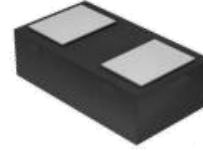


1. Features

- Peak Pulse Power (8/20 μ s): 60W
- Capacitance: 15pF (typ.)
- Reverse Working Voltage: 5V
- IEC 61000-4-2 (ESD Air): \pm 25KV
IEC 61000-4-2 (ESD Contact): \pm 25KV
IEC 61000-4-5 (Lightning 8/20 μ s): 5A

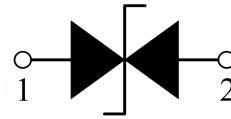
2. Pin Description



3. Applications

- Smart Phone and Tablet PC
- TV and Set Top Box
- PDA

4. Schematic Diagram



5. Order Information

Type	Package	Size (mm)	Delivery Form	Delivery Quantity
MKT3412AB	0402	1.00x0.50x0.38	7" T&R	10,000

6. Limiting Values($T_A = 25\text{ }^\circ\text{C}$, unless otherwise specified)

Symbol	Parameter	Conditions	Min	Max	Unit
V_{ESD}	Electrostatic Discharge Voltage	IEC 61000-4-2; Contact Discharge	-	\pm 25	kV
		IEC 61000-4-2; Air Discharge	-	\pm 25	kV
P_{PP}	Peak Pulse Power	$t_P = 8/20\ \mu\text{s}$	-	60	W
I_{PPM}	Rated Peak Pulse Current	$t_P = 8/20\ \mu\text{s}$	-	5	A
T_A	Ambient Temperature Range	-	-55	125	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-	-55	150	$^\circ\text{C}$

7. Electrical Characteristics($T_A = 25\text{ }^\circ\text{C}$, unless otherwise specified)

Symbol	Parameter	Conditions	Min	Typ.	Max	Unit
V_{RWM}	Reverse Working Voltage	$T_A = 25\text{ }^\circ\text{C}$	-	-	5.0	V
V_{BR}	Breakdown Voltage	$I_R = 1\text{mA}$; $T_A = 25\text{ }^\circ\text{C}$	5.6	6.5	8.4	V
I_R	Reverse Leakage Current	$V_{RWM} = 5\text{V}$; $T_A = 25\text{ }^\circ\text{C}$	-	-	0.1	μA
V_C	Clamping Voltage	$I_{PP}=1\text{A}$, $t_P = 8/20\ \mu\text{s}$	-	-	10	V
		$I_{PP}=5\text{A}$, $t_P = 8/20\ \mu\text{s}$	-	-	12	V
C_J	Junction Capacitance	$V_R = 0\text{V}$, $f = 1\text{ MHz}$	-	15	18	pF

8. Typical Characteristics

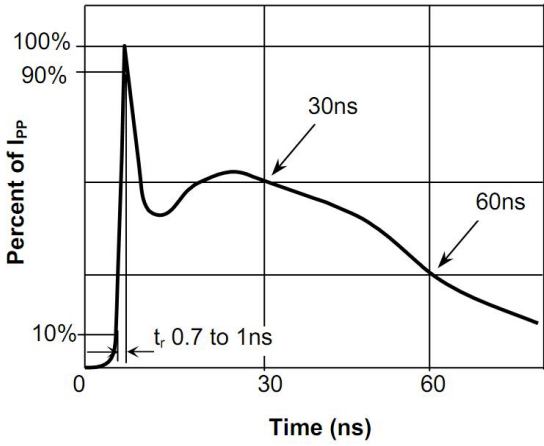


Fig.1 Pulse Waveform-ESD(IEC61000-4-2)

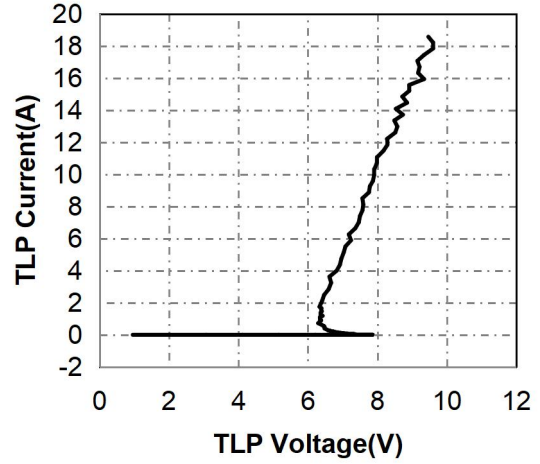


Fig.2 Transmission Line Pulse (TLP)

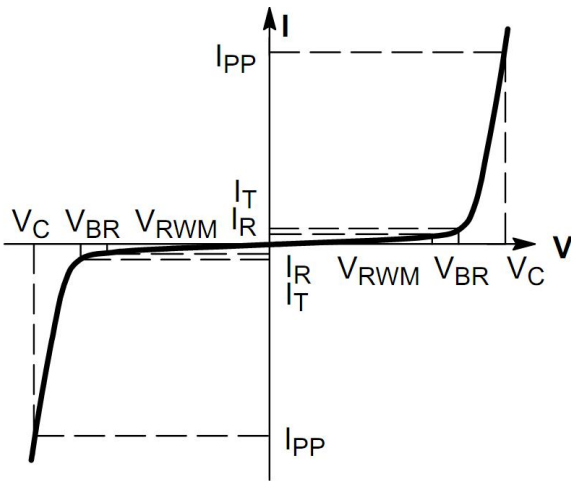


Fig.3 V-I Characteristics for Bidirectional Diode

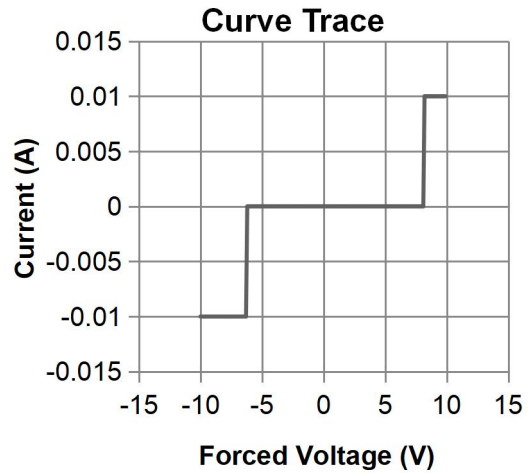


Fig.4 IV Curve

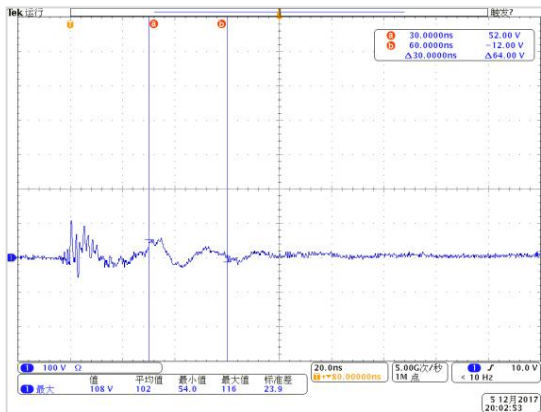


Fig.5 Clamping Voltage at IEC61000-4-2
 +8kV Pulse Waveform

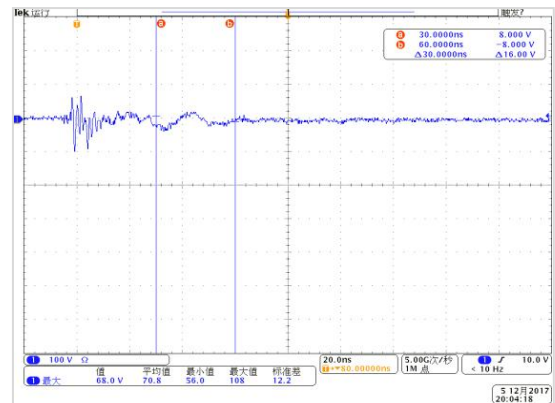
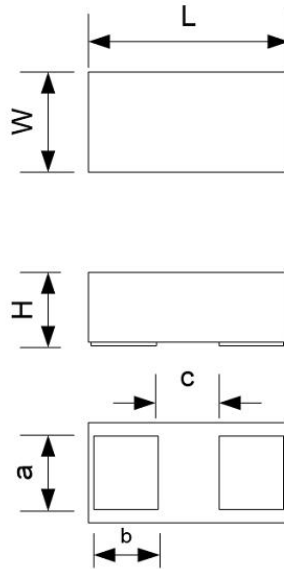


Fig.6 Clamping Voltage at IEC61000-4-2
 -8kV Pulse Waveform

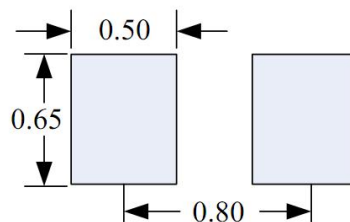
9. Package Outline Dimensions

0402 Package Outline



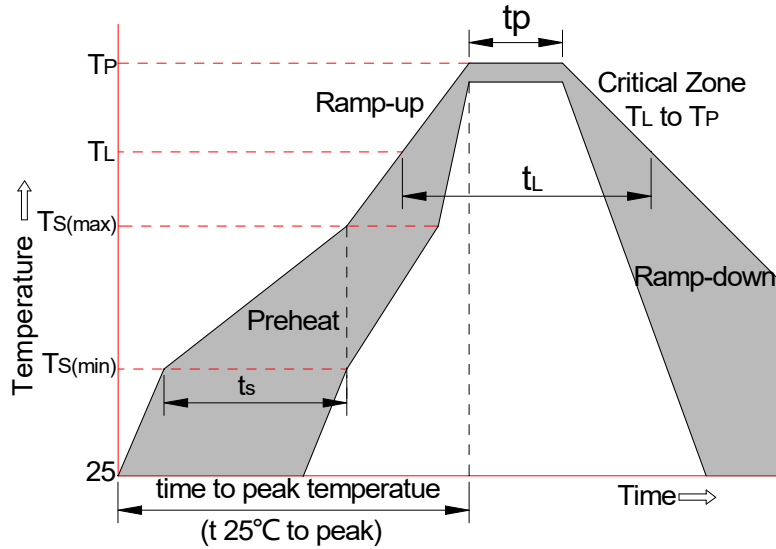
Symbol	Dimensions In Millimeters		
	Min	Max	Min
L	0.98	1.00	1.03
W	0.48	0.50	0.53
H	0.35	0.38	0.40
a	0.35	0.38	0.40
b	0.30	0.30	0.35
c	0.24	0.26	0.29

Recommended Solder Pad Footprint



Size in millimeters

Notes: This solder pad layout is for reference purposes only.

10. Soldering Parameters


Reflow Condition		Pb-Free Assembly
Pre-heat	-Temperature Min ($T_{s(min)}$)	+150°C
	-Temperature Max($T_{s(max)}$)	+200°C
	-Time (Min to Max) (t_s)	60-180 secs.
Average ramp up rate (Liquid us Temp (T_L) to peak)		3°C/sec. Max
$T_{s(max)}$ to T_L - Ramp-up Rate		3°C/sec. Max
Reflow	-Temperature(T_L)(Liquid us)	+217°C
	-Temperature(t_L)	60-150 secs.
Peak Temp (T_p)		+260(+0/-5)°C
Time within 5°C of actual Peak Temp (t_p)		30 secs. Max
Ramp-down Rate		6°C/sec. Max
xTime 25°C to Peak Temp (T_p)		8 min. Max
Do not exceed		+260°C

11. Contact Information

Online product information is available at www.mkfounder.com

Buy our products or get free samples, for further information and requests,

Please e-mail us at: sales@mkfounder.com

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13. Reversion History

Document ID	Release Date	Sheet Status	Change Notice	Supersedes
0.1	08-Mar-2018	Product datasheet	-	-