

BRES5V0M1B2ZP

Rev.A Jun.-2021

DATA SHEET

<http://>

BRES5V0M1B2ZP

Rev.A Jun.-2021



/ Descriptions

DFN1006-2L ESD
DFN1006-2L Plastic Package 1-Line,Bi-directional , ESD Protection Diode.

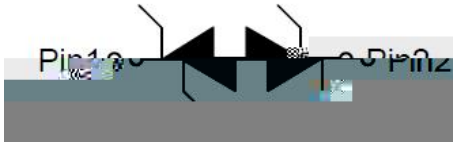
/ Features

Stand-off voltage: $\pm 5V$ Max.
Transient protection for each line according to
IEC61000-4-2(ESD): $\pm 30kV$ (contact)
IEC61000-4-4 (EFT): 80A (5/50ns)
IEC61000-4-5(surge): 20A (8/20 μs)
Ultra-low capacitance: $C_J = 35pF$ typ.
Low leakage current:
Low clamping voltage: $V_{CL} = 7.8V$ typ. @ $I_{PP} = 16A$ (TLP)
Solid-state silicon technology
HF Product

/ Applications

Battery Line Protection
Audio Line Protection
Microphone Line Protection
GPIO Protection

/ Equivalent Circuit



/ Pinning



/ Marking

See Marking Instructions.

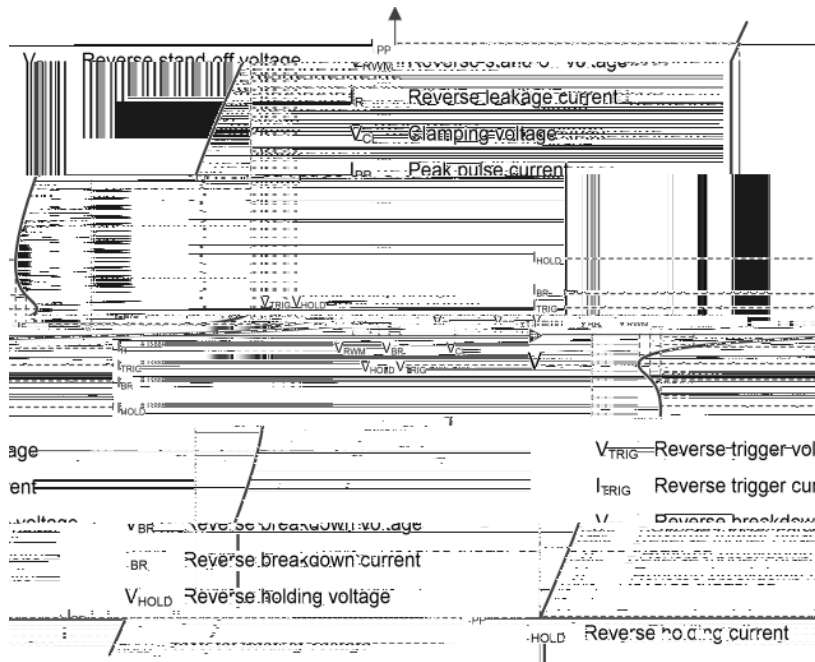
BRES5V0M1B2ZP

Rev.A Jun.-2021

DATA SHEET



/ Electrical Characteristics(Ta=25)



Definitions of electrical characteristics

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Reverse maximum working voltage	V_{RWM}				± 5.0	V
Reverse leakage current	I_R	$V_{RWM} = 5.0V$			100	nA
Reverse breakdown voltage	V_{BR}	$I_{BR}=1mA$	5.1			V
Reverse holding voltage	V_{HOLD}	$I_{HOLD}=50mA$	5.1			V
Clamping voltage ¹⁾	V_{CL}	$I_{PP}=16A \quad t_p=100ns$		7.8		V
Dynamic resistance ¹⁾	R_{DYN}			0.1		
Clamping voltage ²⁾	V_{CL}	$V_{ESD} = 8kV$		8.0		V
Clamping voltage ³⁾	V_{CL}	$I_{PP} = 1A \quad t_p = 8/20\mu s$		6.2	8	V
		$I_{PP} = 20A \quad t_p = 8/20\mu s$		9.5	11.5	V
Junction Capacitance	C_J	$V_R = 0V \quad f = 1MHz$		35	45	pF
	C_J	$V_R = 5V \quad f = 1MHz$		25	35	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.

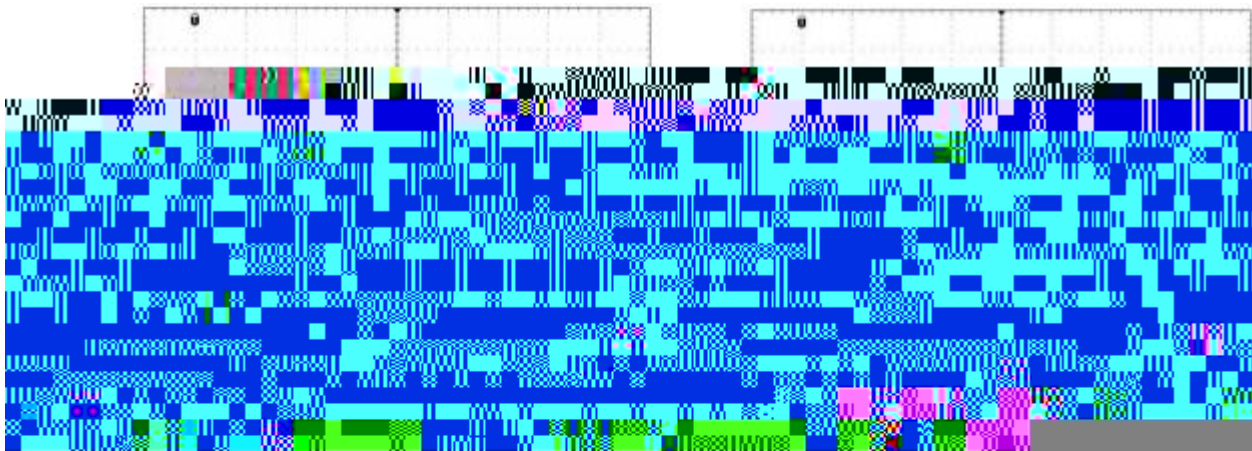
BRES5V0M1B2ZP

Rev.A

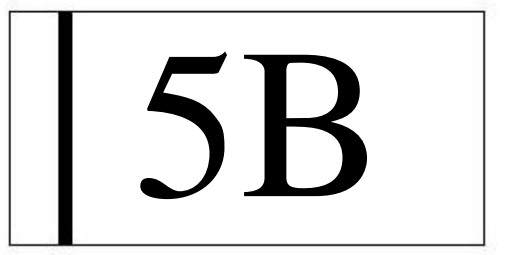
A



/ Electrical Characteristic Curve(Ta=25)



/ Marking Instructions



说明：

5B： 为型号代码

Note：

5B： Product Type.



() / Temperature Profile for IR Reflow Soldering(Pb-Free)

Note:

- 1 150 ~ 180 60 ~ 90sec; 1.Preheating:150~180 , Time:60~90sec.
- 2 245±5 5±0.5sec; 2.Peak Temp.:245±5 , D8