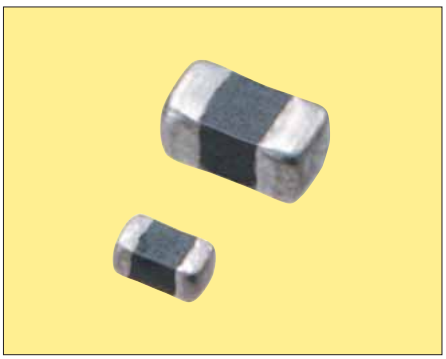


Pb Free RoHS Conforming

USB Series are designed to protect the high speed data lines against ESD transients. They have very low capacitance and fast turn on times that makes this series ideal for data and transmission lines with high data rates. The unique design enables these devices to meet the rigorous testing criteria of the IEC61000-4 standards.

Features

- Bi-directional device, similar to back-to-back Zener diodes plus an EMC capacitor in parallel.
- Low capacitance for high speed datalines.
- Protects against ESD to meet IEC61000-4-2 15kV (air) and 8kV (Contact).
- Available in EIA 0402/0603 (Single), 0405 (Dual), 0508 (Triple) and 0612 (Quad) cases.

Applications

- USB BUS Lines/Firewire Data BUS Lines
- I/O BUS Lines
- 10/100/1000 Ethernet Transmission Lines
- Video card Data Lines

How to Order

USB 0001 R P
① ② ③ ④

①Series
②Type

0001	0603(Single)	**0002**	0405(Dual)
0003	0508(Triple)	**0004**	0612(Quad)
0005	0402(Single, 3pF)	**0006**	0402(Single, 6pF)

③Packaging

D	7" Reel (1000pcs)
R	7" Reel (4000pcs)
T	13" Reel (10000pcs)

④Termination

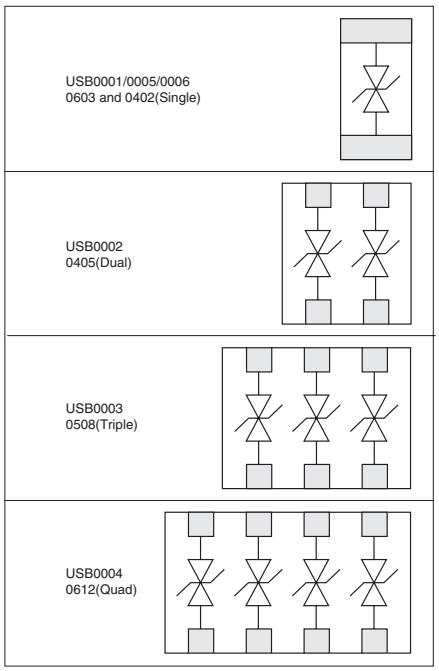
P	Ni/Sn100
X	Pt/Pd/Ag

USB Series

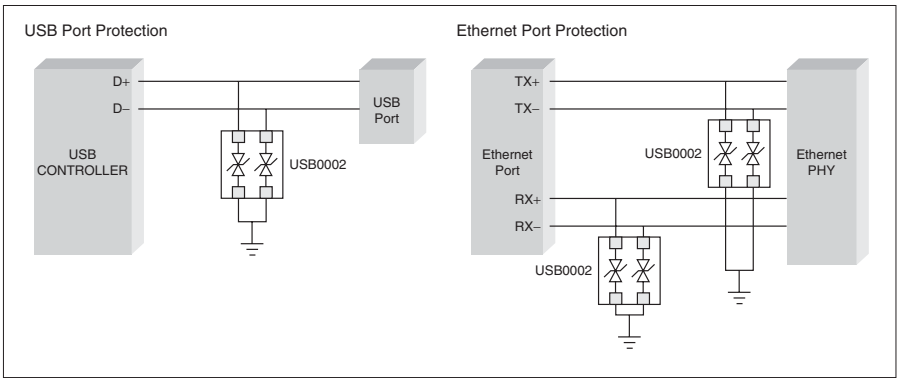
Part Number	V_W(DC)	V_W(AC)	V_B	V_B Tol	I_L	E_T	I_P	Cap	Case Size	Elements
USB0001	≤18V	≤14	65	±20%	2	0.015	4	10	0603	1
USB0002	≤18V	≤14	70	±20%	2	0.015	4	10	0405	2
USB0003	≤18V	≤14	180	±20%	2	0.015	4	10	0508	3
USB0004	≤18V	≤14	90	±20%	2	0.015	4	10	0612	4
USB0005	≤18V	≤14	250	±20%	2	0.015	4	3	0402	1
USB0006	≤18V	≤14	70	±20%	2	0.015	4	6	0402	1

V_W(DC) : DC Working Voltage [V]
V_W(AC) : AC Working Voltage [V]
V_B : Typical Breakdown Votage [V @ 1mA$_{DC}$]
V_B Tol : VB Tolerance is +/- from Typical Value
I_L : Maximum leakage current at the working voltage [μA]
E_T : Transient Energy Rating [J,10×1000μS]
I_P : Peak Current Rating [A,8×20μS]
Cap : Typical capacitance [pF]@1MHz and 0.5V$_{RMS}$

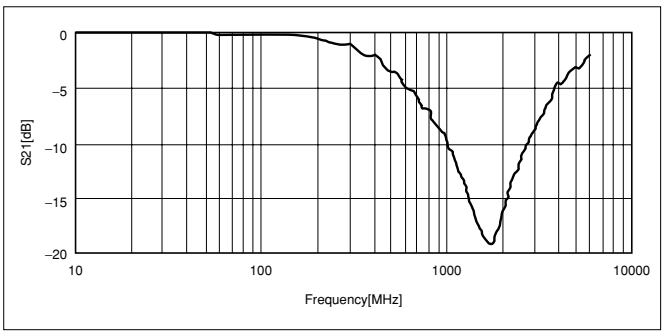
Equivalent Circuit



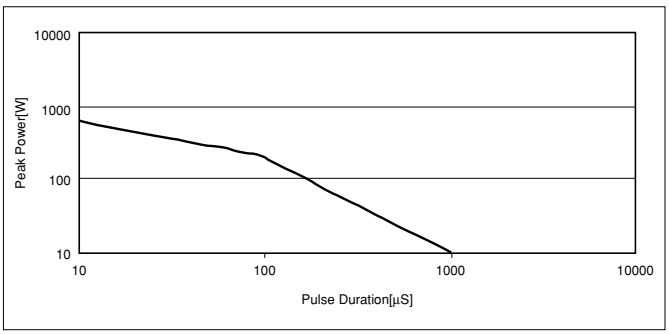
Applications



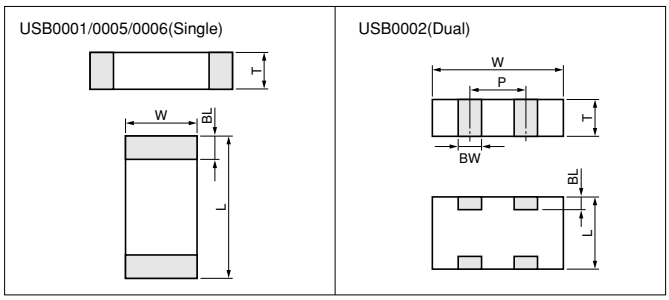
S21Characteristics

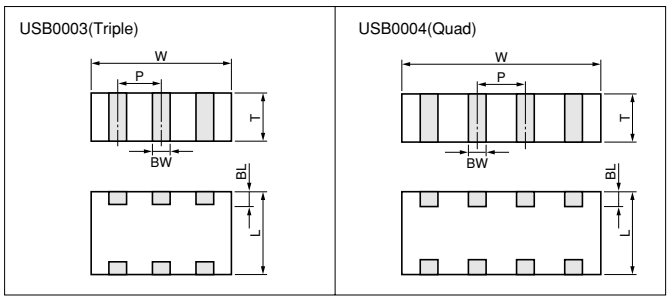


Pulse Rating

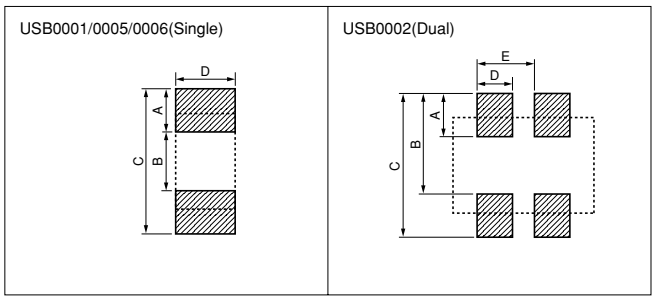


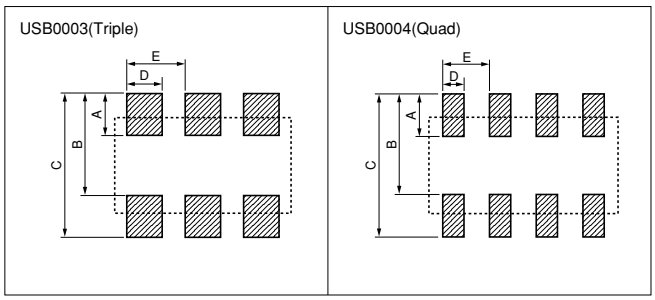
Dimensions





Recommended Land Patlern





Dimensions

(Unit : mm)

Type	L	W	T	BW	BL	P
USB0001	1.6±0.15	0.8±0.15	0.9max.	—	0.35±0.15	—
USB0002	1.00±0.15	1.37±0.15	0.66max.	0.36±0.10	0.20±0.10	0.64REF
USB0003	1.27±0.20	2.03±0.20	0.965max.	0.254±0.100	$0.18^{+0.25}_{-0.08}$	0.64REF
USB0004	1.60±0.20	3.20±0.20	1.22max.	0.41±0.10	$0.18^{+0.25}_{-0.08}$	0.76REF
USB0005	1.0±0.1	0.5±0.1	0.6max.	—	0.25±0.15	—
USB0006						

Land Dimensions

(Unit : mm)

Type	A	B	C	D	E
USB0001	0.89	0.76	2.54	0.76	—
USB0002	0.46	0.74	1.20	0.30	0.64
USB0003	0.64	1.27	1.91	0.28	0.51
USB0004	0.89	1.65	2.54	0.46	0.76
USB0005	0.61	0.51	1.70	0.51	—
USB0006					