

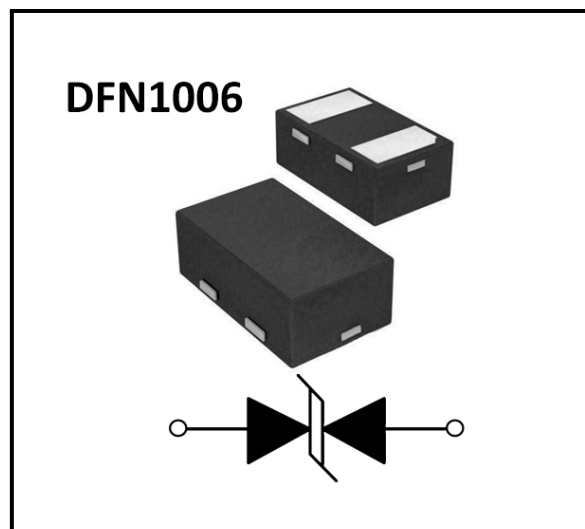
BSDFN2C601L

ESD Protection Diode

Features

- Protects In-vehicle networks line
- Bidirectional configurations
- High trigger voltage
- Low clamping Voltage
- Low leakage current
- IEC 61000-4-2 $\pm 25\text{kV}$ contact ; $\pm 25\text{kV}$ air
- IEC61000-4-4(EFT) 40A(5/50ns)

Package



Applications

- OPEN Alliance IEEE 100/1000BASE-T1 Ethernet
- Low-Voltage Differential Signaling (LVDS) automotive

Mechanical Characteristics

- DFN1006 package
- Molding compound flammability rating: UL 94V-0
- Packaging: Tape and Reel
- RoHS/WEEE Compliant

Marking



Ordering information

Order code	Package	Base qty	Delivery mode
BSDFN2C601L	DFN1006	3k	Tape and reel

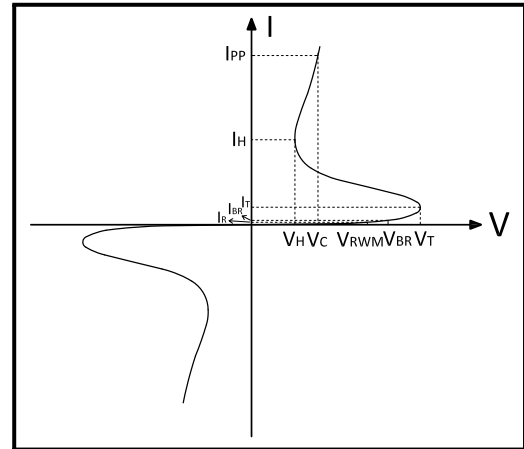


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ESD Protection Diode

Electrical Parameters ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Symbol	Parameter
I_{PP}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}
V_{RWM}	Peak Reverse Working Voltage
I_R	Reverse Leakage Current @ V_{RWM}
V_{BR}	Breakdown Voltage @ I_T
I_T	Test Current
V_T	Trigger voltage
V_H	Holding voltage
I_H	Holding Current



Note: 8/20us pulse Waveform.

Absolute Maximum Rating

Rating	Symler	Value	Units
ESD per IEC 61000-4-2 (Air)	V_{ESD}	25	KV
ESD per IEC 61000-4-2 (Contact)		25	
Lead Soldering Temperature	T_L	260(10seconds)	$^\circ\text{C}$
Junction Temperature	T_J	-55 to + 150	$^\circ\text{C}$
Storage Temperature	T_{stg}	-55 to + 150	$^\circ\text{C}$

Electrical Characteristics

Parameter	Symler	Conditions	Min.	Typical	Max.	Units
Reverse Stand-Off Voltage	V_{RWM}	$T_A = 25^\circ\text{C}$	—	—	60	V
Reverse Breakdown Voltage	V_{BR}	$I_{BR}=1\text{mA}$	100	—	—	V
Reverse leakage current	I_R	$V_{RWM}=60\text{V}, T_A=25^\circ\text{C}$	—	—	0.5	μA
Clamping Voltage	V_C	$I_{TLP}=4\text{A}, t_p = 0.2/100\text{ns}$	—	30	—	V
Clamping Voltage	V_C	$I_{TLP}=16\text{A}, t_p = 0.2/100\text{ns}$	—	33	—	V
diode capacitance	C_d	$f=1\text{MHz}; V_R=0\text{V}$	—	2.0	2.5	pF
ESD Dynamic Resistance	R_{DYN}	$TLP=0.2/100\text{ns}$	—	0.25	—	Ω



Typical Characteristics

Figure 1: Power Derating Curve

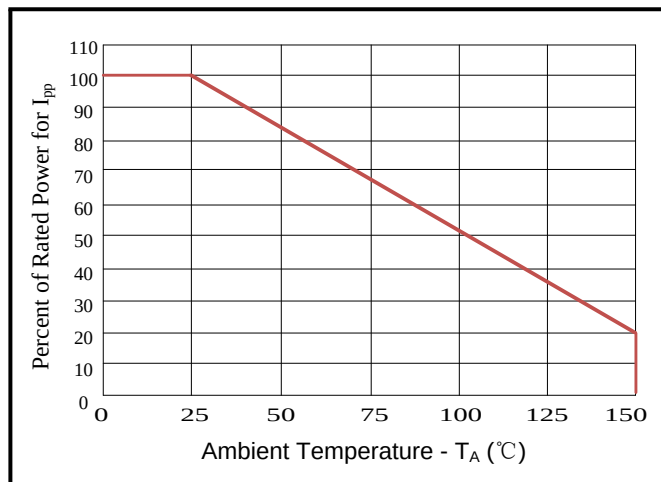


Figure 2: Pulse Waveform-ESD(IEC61000-4-2)

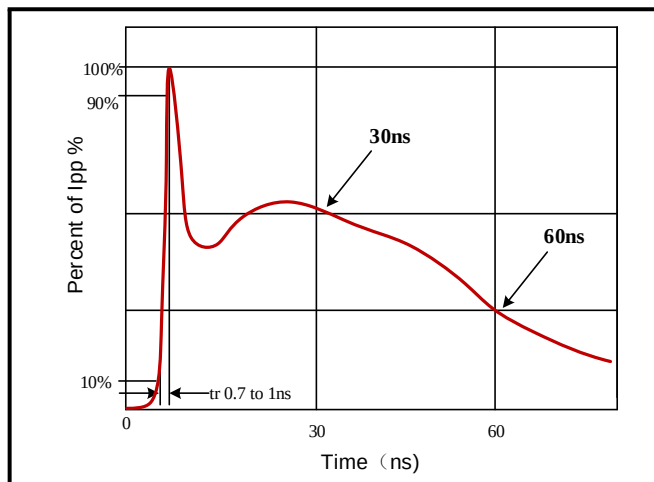


Figure 3: TLP Positive I-V Curve

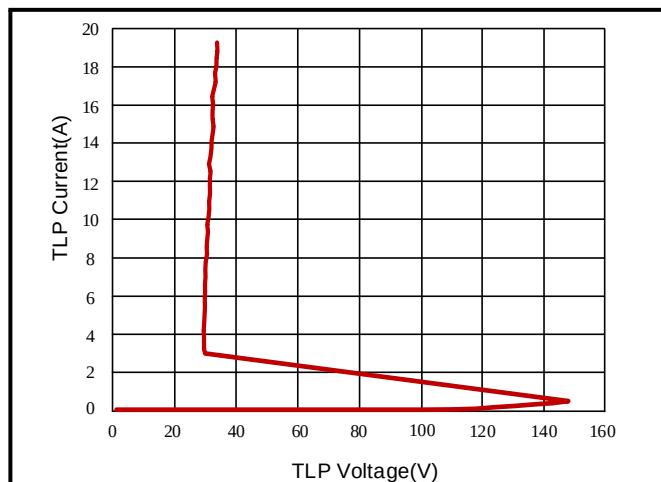
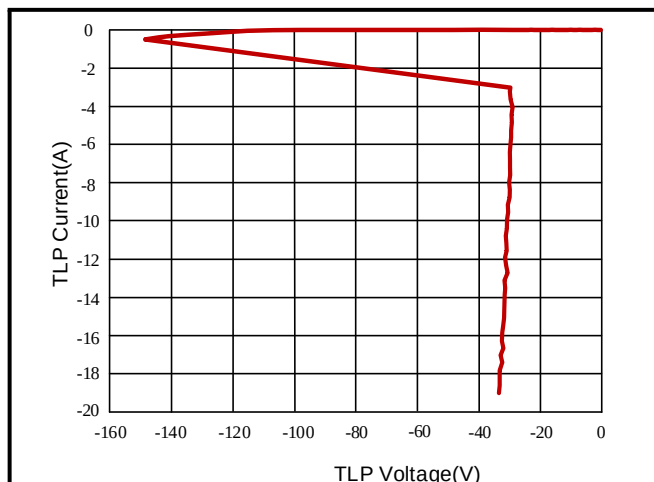


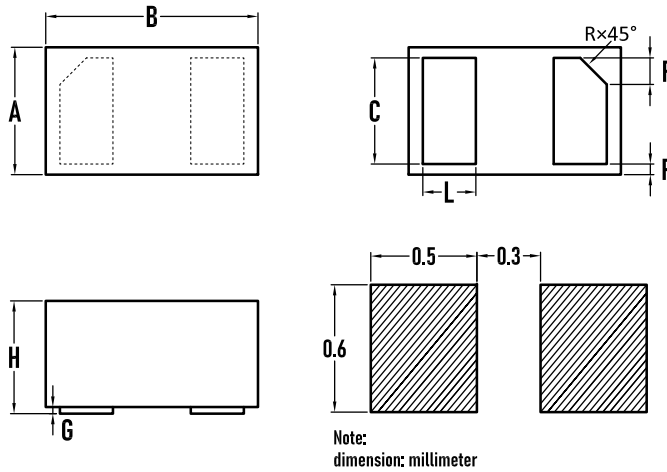
Figure 4: TLP Negative I-V Curve



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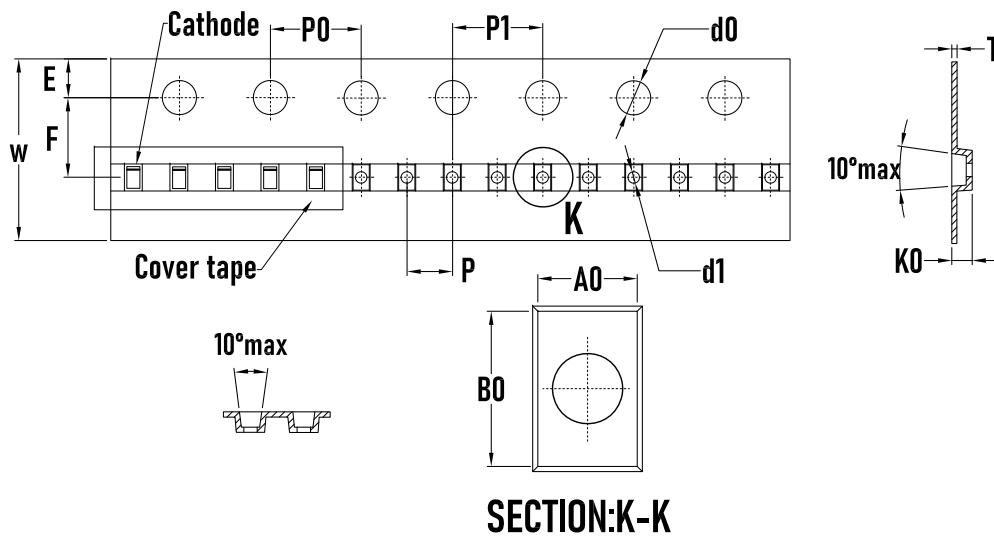
ESD Protection Diode

Outline Drawing - DFN1006



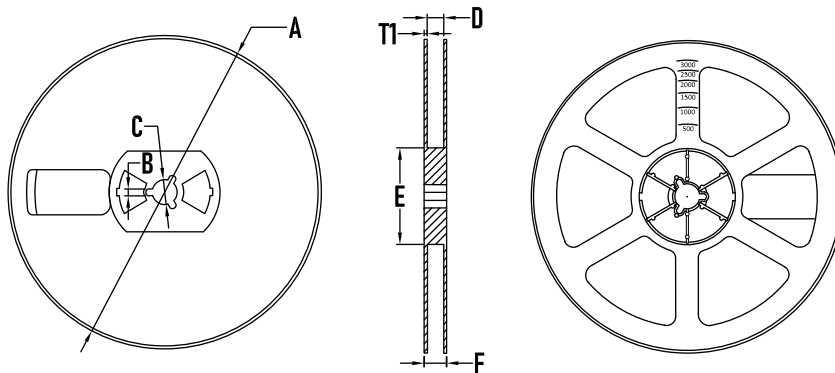
SYMBOL	MILLIMETER		
	MIN.	Typ.	MAX.
A	0.55	0.60	0.65
B	0.95	1.00	1.05
C	0.45	0.50	0.55
L	0.20	0.25	0.30
F	0.05REF		
G	0.00	0.02	0.05
H	0.45	0.50	0.55
R	0.07	0.12	0.17

Packaging Tape - DFN1006



SYMBOL	MILLIMETER
A0	0.71±0.05
B0	1.11±0.05
d0	1.5 ^{+0.1} ₋₀
d1	0.50±0.05
E	1.75±0.10
F	3.50±0.05
K0	0.56±0.05
P	2.00±0.05
P0	4.00±0.10
P1	2.00±0.05
W	8.00 ^{+0.03} _{-0.01}
T	0.2±0.015

Packaging Reel



SYMBOL	MILLIMETER
A	178±1
B	3.5±0.2
C	14.3±0.2
D	9.8 ⁺² ₋₁
E	54.5±0.5
F	12.4±0.2
T1	1.0±0.2
Quantity	10000PCS

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Specifications are subject to change without notice.

Please refer to <http://www.born-tw.com> for current information.

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