

EBL0501T

Low Profile , 1-Line ESD protection

Description

TVS arrays are designed to protect sensitive electronics from damage or latch-up due to ESD.

It is designed to replace multilayer varistors (MLVs) in portable applications such as cell phones, note- book computers, and other portable electronics. It features large cross-sectional area junctions for conducting high transient currents. They offer desirable characteristics for board level protection including fast response time, low operating and clamping voltage, and no device degradation.

Features

- Transient protection for data lines to IEC 61000-4-2 (ESD) $\pm 15\text{kV}$ (air), $\pm 8\text{kV}$ (contact) IEC 61000-4-4 (EFT) 40A (tp = 5/50ns)
- Cable Discharge Event (CDE)
- Ultra-small package (1.0 x 0.6 x 0.4mm)
- Protects one data line
- Low clamping voltage
- Working voltage: 5V
- Low leakage current
- Solid-state silicon-avalanche technology
- RoHS compliant package

Mechanical Data

- Molded DFN1006
- RoHS/WEEE Compliant
- Nominal Dimensions: 1.0 x 0.6 x 0.4 mm
- Lead Finish: NiPdAu
- Molding compound flammability rating: UL 94V-0
- Marking: Marking code, cathode band
- Packaging : Tape and Reel

Packing & Order Information

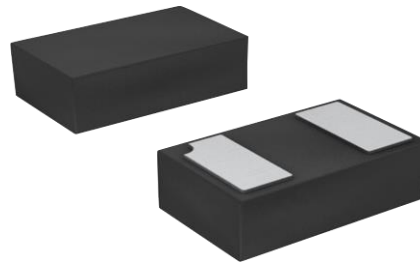
3,000/Reel

Applications:

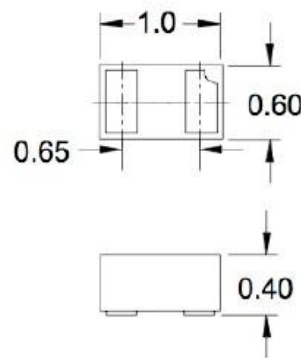
- Cellular Handsets & Accessories
- Personal Digital Assistants (PDAs)
- Notebooks & Handhelds
- Portable Instrumentation
- Digital Cameras
- Peripherals
- MP3 Players

Packing & Order Information

Shipping : 3,000/Reel

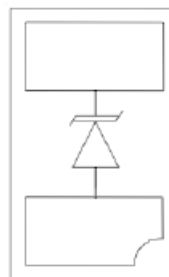


RoHS
COMPLIANT



Graphic symbol

DFN1006 package



EBL0501T

Low Profile , 1-Line ESD protection

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Maximum Ratings (Tc=25°C unless otherwise noted)

Symbol	Parameter	EBL0501T	Unit
Ppk	Peak Pulse Power (tp = 8/20µs)	25	W
Ipp	Maximum Peak Pulse Current (tp = 8/20µs)	2	A
VESD	ESD per IEC 61000-4-2 (Air)	+/- 20	KV
	ESD per IEC 61000-4-2 (Contact)	+/- 15	
TJ	Operating Temperature	-55 to +125	°C
TSTG	Storage Temperature	-55 to +150	°C

Absolute ratings (limiting value)

Symbol	Parameter	Conditions	Min	Typ.	Max.	Units
VRWM	Reverse Stand-Off Voltage				5	V
VBR	Reverse Breakdown Voltage	It=1mA	6			V
IR	Reverse Leakage Current	VRWM=5V , T=25°C			0.25	uA
VF	Forward Voltage	IF=10mA		1	1.2	V
VC	Clamping Voltage	IPP=2A , tp=8/20µs			12.5	V
Cj	Junction Capacitance	VR=0V , f=1 MHz			10	pF
Cj	Junction Capacitance	VR=3.3V , f=1 MHz		4.5		pF

EBL0501T

Low Profile , 1-Line ESD protection

Typical Device Characteristics

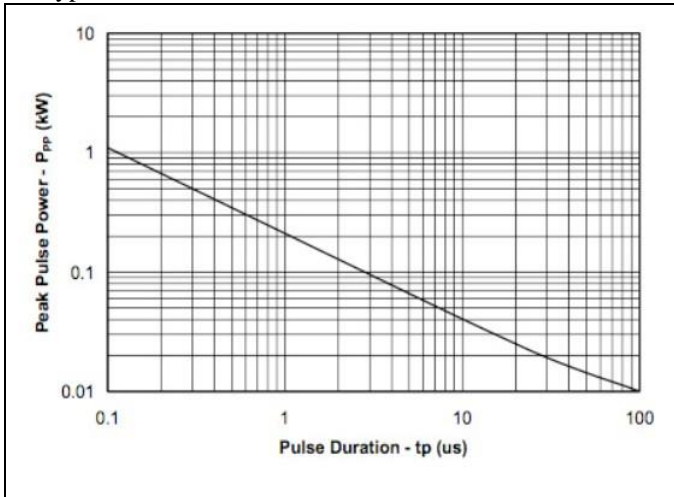


FIG.1-NON-REPETITIVE PEAK PULSE POWER VS. TIME

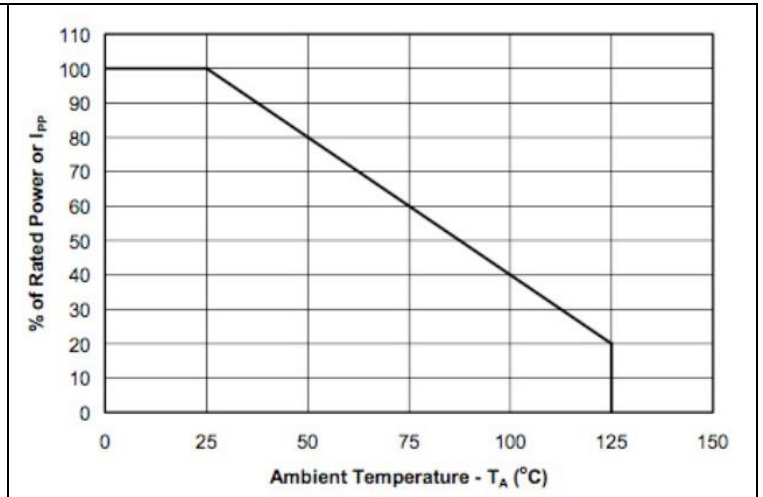


FIG.2-POWER DERATING CURVE

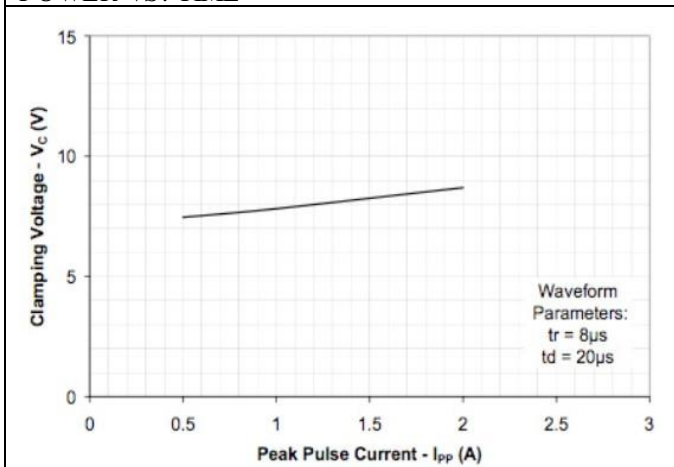


FIG.3-CLAMPING VOLTAGE VS. PEAK PULSE CURRENT

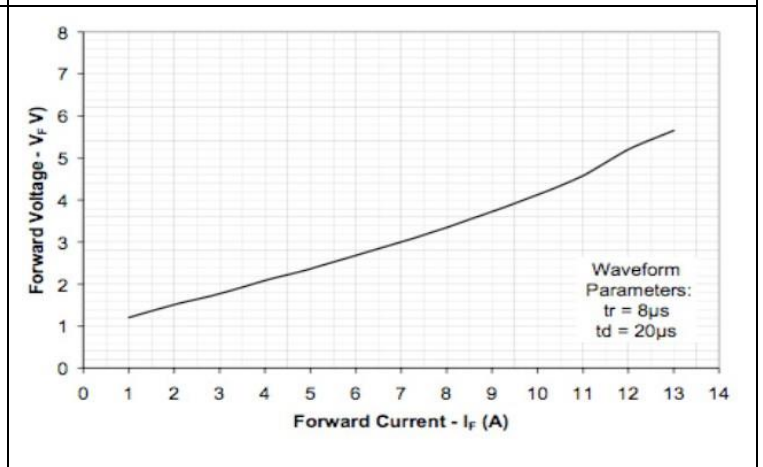


FIG.4-FORWARD VOLTAGE VS. FORWARD CURRENT

EBL0501T

Low Profile , 1-Line ESD protection

Disclaimer

ALL PRODUCT, PRODUCT SPECIFICATIONS AND DATA ARE SUBJECT TO CHANGE

WITHOUT NOTICE TO IMPROVE RELIABILITY, FUNCTION OR DESIGN OR OTHERWISE.

Bruckewell Technology Inc., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, "Bruckewell"), disclaim any and all liability for any errors, inaccuracies or incompleteness contained in any datasheet or in any other disclosure relating to any product.

Bruckewell makes no warranty, representation or guarantee regarding the suitability of the products for any particular purpose or the continuing production of any product. To the maximum extent permitted by applicable law, Bruckewell disclaims

- (i) Any and all liability arising out of the application or use of any product.
- (ii) Any and all liability, including without limitation special, consequential or incidental damages.
- (iii) Any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.

Statements regarding the suitability of products for certain types of applications are based on Bruckewell's knowledge of typical requirements that are often placed on Bruckewell products in generic applications.

Such statements are not binding statements about the suitability of products for a particular application. It is the customer's responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application. Parameters provided in datasheets and/or specifications may vary in different applications and performance may vary over time.

Product specifications do not expand or otherwise modify Bruckewell's terms and conditions of purchase, including but not limited to the warranty expressed therein.