibility or liability for any damages resulting from such improper use of sale.

This publication supersedes & replaces all information previously supplied. For additional information, please visit our website [http:// www.21yangjie.com](http://www.21yangjie.com) , or consult your nearest Yangjie's sales office for further assistance.