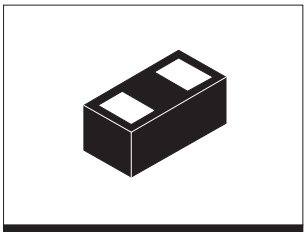
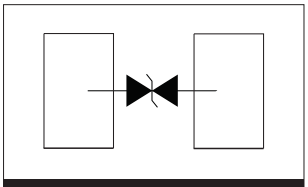
DESCRIPTION

The SE06F10B5.0UA is an ultra low capacitance ESD protection devices designed to protect high speed interfaces, It is designed to replace 0201 size mul-tilayer varistors(MLVs) in portable applications such as cellphones,notebook computers and other portable electronics. This device offers desirable characteristics for board level protection including fast response time,low operating and clamping voltages,and no device degradation,The SE06F10B5.0UA has a typical capacitance of only 0.25 pF,this allows it to be used in high-speed data lines.



DFN0603 PACKAGE



PIN CONFIGURATIONS

FEATURES

> 80 Watts Peak Pulse Power per Line (tp=8/20µs)
> Protects one bidirectional I/O line
> Working voltages : 5.0 V
> Low leakage current
> Low clamping voltage
> Ultra low capacitance

APPLICATIONS

> HDMI 1.3/1.4 and HDMI 2.0
> USB 2.0 and USB 3.0
> LVDS Interfaces
> FM Antenna
> PCI Express
> eSATA Interfaces
> MHL

IEC COMPATIBILITY

> IEC61000-4-2 (ESD) ±25kV (air), ±22kV (contact)
> IEC61000-4-4 (EFT) 40A (5/50ns)

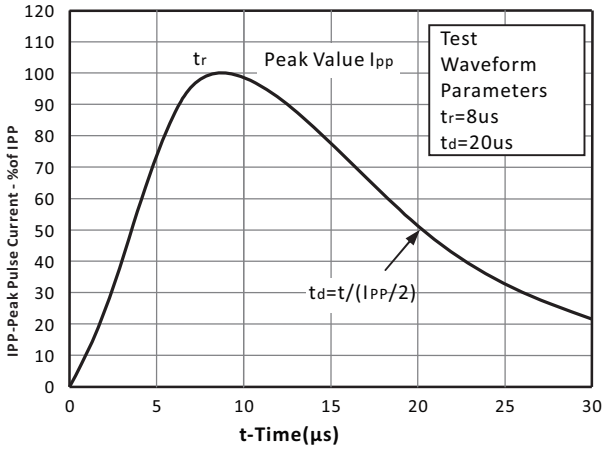
MAXIMUM RATINGS AND CHARACTERISTICS Ratings at 25°C ambient temperature unless otherwise specified.

RATING	SYMBOL	VALUE	UNITS
Peak Pulse Power (tp=8/20µs waveform).	P_{PPM}	80	Watts
Operating Temperature Range.	T_J	-55~+125	°C
Storage Temperature Range.	T_{STG}	-55~+150	°C
Stresses exceeding those listed in the Maximum Ratings table may damage the device. If any of these limits are exceeded, device functionality should not be assumed, damage may occur and reliability may be affected.			

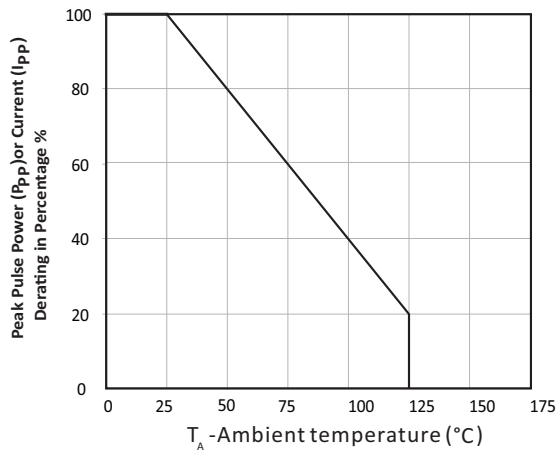
ELECTRICAL CHARACTERISTICS

Part Number	Reverse Stand-off Voltage Max. V_{RWM}(V)	Breakdown Voltage Min. V_{BR} (V)	Test Current I_T(mA)	Peak Pulse Current V_C(V) Max.	@A	Junction Capacitance Typ. C_T(PF)	Junction Capacitance Max. C_T(PF)	Reverse Leakage Max. I_R(µA)
SE06F10B5.0UA	5.0	7.0	1	20	4	0.25	0.40	1.0

CHARACTERISTIC CURVES



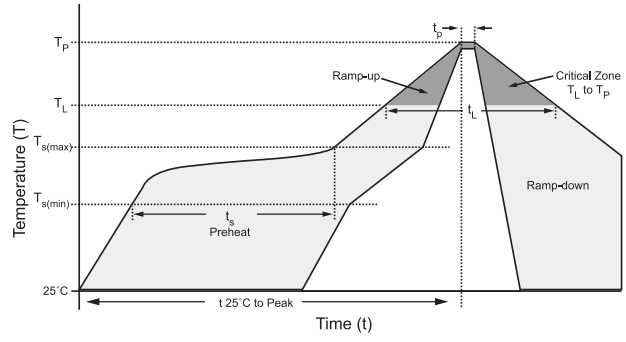
8/20μs Pulse Waveform



Power Derating Curve

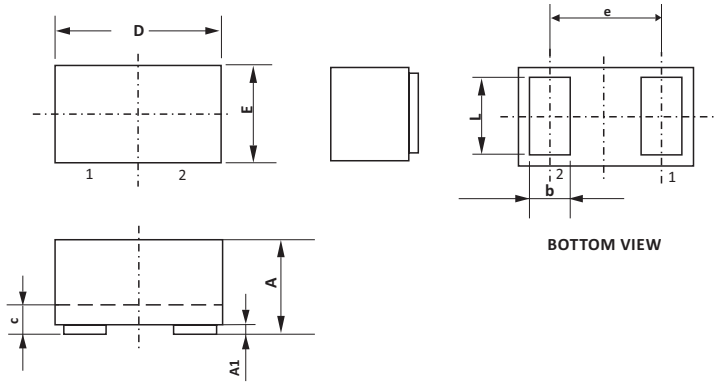
REFLOW PROFILE

Reflow Condition		Lead–free assembly
Pre Heat	Temperature Min (Ts(min))	150°C
	Temperature Max (Ts(max)	200°C
	Time (min to max) (ts)	60 – 180 secs
Average ramp up rate (Liquidus Temp (T_L) to peak		3°C/second max
Ts(max)to T_L - Ramp-up Rate		3°C/second max
Reflow	Temperature (T_L) (Liquidus)	217°C
	Time (min to max) (t_L)	60 – 150 seconds
Peak Temperature (T_P)		260°C
Time within 5°C of actual peak Temperature (tp)		20 – 40 seconds
Ramp-down Rate		6°C/second max
Time 25°C to peak Temperature (T_P)		8 minutes Max.
Do not exceed		260°C



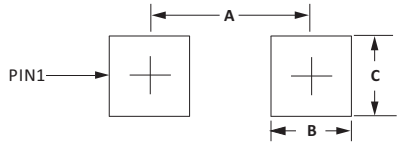
DFN0603 PACKAGE DIMENSIONS

OUTLINE DIMENSIONS				
DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	0.28	0.32	0.011	0.013
A1	0	0.05	0	0.002
b	0.13	0.24	0.005	0.009
c	0.05	0.15	0.002	0.006
D	0.55	0.65	0.022	0.026
e	0.35 BSC		0.014 BSC	
E	0.25	0.35	0.010	0.014
L	0.20	0.30	0.008	0.012



RECOMMENDED PAD LAYOUT DIMENSIONS

DIM	MILLIMETERS	INCHES
A	0.38	0.015
B	0.23	0.009
C	0.30	0.012



ORDERING INFORMATION

Part Number	Component Package	QTY/Reel	Reel Size
SE06F10B5.0UA	DFN0603	10000PCS	7"

CONTACT US

Headquarters
No.3387 Shendu Road Pujiang I&E Park Minhang Shanghai
China

Hotline
400-021-5756

Web
Http://www.semiware.com.cn

By Telephone
General: 86-21-3463-7172
Sales: 86-21-3463-7345
Technical Support: 86-21-34637172-8811

By Fax
General: 86-21-3965-0654
Sales: 86-21-3463-7458

By Email
General: china@semiware.com.cn
Sales: sales33@semiware.com.cn
Technical Support: fae03@semiware.com.cn

COPYRIGHT ©Semiware 2017 - This literature is subject to all applicable copyright laws and is not for resale in any manner.

SPECIFICATIONS: Semiware reserves the right to change the electrical and or mechanical characteristics described herein without notice.

DESIGN CHANGES : Semiware reserves the right to discontinue product lines without notice and that the final judgement concerning selection and specifications is the buyer's and that in furnishing engineering and technical assistance.Semiware assumes no responsibility with respect to the selection or specifications of such products.Semiware makes no warranty,representation or guarantee regarding the suitability of its products for any particular purpose, nor does Semiware assume any liability arising out of the application or use of any product or circuit and specifically disclaims any and all liability without limitation special,consequential or incidental damages.

LIFE SUPPORT POLICY: Semiware products are not authorized for use in life support systems without written consent from the factory