

## Features

- Ultra-Low capacitance:0.05pF(typ.)
- Low leakage current(<100nA)
- Fast response time(<1ns)
- Bi-directional,single line protection
- IEC 61000-4-2 (ESD Air): 15kV
- IEC 61000-4-2 (ESD Contact): 8kV

## Applications

- USB 3.0/3.1
- HDMI 1.3/1.4/2.0
- RF Antenna
- SATA and eSATA Interface

## Pin Description



## Schematic Diagram



## Order Information

Type	Package	Size (mm)	Delivery Form	Delivery Quantity
WEP040PCR0201	0201	0.60x0.30x0.32	7" T&R	15,000

## Limiting Values(TA = 25 °C, unless otherwise specified)

Symbol	Parameter	Conditions	Min	Max	Unit
V <sub>ESD</sub>	Electrostatic Discharge Voltage	IEC 61000-4-2; Contact Discharge	-	8	kV
		IEC 61000-4-2; Air Discharge	-	15	kV
T <sub>A</sub>	Operating Temperature Range	-	-55	125	°C
T <sub>stg</sub>	Storage Temperature Range	-	-40	85	°C

## Electrical Characteristics(TA = 25 °C unless otherwise specified)

Symbol	Parameter	Conditions	Min	Typ.	Max	Unit
V <sub>DC</sub>	Continuous Operating Voltage	-	-	-	4.0	V
V <sub>T</sub>	Trigger Voltage	IEC61000-4-2 8kV contact discharge	-	450	-	V
V <sub>C</sub>	Clamping Voltage	IEC61000-4-2 8kV contact discharge	-	40	-	V
I <sub>L</sub>	Leakage Current	DC 4V shall be applied on component	-	-	100	nA
C <sub>J</sub>	Capacitance	Measured at 10MHz	-	0.05	-	pF

Typical Characteristics

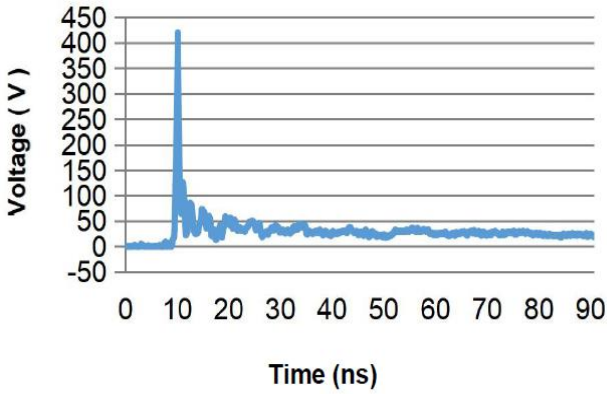


Fig.1 Typical ESD Response  
(IEC 61000-4-2, 8kV contact discharge)

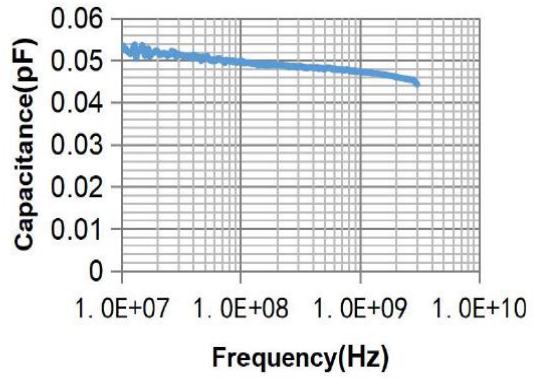


Fig.2 Typical Device Capacitance VS. Frequency

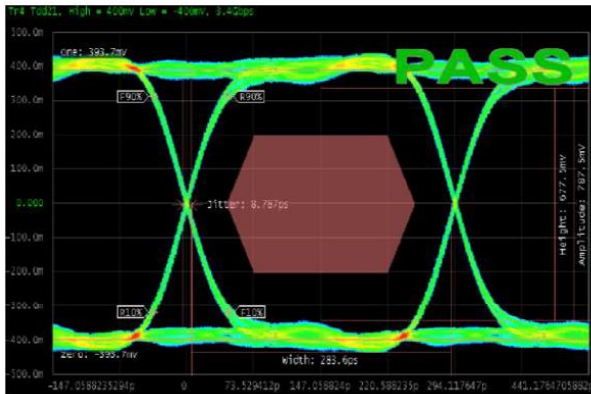


Fig.3 HDMI 1.4 Mask at 3.4 Gbps

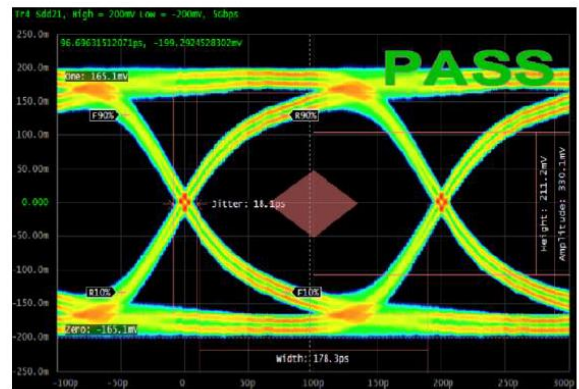


Fig.4 USB 3.0 Mask at 5.0 Gbps

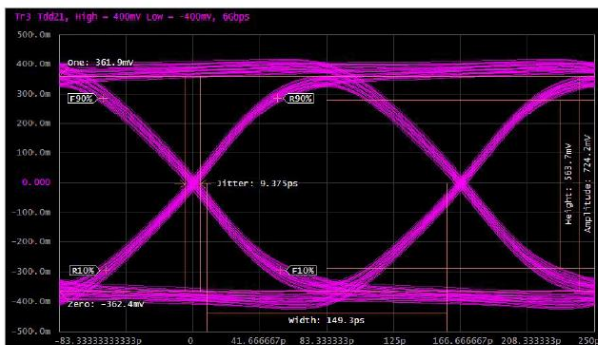
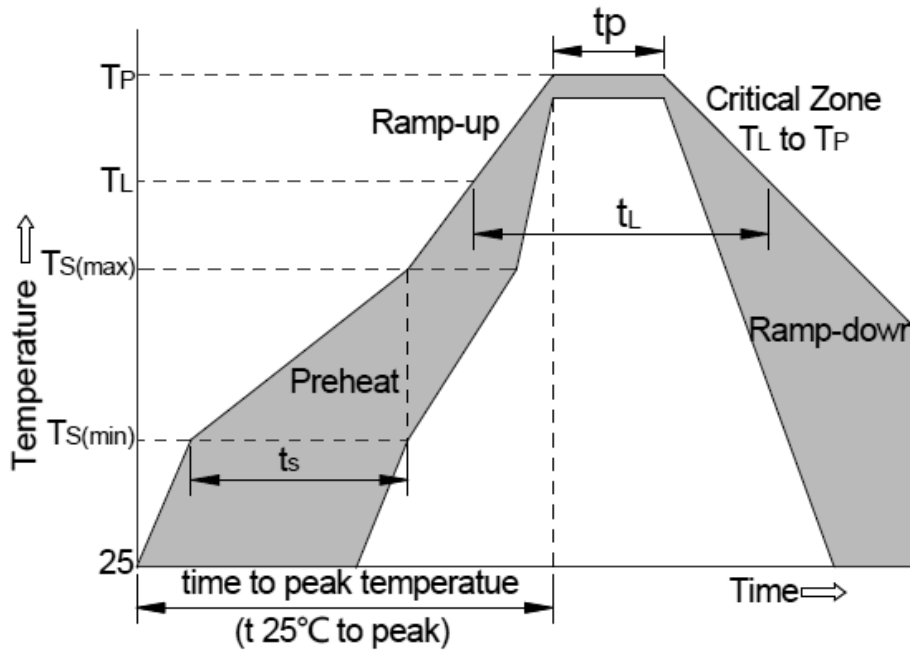


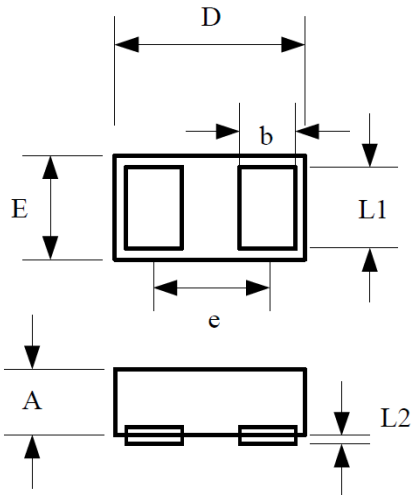
Fig.3 HDMI 2.0 Mask at 6.0 Gbps

Soldering Parameters

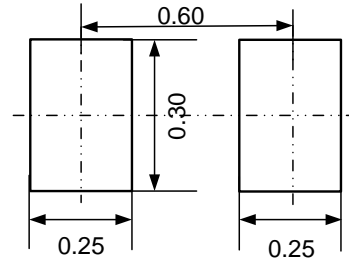


Reflow Condition		Pb-Free Assembly
Pre-heat	-Temperature Min ( $T_{s(min)}$ )	+150°C
	-Temperature Max( $T_{s(max)}$ )	+200°C
	-Time (Min to Max) ( $t_s$ )	60-180 secs.
Average ramp up rate (Liquid us Temp ( $T_L$ ) to peak)		3°C/sec. Max
$T_{s(max)}$ to $T_L$ - Ramp-up Rate		3°C/sec. Max
Reflow	-Temperature( $T_L$ )(Liquid us)	+217°C
	-Temperature( $t_L$ )	60-150 secs.
Peak Temp ( $T_p$ )		+260(+0/-5)°C
Time within 5°C of actual Peak Temp ( $t_p$ )		30 secs. Max
Ramp-down Rate		6°C/sec. Max
xTime 25°C to Peak Temp ( $T_P$ )		8 min. Max
Do not exceed		+260°C

**Product Dimensions**



**Recommended Solder Pad Footprint**



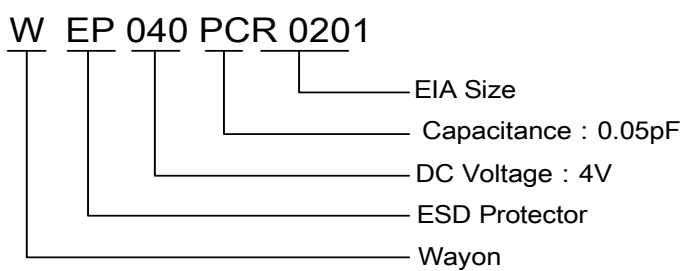
**\*Sizes in mm**

Notes:

This solder pad layout is for reference purposes only.

Dimension	Unit: Millimeters	
	Min.	Max.
A	0.25	0.40
b	0.15	0.20
D	0.50	0.70
E	0.25	0.35
e	0.45BSC	
L1	0.20	0.30
L2	0.00	0.05

**Part Numbering System**



**Package Information**

Qty: 15kpcs/Reel

**Contact Information**

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For additional information, please contact your local Sales Representative.

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*Specifications are subject to change without notice.  
 The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time.  
 Users should verify actual device performance in their specific applications.*