BRESD5V0M1B2ZP

Rev.A Jun.-2021

DATA SHEET

/ Descriptions

DFN1006-2L ESD

DFN1006-2L 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): ±30kV (contact)

IEC61000-4-4 (EFT): 80A (5/50ns)

IEC61000-4-5(surge): 20A (8/20μs)

Ultra-low capacitance: CJ = 35pF typ.

Low leakage current:

Low clamping voltage: VCL =7.8V typ. @ IPP = 16A (TLP)

Solid-state silicon technology

HF Product

/ Applications

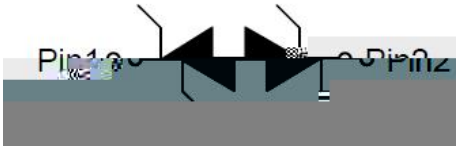
Battery Line Protection

Audio Line Protection

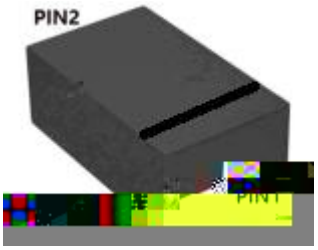
Microphone Line Protection

GPIO Protection

/ Equivalent Circuit



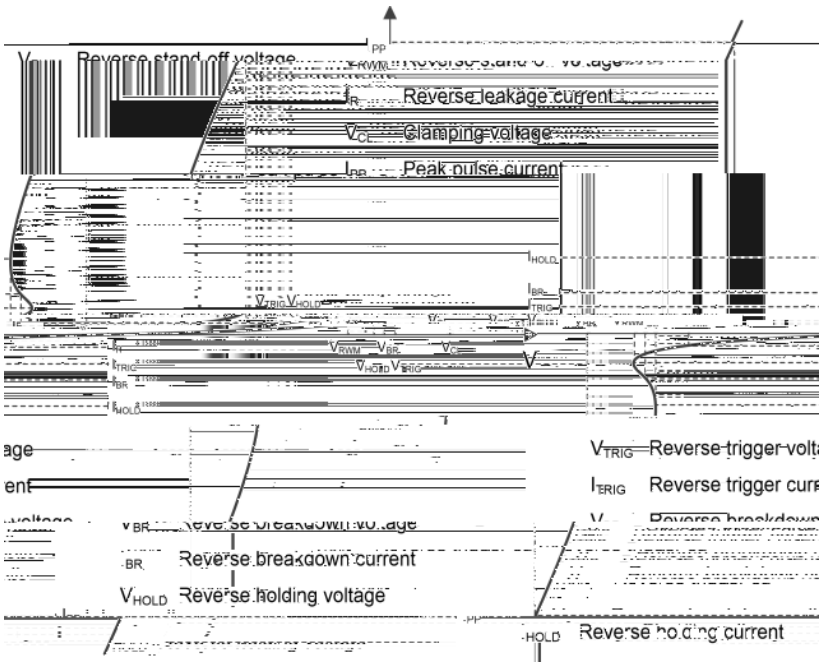
/ Pinning



/ Marking

See Marking Instructions.

/ 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 t_p=100ns		7.8		V
Dynamic resistance [1]	R_{DYN}			0.1		Ω
Clamping voltage [2]	V_{CL}	V_{ESD}= 8kV		8.0		V
Clamping voltage [3]	V_{CL}	I_{PP} = 1A t_p = 8/20μs		6.2	8	V
		I_{PP} = 20A t_p = 8/20μs		9.5	11.5	V
Junction Capacitance	C_J	V_R =0V f = 1MHz		35	45	pF
	C_J	V_R = 5V f = 1MHz		25	35	pF

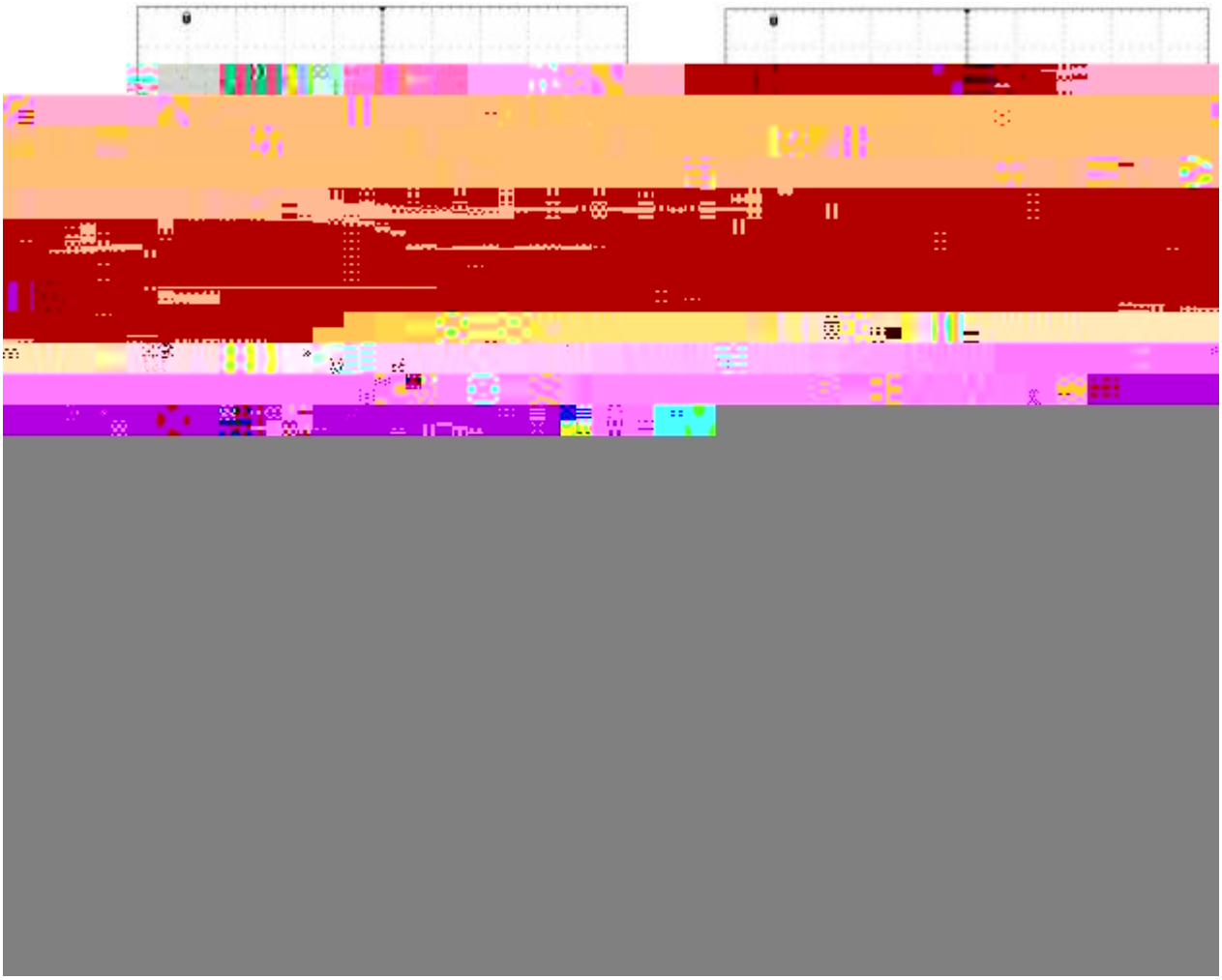
Notes:

1) TLP parameter: Z0 = 50Ω, tp = 100ns, tr = 2ns, averaging window from 60ns to 80ns. RDYN is calculated from 4A to 16A.

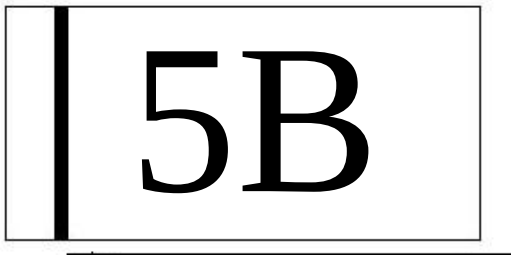
2) Contact discharge mode, according to IEC61000-4-2.

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

/ Electrical Characteristic Curve(Ta=25)



/ 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 , D