

# ESDBL5V0CBBF

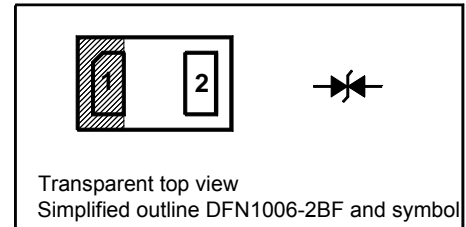
## ESD Protection Diode

### Features

- Low capacitance
- Low clamping voltage
- Low leakage current

### PINNING

PIN	DESCRIPTION
1	Anode
2	Anode



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

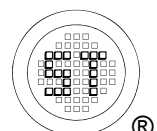
Parameter	Symbol	Value	Unit
Peak Pulse Power (tp = 8/20 $\mu\text{s}$ )	$P_{PK}$	65	W
Peak Pulse Current (tp = 8/20 $\mu\text{s}$ )	$I_{PP}$	3	A
IEC61000-4-2 (ESD) Air Contact	$V_{ESD}$	$\pm 15$ $\pm 10$	KV
Total Power Dissipation <sup>1)</sup>	$P_D$	150	mW
Operation Temperature Range	$T_j$	- 55 to + 125	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	- 55 to + 150	$^\circ\text{C}$

<sup>1)</sup> Device mounted on FR-4 substrate PC board, 2oz copper, with minimum recommended pad layout.

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

Parameter	Symbol	Min.	Typ.	Max.	Unit
Working Peak Reverse Voltage	$V_{RWM}$	-	-	5	V
Reverse Breakdown Voltage at $I_{PT} = 1 \text{ mA}$	$V_{BR}$	6	-	-	V
Reverse Current at $V_{RWM} = 5 \text{ V}$	$I_R$	-	-	1	$\mu\text{A}$
Clamping Voltage at $I_{PP} = 1 \text{ A}$ , tp = 8/20 $\mu\text{s}$ at $I_{PP} = 3 \text{ A}$ , tp = 8/20 $\mu\text{s}$	$V_C$	-	-	12.9 22	V
ESD Clamping Voltage at $I_{TLP} = 4 \text{ A}$ , tp = 0.2/100 ns at $I_{TLP} = 16 \text{ A}$ , tp = 0.2/100 ns	$V_{CL}$	-	16 30.2	-	V
Junction Capacitance at $V_R = 0 \text{ V}$ , f = 1 MHz	$C_j$	-	-	0.9	pF
Dynamic Resistance <sup>1)</sup>	$R_{dyn}$	-	1.2	-	$\Omega$

<sup>1)</sup> Dynamic Resistance calculated from  $I_{TLP} = 4 \text{ A}$  to  $I_{TLP} = 16 \text{ A}$ .



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## Electrical Characteristics Curves

Fig 1. Pulse Waveform

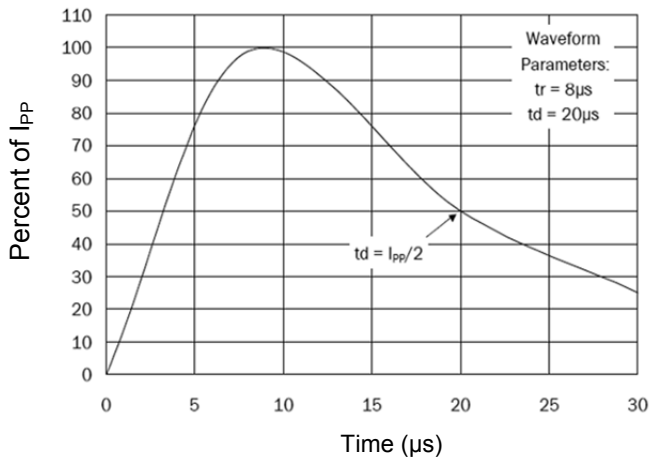


Fig 2. Power Derating Curve

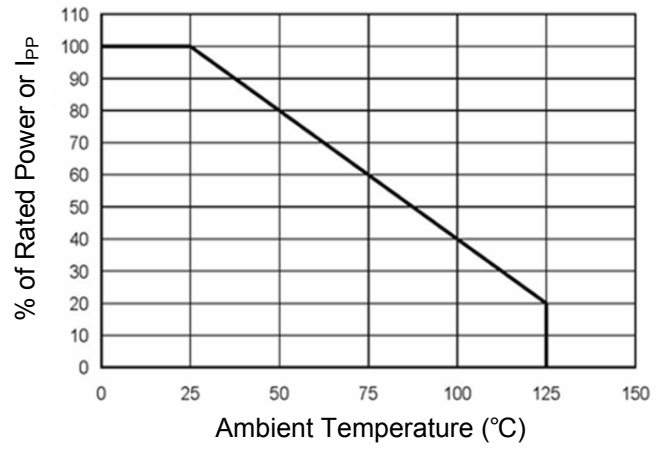


Fig 3. Clamping Voltage Curve

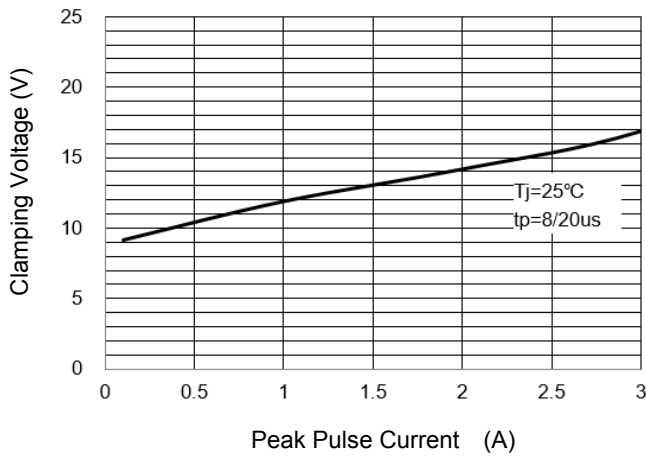


Fig 4. Junction Capacitance

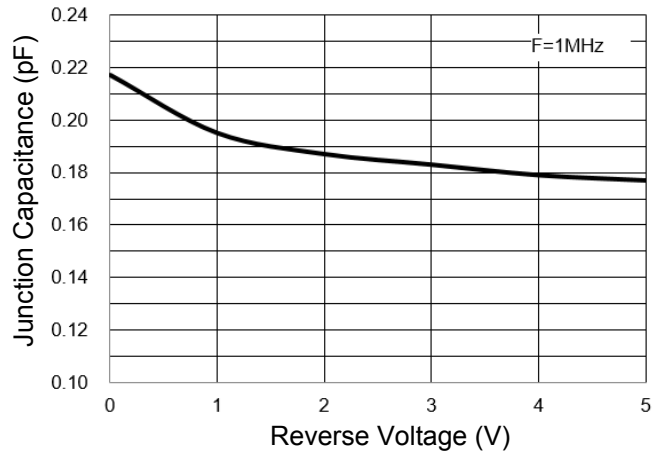
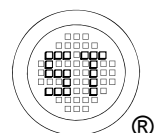
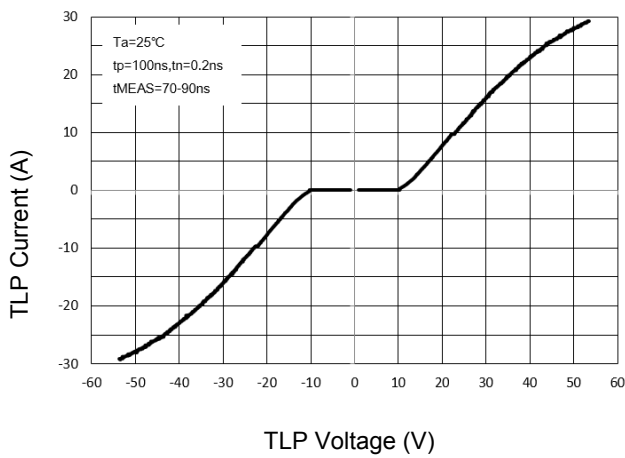


Fig 5 TLP Curve

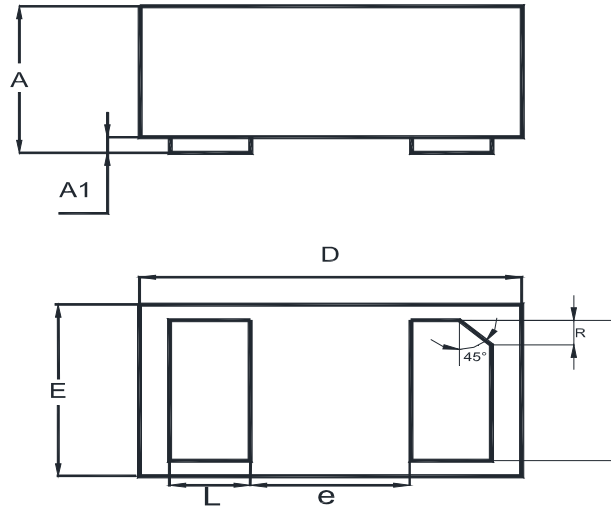


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## PACKAGE OUTLINE

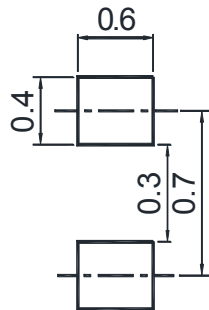
Plastic surface mounted package

DFN1006-2BF



UNIT	A	A1	b	D	E	e	L	R
mm	0.40 0.36	0.05 0	0.52 0.42	1.05 0.95	0.65 0.55	0.4	0.3 0.2	0.1 Typ.

### Recommended Soldering Footprint



### Packing information

Package	Tape Width (mm)	Pitch		Reel Size		Per Reel Packing Quantity
		mm	inch	mm	inch	
DFN1006-2BF	8	2 ± 0.1	0.079 ± 0.004	178	7	10,000

### Marking information

" N5 " = Part No.

Font type: Arial

