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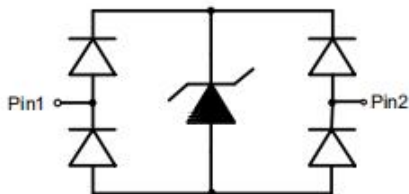
/ Descriptions

DFN0603 ESD

DFN0603 Plastic Package 1-Line,Bi-directional , ESD Protection Diode.

/ Features

- ◆ Stand-off voltage: 5V Max.
 - ◆ Transient protection for each line according to IEC61000-4-2(ESD): $\pm 15\text{kV}$ (contact)
IEC61000-4-5(surge): 4A (8/20 μs)
 - ◆ Ultra-low capacitance: $C_J = 0.4\text{pF}$ typ.
 - ◆ Ultra-low leakage current: $I_R < 1\text{nA}$ typ.
 - ◆ Low clamping voltage: $V_{CL} = 8.0\text{V}$ typ. @ $I_{PP} = 16\text{A}$ (TLP)
 - ◆ Solid-state silicon technology
 - ◆ HF Product
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- ◆ USB 2.0 and USB 3.0
 - ◆ HDMI 1.3, HDMI 1.4 and HDMI 2.0
 - ◆ SATA and eSATA interface
 - ◆ DVI
 - ◆ IEEE 1394
 - ◆ Portable Electronics and Notebooks

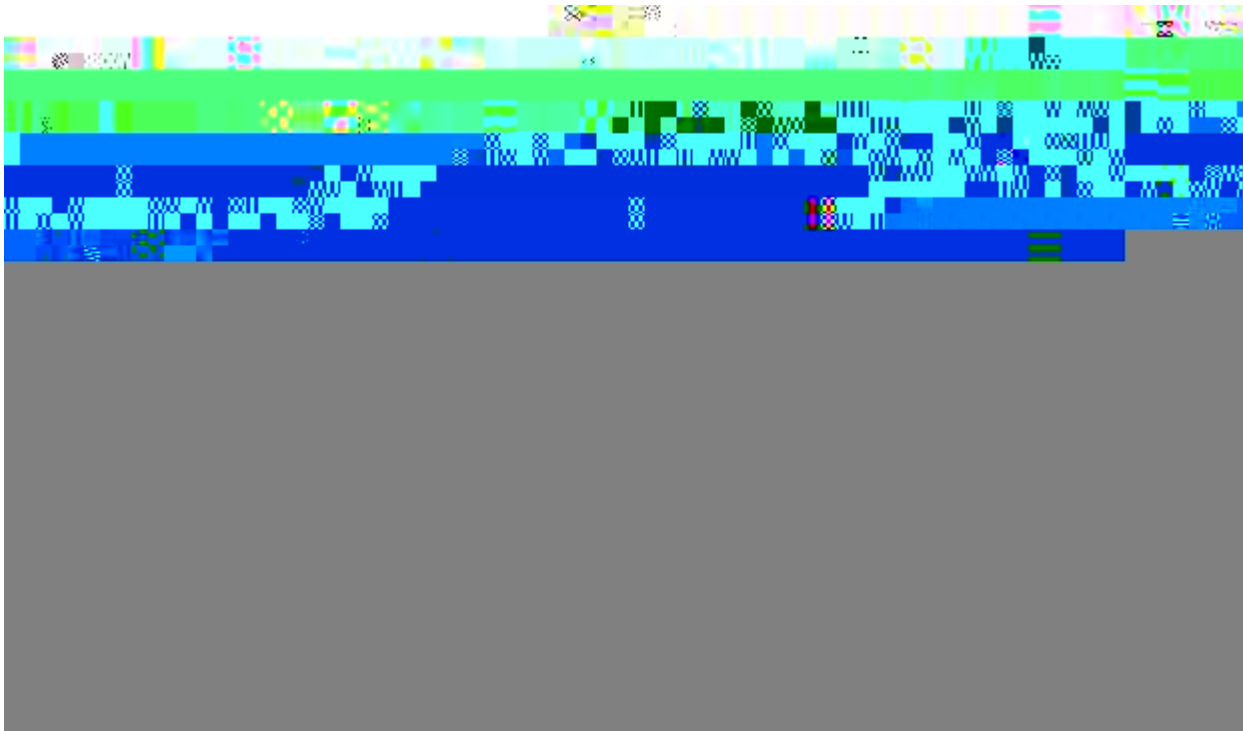
**/ h_{FE} Classifications & Marking**

See Marking Instructions.

BRESD3V3X1C2ZA

Rev.

/ Electrical Characteristics(Ta=25)



Definitions of electrical characteristics

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Reverse maximum working voltage	V_{RWM}				3.3	V
Reverse leakage current	I_R	$V_{RWM} = 3.3V$		<1	50	nA
Reverse breakdown voltage	V_{BR}	$I_T=1mA$	7.0	10.0		V
Clamping voltage ¹⁾	V_{CL}	$I_{PP}=16A \quad t_p=100ns$		8		V
Dynamic resistance ¹⁾	R_{DYN}			0.25		Ω
Clamping voltage ²⁾	V_{CL}	$V_{ESD}= 8kV$		8.0		V
Clamping voltage ³⁾	V_{CL}	$I_{PP} = 1A \quad t_p = 8/20\mu s$		4.5	5.5	V
		$I_{PP} = 4A \quad t_p = 8/20\mu s$		7	8.5	V
Junction Capacitance	C_J	$V_R = 0V \quad f = 1MHz$		0.4	0.55	pF

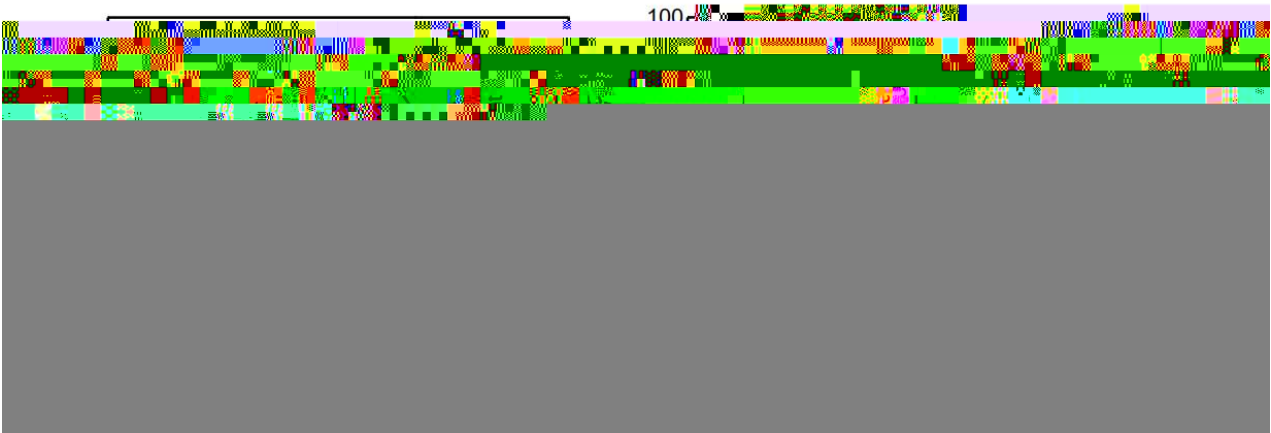
Notes:

1) TLP parameter: $Z_0 = 50\Omega$, $t_p = 100ns$, $t_r = 2ns$, averaging window from 60ns to 80ns. R_{DYN} is calculated from 4A to 16A.

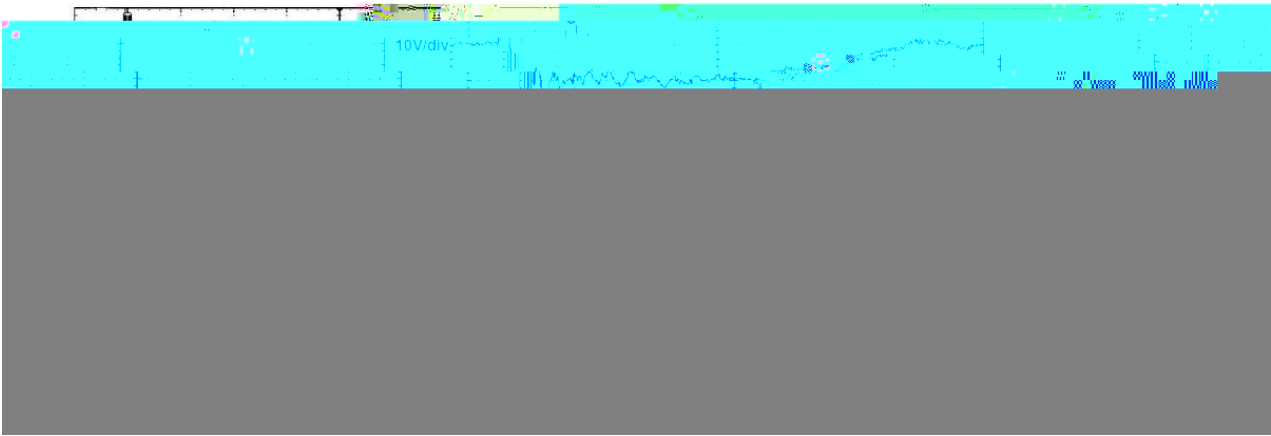
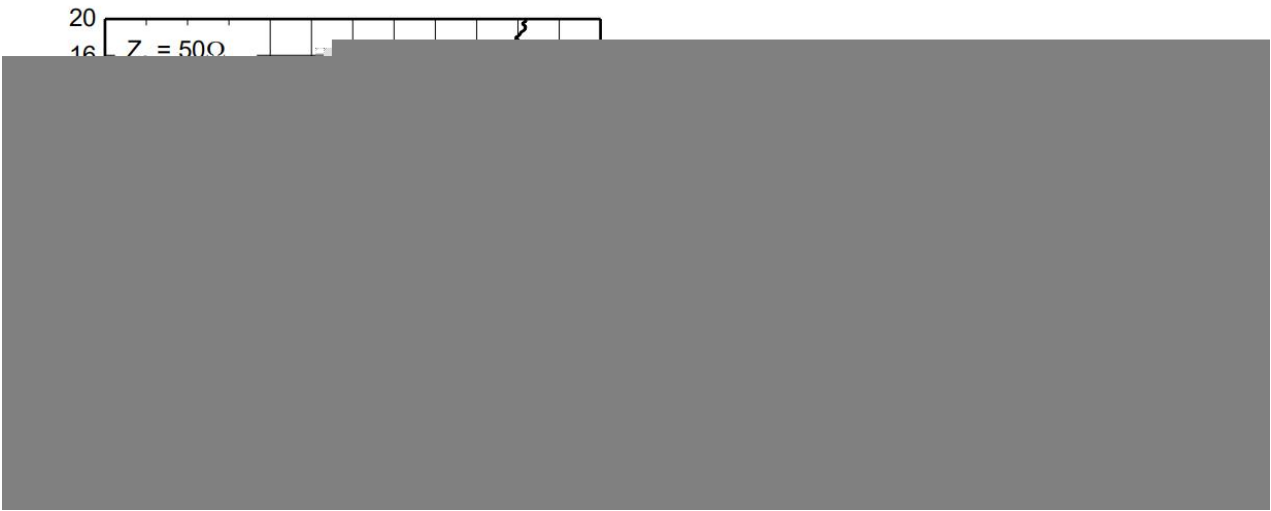
2) Contact discharge mode, according to IEC61000-4-2.

3) Non-repetitive current pulse, according to IEC61000-4-5.

/ Electrical Characteristic Curve(Ta=25)



/ Electrical Characteristic Curve(Ta=25)



BRES3V3X1C2ZA

Rev.B Oct.-2021

DATA SHEET

/ Marking Instructions

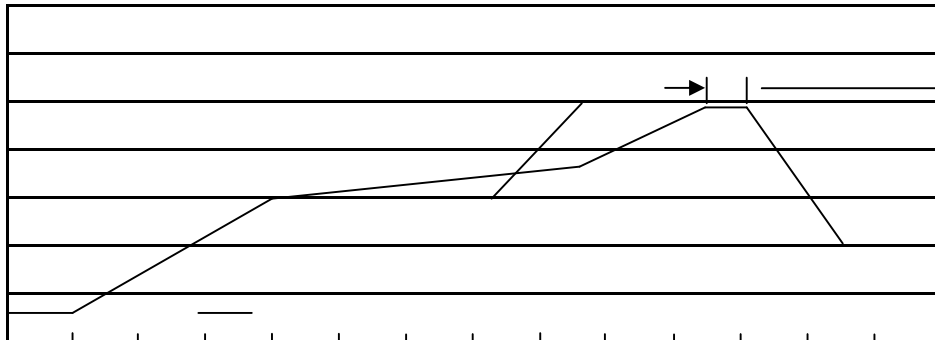
U3
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Note

U3 Product Type.
* Lot No. Code,code change with Lot No.

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Note:

- 1 150 180 60 90sec;
- 2 245±5 5±0.5sec;
- 3 2 10°C/sec.

- 1.Preheating:150~180°C, Time:60~90sec.
- 2.Peak Temp.:245±5°C, Duration:5±0.5sec.
3. Cooling Speed: 2~10°C/sec.

/ Resistance to Soldering Heat Test Conditions

260±5°C

10±1 sec.

Temp.:260±5°C

Time:10±1 sec

/ Packaging SPEC.

/ REEL

Package Type 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm ³)		
	Units/Reel /	Reels/Inner Box /	Units/Inner Box /	Inner Boxes/Outer Box /	Units/Outer Box /	Reel	Inner Box 盒	Outer Box 箱
DFN0603-2L	10,000	10	100,000	6	600,000	7" ×8	180×120×180	390×385×205

/ Notices