

ESDB206BP

Transient Voltage Suppressors

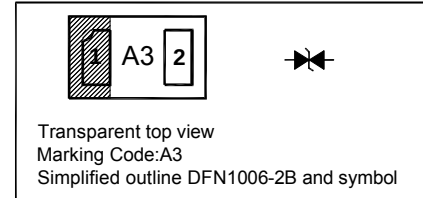
for ESD Protection

Features

- Low leakage current
- Bi-direction high reliability
- Medium capacitance

PINNING

PIN	DESCRIPTION
1	Anode
2	Anode



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

Parameter	Symbol	Value	Unit
Peak Pulse Current ($t_p = 8/20 \mu\text{s}$)	I_{PP}	6	A
ESD contact discharge (IEC61000-4-2) Air Contact	V_{ESD}	± 30 ± 30	KV
Operating Temperature Range	T_j	- 55 to + 125	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	- 65 to + 150	$^\circ\text{C}$

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

Parameter	Symbol	Min.	Typ.	Max.	Unit
Reverse Standoff Voltage	V_{RWM}	- 5.5	-	5.5	V
Breakdown Voltage at $I_R = 1 \text{ mA}$	V_{BR}	6	-	10	V
Reverse Current at $V_R = 5.5 \text{ V}$	I_R	-	-	50	nA
Clamping Voltage at $I_{PP} = 16 \text{ A}$, Pin 1 to Gnd at $I_{PP} = 30 \text{ A}$, Pin 1 to Gnd at $I_{PP} = 16 \text{ A}$, Gnd to Pin 1 at $I_{PP} = 30 \text{ A}$, Gnd to Pin 1 at $V_{ESD} = 8 \text{ KV}$, $t_p = 30 \text{ ns}$ at $I_{PP} = 1 \text{ A}$, $t_p = 8/20 \mu\text{s}$ at $I_{PP} = 6 \text{ A}$, $t_p = 8/20 \mu\text{s}$	V_{CL}	- - - - - - -	8 ¹⁾ 10.8 ¹⁾ 8.5 ¹⁾ 12.5 ¹⁾ 8 ²⁾ 7.5 9.6	- - - - - - -	V
Diode Capacitance at $V_R = 0 \text{ V}$, $f = 1 \text{ MHz}$	C_D	-	12	20	pF
Dynamic resistance Pin 1 to Gnd Gnd to Pin 1	R_{DYN}	- -	0.13 ¹⁾ 0.16 ¹⁾	- -	Ω

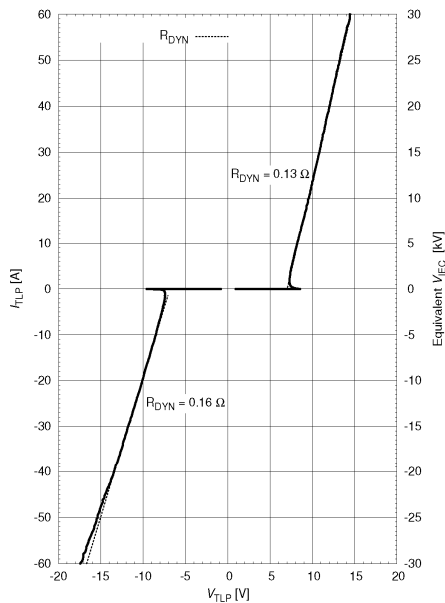
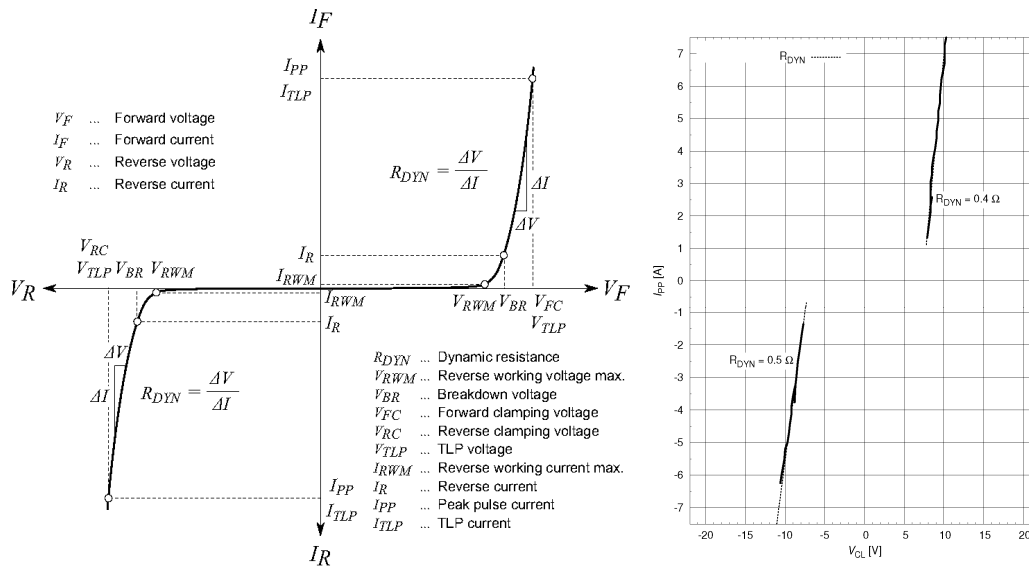
¹⁾ Electrostatic Discharge Sensitive Testing using Transmission Line Pulse (TLP) Model. TLP conditions: $Z_0 = 50 \Omega$, $t_p = 100 \text{ ns}$, $t_r = 0.6 \text{ ns}$, I_{TLP} and V_{TLP} averaging window: $t_1 = 30 \text{ ns}$ to $t_2 = 60 \text{ ns}$, extraction of dynamic resistance using least squares fit of TLP characteristic between $I_{TLP1} = 10 \text{ A}$ and $I_{TLP2} = 40 \text{ A}$.

²⁾ V_{ESD} according to IEC61000-4-2 ($R = 330 \Omega$, $C = 150 \text{ pF}$ discharge network)

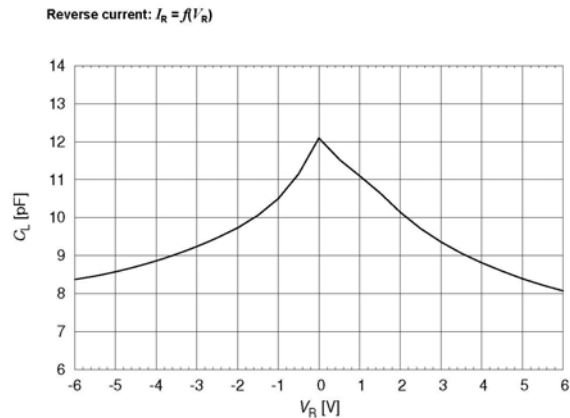
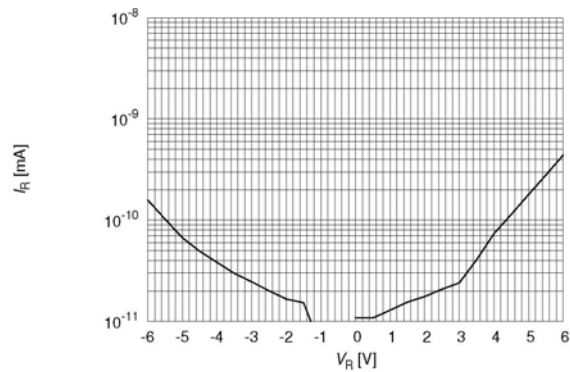
TOP DYNAMIC



Dated: 06/01/2016 Rev: 03



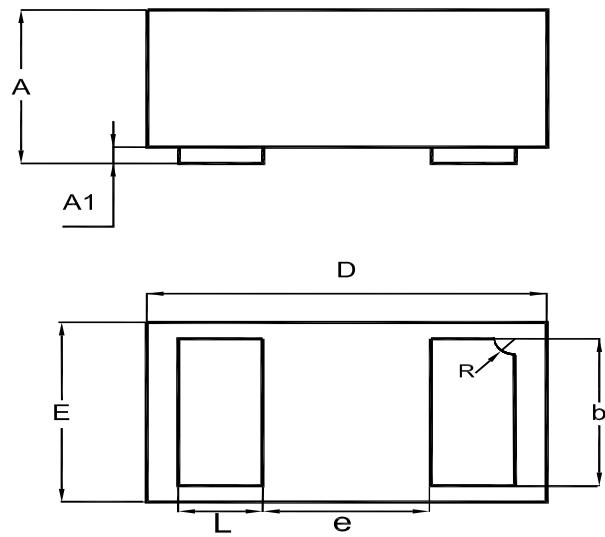
Electrostatic Discharge
 Sensitivity Testing using Transmission Line Pulse (TLP) Model. TLP conditions: $Z_0 = 50 \Omega$, $t_p = 100 \text{ ns}$, $t_r = 0.8 \text{ ns}$, I_{TLP} and V_{TLP} averaging window: $t_1 = \text{ns}$ to $t_2 = 60 \text{ ns}$, extraction of dynamic resistance using squares fit to TLP characteristics between $I_{TLP1} = 10 \text{ A}$ and $I_{TLP2} = 40 \text{ mA}$.



PACKAGE OUTLINE

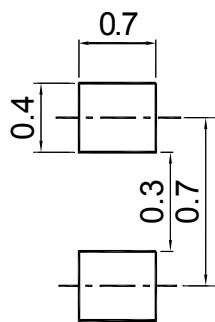
Plastic surface mounted package; 2 leads

DFN1006-2B



UNIT	A	A1	b	D	E	e	L	R
mm	0.40 0.36	0.05 0	0.55 0.45	1.05 0.95	0.65 0.55	0.4	0.3 0.2	0.15 0.05

Recommended Soldering Footprint



Packing information

Package	Tape Width (mm)	Pitch		Reel Size		Per Reel Packing Quantity
		mm	inch	mm	inch	
DFN1006-2B	8	4 ± 0.1	0.157 ± 0.004	178	7	5,000