

BRSY24VM1U2YV

Rev.A Nov.-2023

描述 / Descriptions

DFN1610-2L 塑封封装单线程单向 ESD 保护二极管。

DFN1610-2L Plastic Package 1-Line, Uni-directional , ESD Protection Diode.

特征 / Features

超小封装，正常响应时间小于 1ns，防静电等级达到 30KV 以上，符合 IEC61000-4-2 的 4 级 ESD 保护项目，无卤产品。

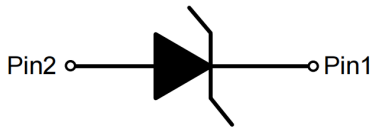
Ultra small package, Response Time is Typically < 1 ns, ESD > 30 kV per Human Body Model, IEC61000-4-2 Level 4 ESD Protection, HF Product.

用途 / Applications

适用于手机音频、MP3 播放器、数码相机、便携式设备、移动电话等用户端。

Suitable for cellular phones audio, MP3 players, Digital cameras, Portable devices, mobile telephone and other users.

内部等效电路 / Equivalent Circuit



引脚排列 / Pinning



印章代码 / Marking

见印章说明。

See Marking Instructions.

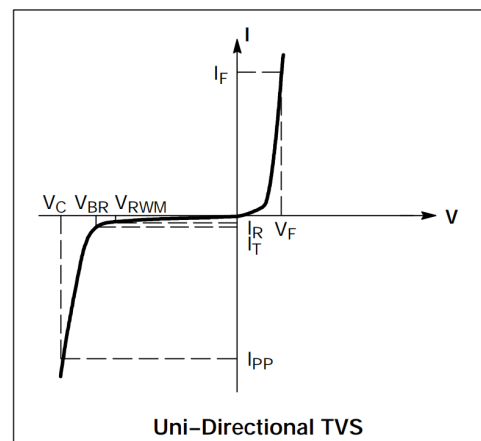
极限参数 / Absolute Maximum Ratings

参数 Parameter	符号 Symbol	数值 Rating	单位 Unit
Peak Pulse Current($t_p = 8/20\mu s$)	I_{PP}	80	A
ESD according to IEC61000-4-2 air discharge	V_{ESD}	± 30	KV
ESD according to IEC61000-4-2 contact discharge		± 30	
Junction temperature	T_J	125	$^{\circ}C$
Storage Temperature	T_{STG}	-55~+150	$^{\circ}C$

电性能参数 / Electrical Characteristics($T_a=25^{\circ}C$)

Electrical performance curve

Symbol	Parameter
V_{RWM}	Peak Reverse Working Voltage
I_R	Reverse Leakage Current @ V_{RWM}
V_{BR}	Breakdown Voltage @ I_T
I_T	Test Current
I_{PP}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}
P_{PP}	Peak Pulse Power
C_J	Junction Capacitance
I_F	Forward Current
V_F	Forward Voltage @ I_F



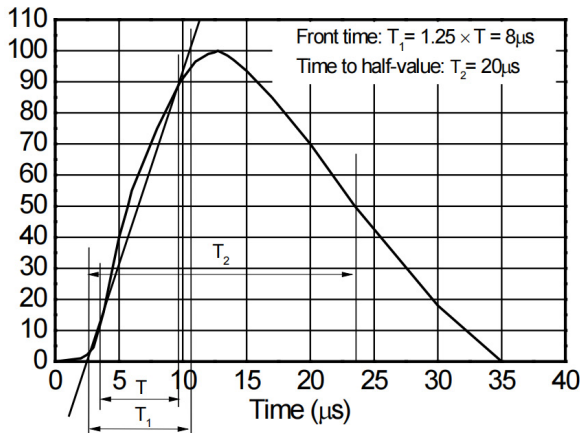
参数 Parameter	符号 Symbol	测试条件 Test Conditions	最小值 Min	典型值 Typ	最大值 Max	单位 Unit
Reverse maximum working voltage	V_{RWM}				24	V
Reverse leakage current	I_R	$V_R = 24V$			0.5	μA
Reverse breakdown voltage ¹⁾	V_{BR}	$I_T=1mA$	25.5			V
Clamping voltage ²⁾	V_{CL}	$I_{PP} = 80A \quad t_p = 8/20\mu s$		32	34	V
Junction Capacitance	C_J	$V_R = 0V \quad f = 1MHz$		250	600	pF
Forward Voltage	V_F	$I_F=10mA$		0.7		V

Notes:

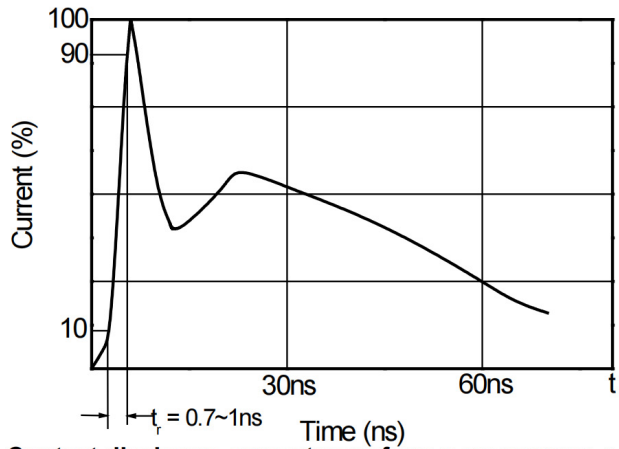
1) V_{BR} is measured with a pulse test current I_T at an ambient temperature of $25^{\circ}C$.

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

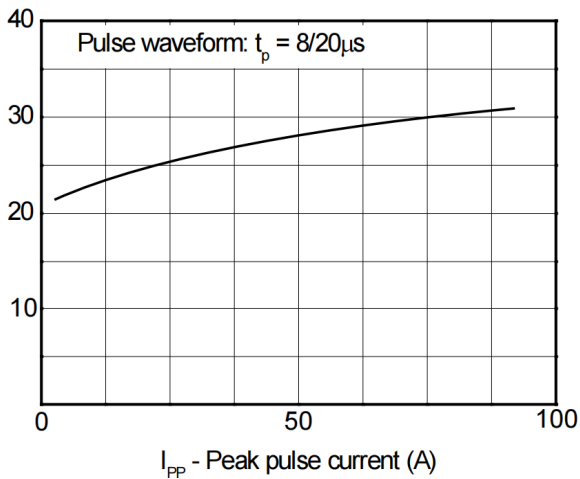
电参数曲线图 / Electrical Characteristic Curve(Ta=25°C)



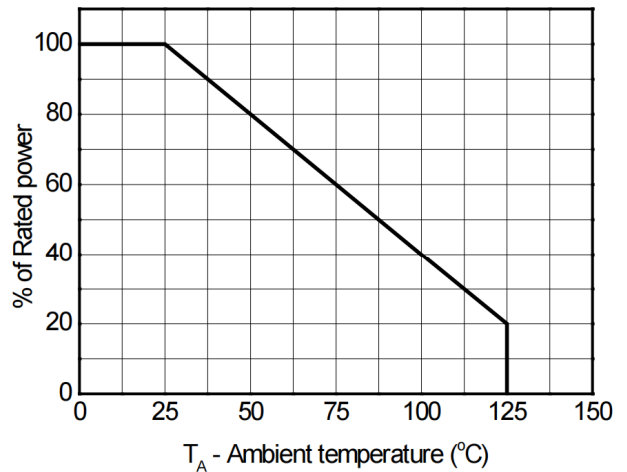
8/20µs waveform per IEC61000-4-5



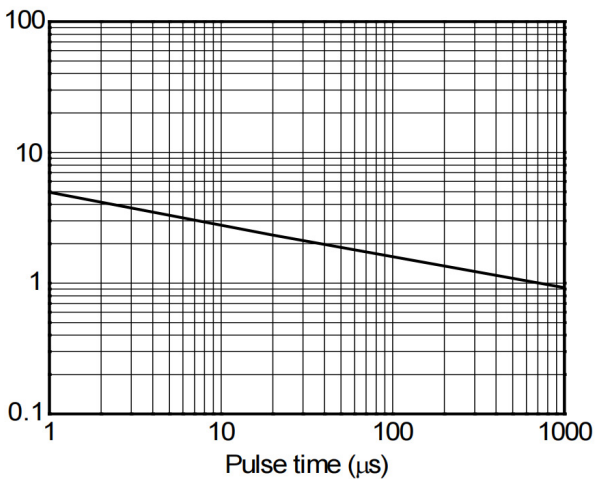
Contact discharge current waveform per IEC61000-4-2



Clamping voltage vs. Peak pulse current



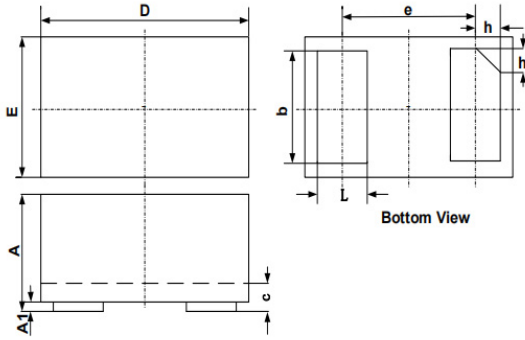
Power derating vs. Ambient temperature



Non-repetitive peak pulse power vs. Pulse time

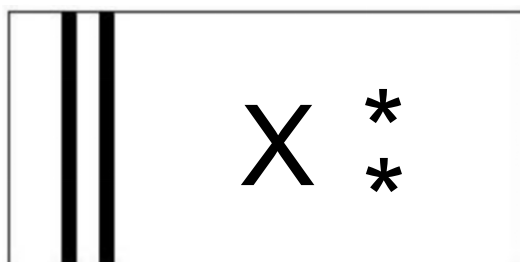
外形尺寸图 / Package Dimensions

DFN1610



SYM	DIMENSIONS					
	MILLIMETERS			INCHES		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.45	0.50	0.55	0.018	0.020	0.022
A1	0.00	0.02	0.05	0.000	0.001	0.002
b	0.75	0.80	0.85	0.030	0.032	0.034
c	0.10	0.15	0.20	0.004	0.006	0.008
D	1.55	1.60	1.65	0.062	0.064	0.066
e	1.10 BSC			0.044 BSC		
E	0.95	1.00	1.05	0.038	0.040	0.042
L	0.35	0.40	0.45	0.014	0.016	0.018
h	0.15	0.20	0.25	0.006	0.008	0.010

印章说明 / Marking Instructions



说明：

X： 为型号代码

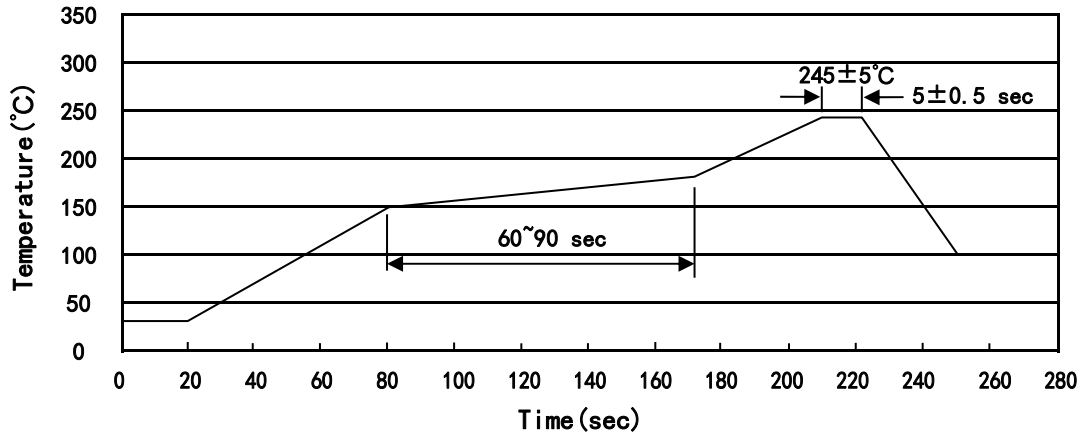
**： 为生产批号代码，随生产批号变化

Note：

X： Product Type Code

**： Lot No. Code, code change with Lot No

回流焊温度曲线图(无铅) / Temperature Profile for IR Reflow Soldering(Pb-Free)



说明：

- 1、预热温度 150~180°C，时间 60~90sec;
- 2、峰值温度 245±5°C，时间持续为 5±0.5sec;
- 3、焊接制程冷却速度为 2~10°C/sec.

Note:

- 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.

耐焊接热试验条件 / Resistance to Soldering Heat Test Conditions

温度：260±5°C

时间：10±1 sec.

Temp.:260±5°C

Time:10±1 sec

使用说明 / Notices