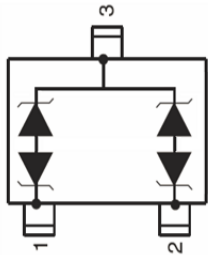
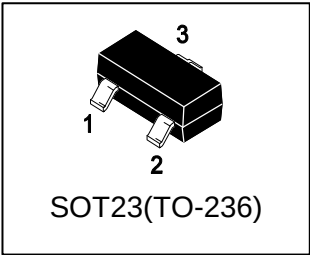


LR2105LT1G

ESD Protection Diode



1. FEATURES

- Ultra low leakage: nA level.
- Low clamping voltage.
- Complies with IEC 61000-4-2 standards: Air discharge: $\pm 30\text{kV}$
Contact discharge: $\pm 30\text{kV}$
- We declare that the material of product compliance with RoHS requirements and Halogen Free.

2. APPLICATIONS

- CAN bus protection
- Automotive applications

3. DEVICE MARKING AND ORDERING INFORMATION

Device	Marking	Shipping
LR2105LT1G	R21	3000/Tape&Reel

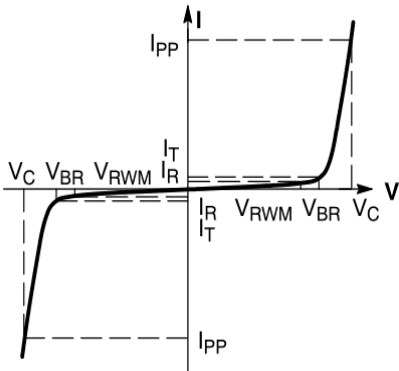
4. MAXIMUM RATINGS($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Limits	Unit
IEC 61000-4-2 (ESD) Contact		± 30	kV
Air		± 30	
peak pulse power@8/20 μs	PPP	320	W
peak pulse current @8/20 μs	IPP	8	A
Storage Temperature Range	Tstg	$-55 \sim +150$	$^\circ\text{C}$
Operating Temperature Range	TJ	$-55 \sim +150$	$^\circ\text{C}$

Note 1.Surge current waveform per Figure 1 according to IEC 61000-4-5.

5. ELECTRICAL CHARACTERISTICS ($T_a = 25^\circ\text{C}$)

Symbol	Parameter
IPP	Maximum Reverse Peak Pulse Current
VC	Clamping Voltage @ IPP
VRWM	Working Peak Reverse Voltage
IR	Maximum Reverse Leakage Current @ VRWM
VBR	Breakdown Voltage @ IT
IT	Test Current
IF	Forward Current
VF	Forward Voltage @ IF
Ppk	Peak Power Dissipation
C	Capacitance @ VR = 0 and f = 1.0 MHz



6. ELECTRICAL CHARACTERISTICS (Ta= 25°C)

Characteristic	Symbol	Min.	Typ.	Max.	Unit
reverse stand-off voltage	VRWM	-	-	24	V
reverse leakage current (VRWM = 24 V, Pin 1、 2to Pin 3) (VRWM = 24 V, Pin 3 to Pin 1、 2)	IRM	- -	- -	200 200	nA
breakdown voltage (IT = 5 mA, Pin 1、 2to Pin 3) (IT = 5 mA, Pin 3 to Pin 1、 2)	VBR	26.2	-	32	V
Clamping Voltage (IPP = 3A (8 x 20μs pulse) (IPP = 5A (8 x 20μs pulse) (IPP = 8A (8 x 20μs pulse)	VC	- - -	32 34 37	34 36 39	V
Junction Capacitance (VR = 0V, f = 1MHz)	CJ	-	-	30	pF

Note 1.Surge current waveform per Figure 1 according to IEC 61000-4-5.

7.ELECTRICAL CHARACTERISTICS CURVES

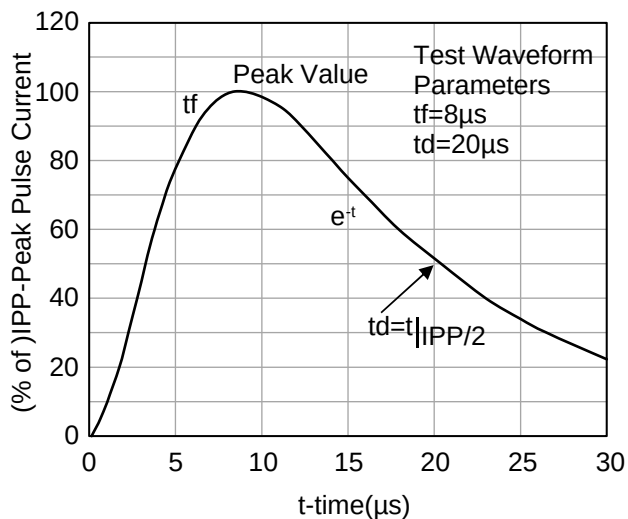


Figure 1. Pulse Waveform
according to IEC 61000-4-5

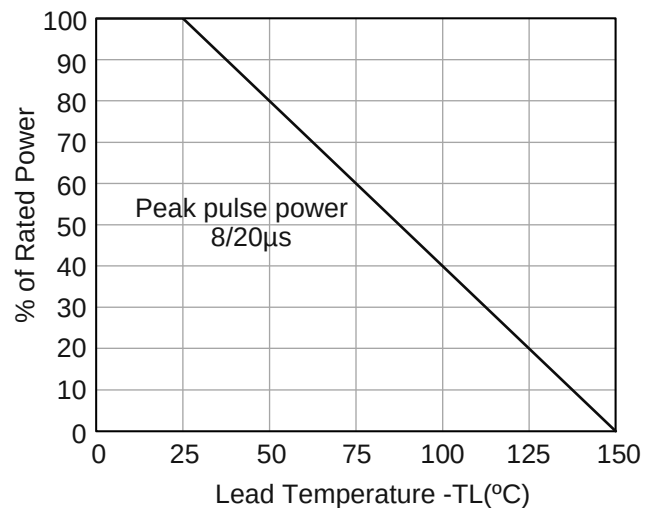


Figure 2. Power Derating Curve

7.ELECTRICAL CHARACTERISTICS CURVES(Con.)

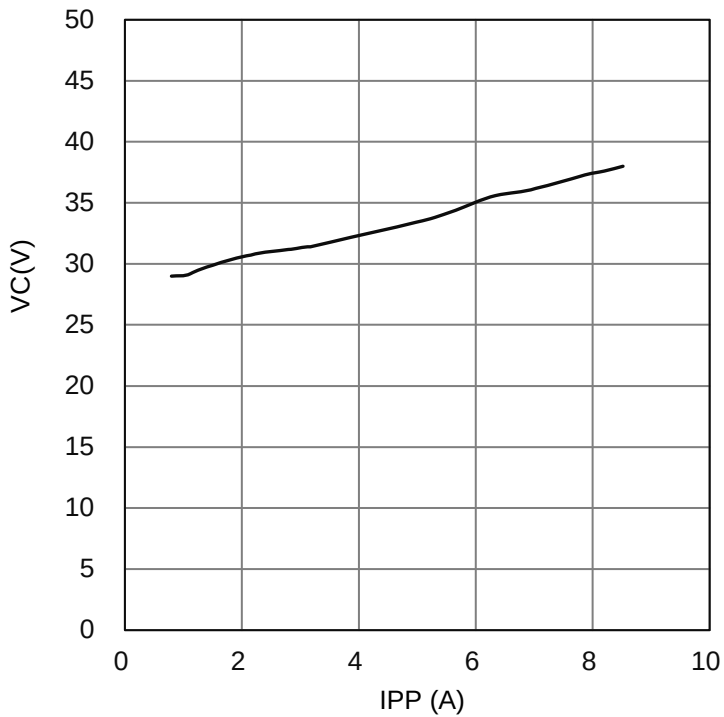


Figure 3. IPP vs. VC

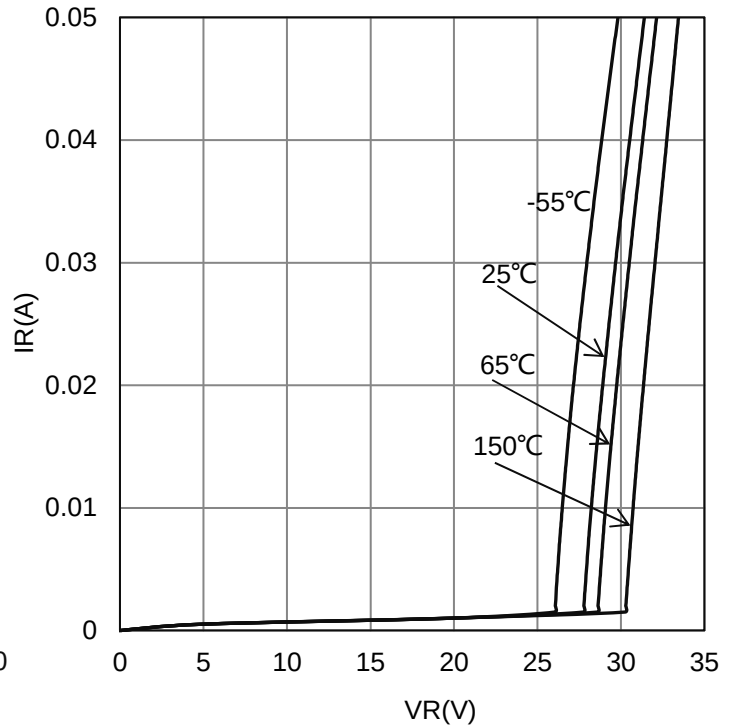


Figure 4. IR vs. VR

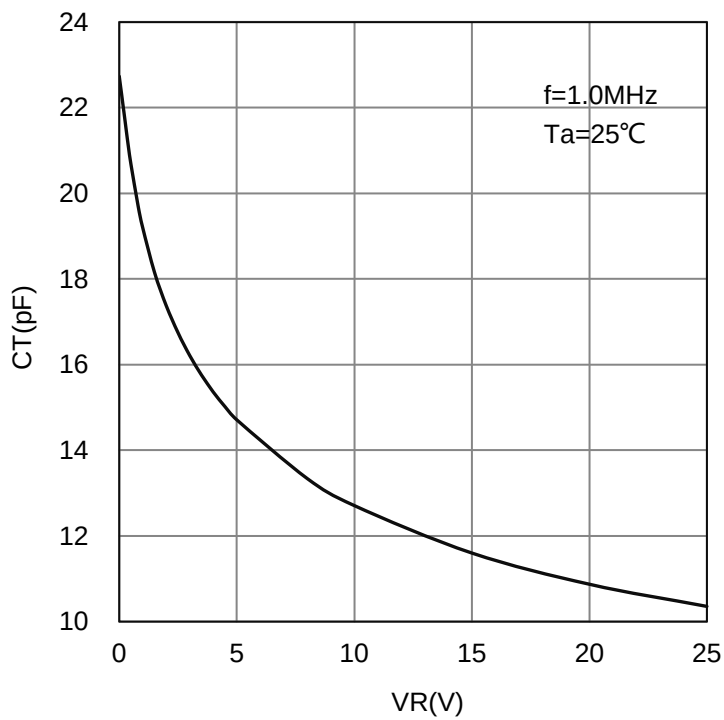


Figure 5. CT vs. VR

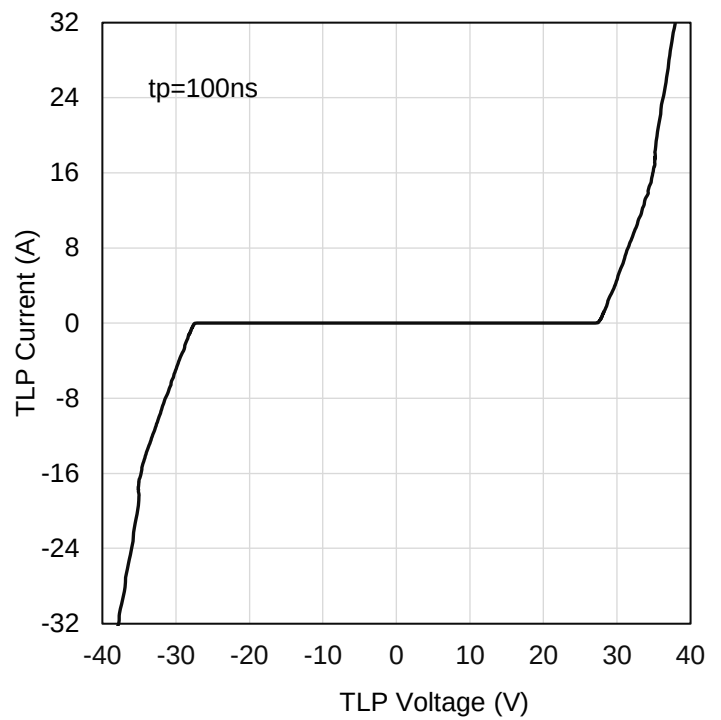
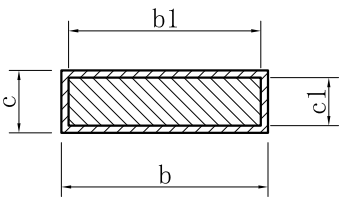
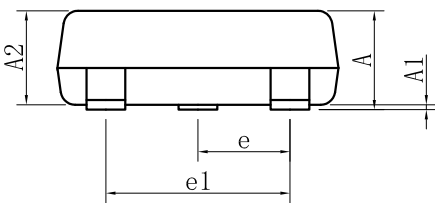
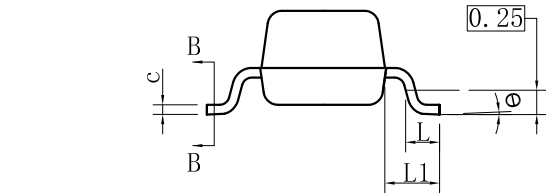
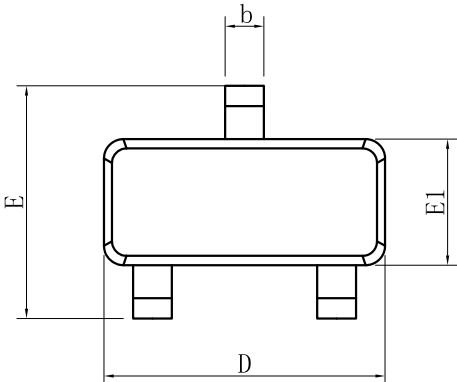


Figure 6.TLP Measurement

8.OUTLINE AND DIMENSIONS



SECTION B-B

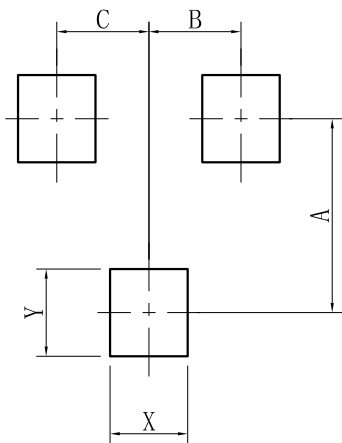


SOT23			
DIM	MIN	NOR	MAX
A	0.89	-	1.12
A1	0.01	-	0.10
A2	0.88	0.95	1.02
b	0.30	-	0.50
b1	0.30	0.40	0.45
c	0.08	-	0.20
c1	0.08	0.10	0.16
D	2.80	2.90	3.04
E	2.10	-	2.64
E1	1.20	1.30	1.40
e	0.95BSC		
e1	1.90BSC		
L	0.40	0.46	0.60
L1	0.54REF		
θ	0°	-	8°
All Dimensions in mm			

GENERAL NOTES

- 1.Top package surface finish Ra0.4±0.2um
- 2.Bottom package surface finish Ra0.7±0.2um
- 3.Side package surface finish Ra0.4±0.2um

9.SOLDERING FOOTPRINT



SOT-23	
DIM	(mm)
X	0.80
Y	0.90
A	2.00
B	0.95
C	0.95

DISCLAIMER

- Curve guarantee in the specification. The curve of test items with electric parameter is used as quality guarantee. The curve of test items without electric parameter is used as reference only.
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