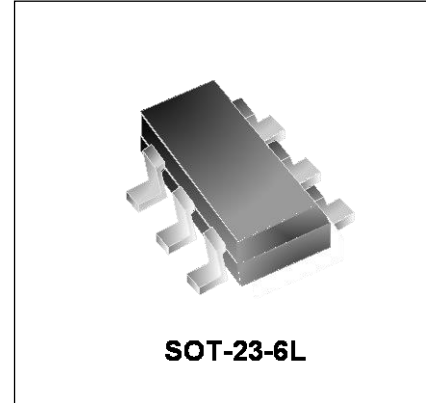


Features

- Low operating voltage: 5V
- Ultra low capacitance: 0.5pF
- Solid-state silicon-avalanche and active circuit triggering technology
- Back-drive protection for power-down mode
- Lead-free version available

IEC COMPATIBILITY (EN61000-4)

- IEC 61000-4-2 (ESD) $\pm 20\text{kV}$ (air), $\pm 12\text{kV}$ (contact)
- IEC 61000-4-4 (EFT) Level-3, 55A (5/50ns)
- IEC 61000-4-5 (Lightning) 4A (8/20 μs)



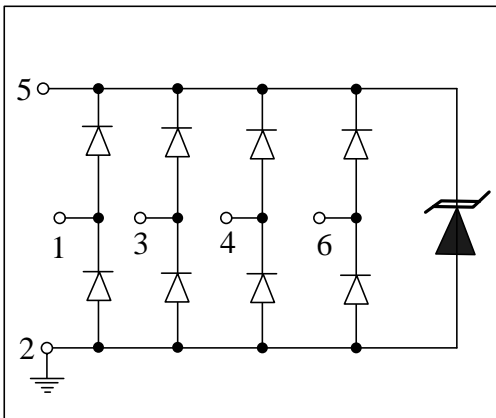
Mechanical Characteristics

- SOT-23-6L package
- Molding compound flammability rating: UL 94V-0
- Marking: Marking Code
- Packaging: Tape and Reel
- RoHS Compliant
- Weight : 0.0015 gram(approx.).

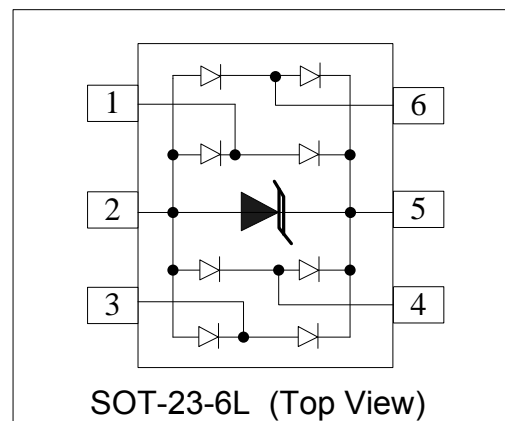
Applications

- Video/Graphics Card
- Digital Visual Interface (DVI)
- USB2.0 Power and Data lines protection
- Notebook and PC Computers
- Monitors and Flat Panel Displays

Circuit Diagram



Schematic & PIN Configuration

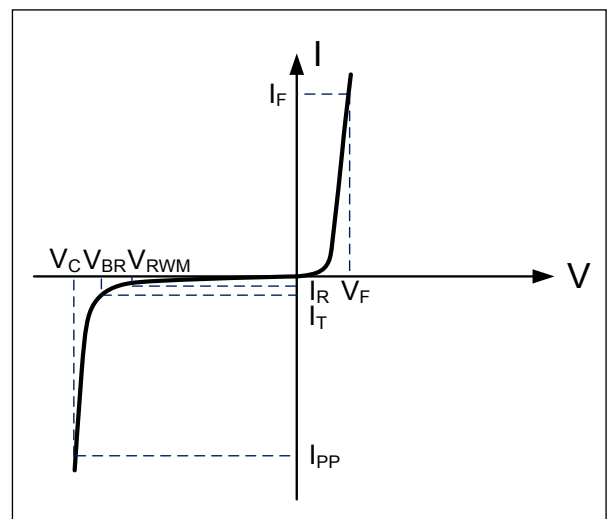


Absolute Maximum Rating

Rating	Symbol	Value	Units
Peak Pulse Power ($t_p = 8/20\mu s$)	P_{PP}	50	Watts
Peak Pulse Current ($t_p = 8/20\mu s$)	I_{PP}	4	A
Operating Temperature	T_J	-55 to +125	°C
Storage Temperature	T_{STG}	-55 to +150	°C

Electrical Parameters (T=25°C)

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



Electrical Characteristics

UAE0524A						
Parameter	Symbol	Conditions	Minimum	Typical	Maximum	Units
Reverse Stand-Off Voltage	V_{RWM}	Pin5 to pin2 T=25°C			5.0	V
Reverse Breakdown Voltage	V_{BR}	$I_T=1mA$ Pin 5 to pin2	6.0			V
Reverse Leakage Current	I_R	$V_{RWM}=5V, T=25°C$ Pin 5 to pin2			5	μA
Forward Voltage	V_F	$I_T=10mA$		0.8	1	V
Clamping Voltage	V_C	$I_{PP}=4A, t_p=8/20\mu s$ I/O pin to GND		12	15	V
Junction Capacitance	C_j	$V_R = 0V, f = 1MHz$ I/O pin to GND		1.0		pF
		$V_R = 0V, f = 1MHz$ Between I/O pins		0.5		pF

Typical Characteristics

Figure 1: Peak Pulse Power vs. Pulse Time

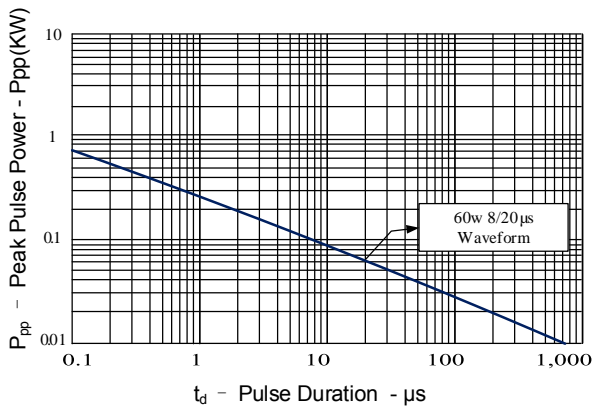


Figure 2: Power Derating Curve

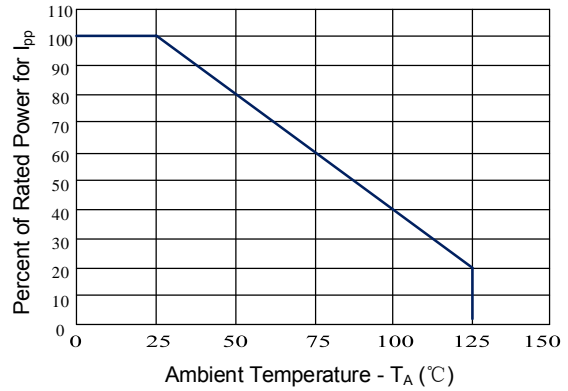


Figure 3: Pulse Waveform

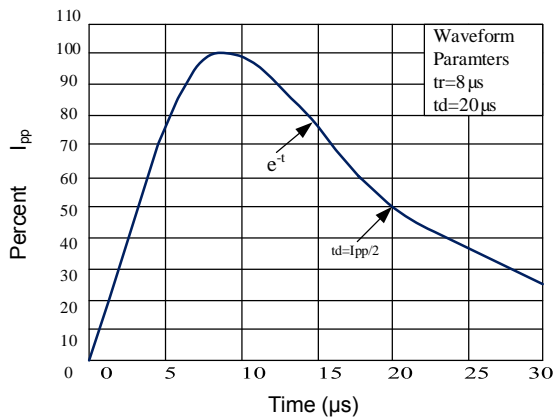


Figure 4: Clamping Voltage vs. Peak Pulse Current

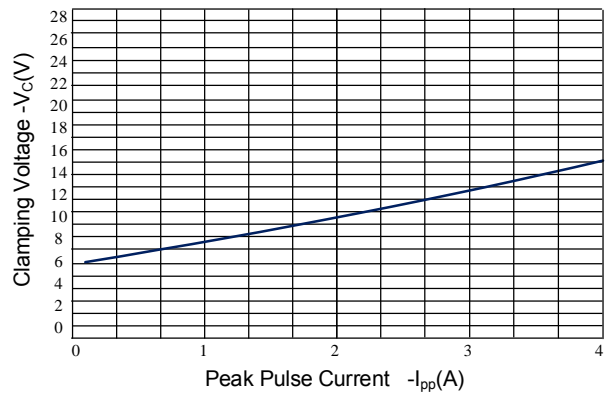


Figure 5: Capacitance vs. Reverse Voltage

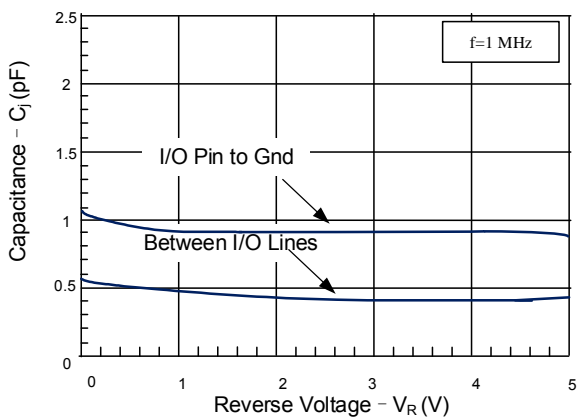
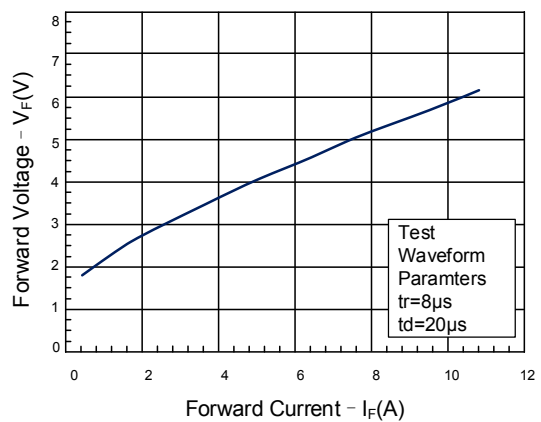
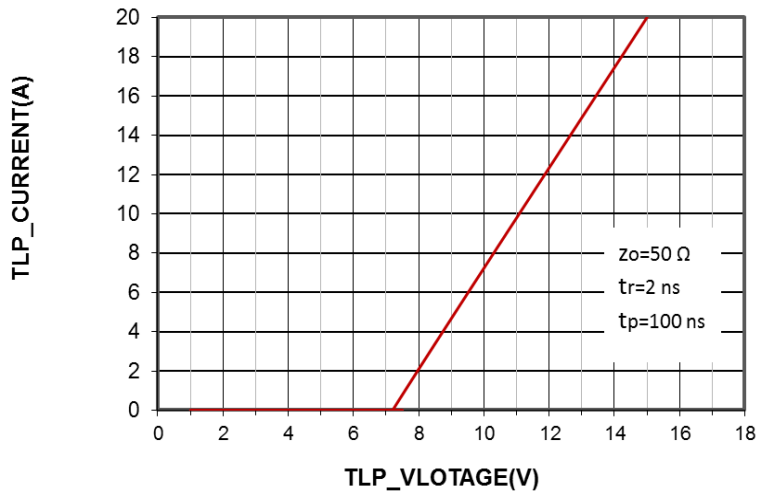


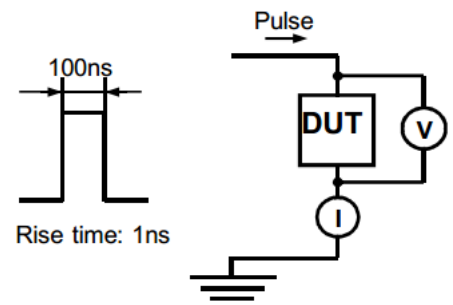
Figure 6: Forward Voltage vs. Forward Current



Typical Performance Characteristics ($T_A=25^\circ\text{C}$ unless otherwise Specified)



Transmission Line Pulsing (TLP) Measurement



Transmission Line Pulsing System

Outline Drawing – SOT-23-6L

PACKAGE OUTLINE

NOTES:

- Controlling Dimensions are In Millimeters (Angles In Degrees).
- Datums **A** And **B** To Be Determined At Datum Plane **H**.
- Dimensions "E1" And "D" Do Not Include Mold Flash, Protrusions Or Gate Burrs.

SOT-23-6L

DIMENSIONS

DIM	INCHES			MILLIMETERS		
	MIN	NOM	MAX	MIN	NOM	MAX
A	.035	-	.057	0.90	-	1.45
A1	.000	-	.006	0.00	-	0.15
A2	.035	.049	.051	0.90	1.25	1.30
b	.010	-	.020	0.35	-	0.50
c	.003	-	.007	0.08	-	0.20
D	.110	.114	.122	2.80	2.90	3.00
E1	.060	.063	.069	1.50	1.625	1.75
E	.110BSC			2.80 BSC		
e	.037 BSC			0.95 BSC		
e1	.075BSC			1.90 BSC		
L	.013	.018	.024	0.35	0.45	0.60
L1	(.024)			(0.60)		
θ 1	0°	-	8°	0°	-	8°
N	6			6		
aaa	.004			0.10		
bbb	.008			0.20		
ccc	.008			0.20		

DIMENSIONS		
DIM	INCHES	MILLIMETERS
C	(.098)	(2.50)
G	.055	1.40
P	.037	0.95
X	.024	0.60
Y	.043	1.10
Z	.141	3.60

Notes

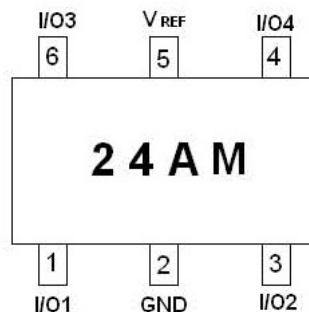
THIS LAND PATTERN IS FOR REFERENCE PURPOSES ONLY. CONSULT YOUR MANUFACTURING GROUP TO ENSURE YOUR COMPANY'S MANUFACTURING GUIDELINES ARE MET.

Marking Codes

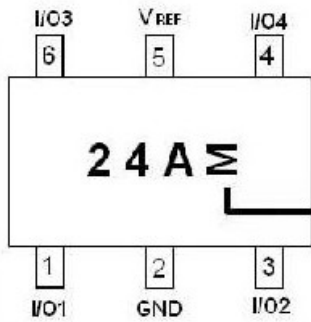
Part Number	UAE0524A
Marking Code	24AM

Package Information

Qty: 3k/Reel



印字試意圖



月份代碼
字體逆轉90度

月份代碼	
奇數年份	偶數年份
Odd year	Even year
1	E
2	F
3	H
4	J
5	K
6	L
7	N
8	P
9	U
T	X
V	Y
C	Z

1. 24A : 型號碼, 固定不變.
2. M : 月份代碼, 旋轉90度.

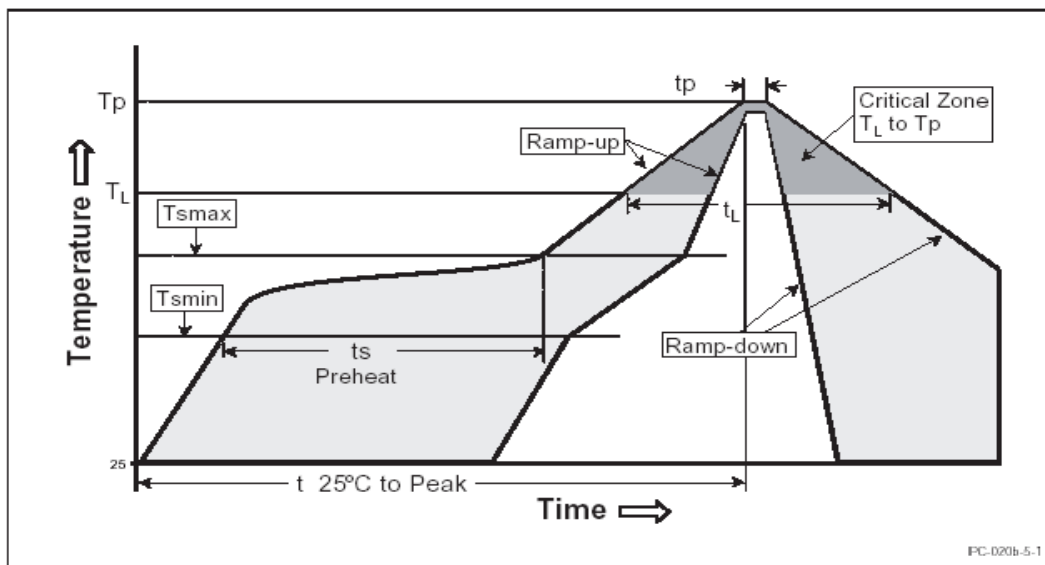
例 : 2013 / 6 月 : 打成 " 6 "
 2014 / 6 月 : 打成 " L "

Recommended Soldering(Reflow soldering)

Soldering Method :

- Wave soldering : 260°C, 10 Sec. max
- Reflow soldering : 260°C, 30 Sec. max
- Hand soldering : 350°C, 3 Sec. max

Recommended Reflow Soldering Curve

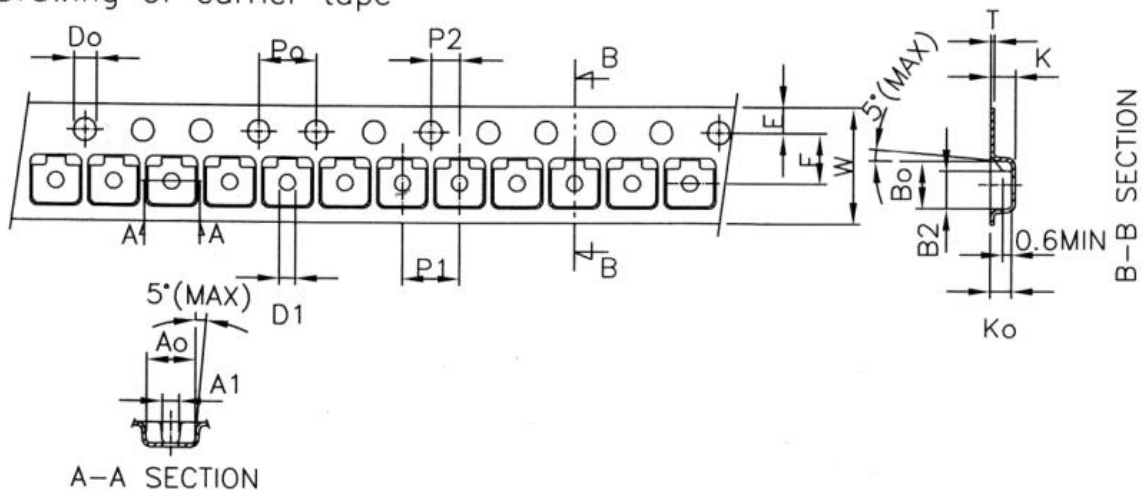


Reflow Condition		Pb-free assembly
Pre Heat	Temperature Min (T_s (min))	150°C
	Temperature Max (T_s (max))	200°C
	Time (Min to Max) (t_s)	60-180 seconds
Average Ramp-up Rate (Liquidus Temp (T_L) to peak)		3°C/second max
T_s (max) to T_L -Ramp-up Rate		5°C/second max
Reflow	Temperature (T_L) (Liquidus)	217°C
	Time (t_L)	60-150 seconds
Peak Temperature (T_p)		260 ^{+0/-5} °C
Time within 5°C of actual peak Temperature (t_p)		10-30 seconds
Ramp-down Rate		6°C/second max
Time 25°C to peak Temperature ($t_{25^\circ\text{C to peak}}$)		8 minutes max
Do not exceed		260°C

Transient Voltage Suppressor

SOT-23-6L Tape and Reel Specification

Drawing of carrier tape



尺寸标准

符号	A_0	B_0	K_0	P_0	P_1	P_2
标准	3.1 ± 0.2	$2.7^{+0.2}_{-0.1}$	1.20 (MIN)	4.0 ± 0.1	4.0 ± 0.1	2.0 ± 0.05
符号	T	A_1	E	F	B_2	D_0
标准	0.20 ± 0.02	1.0 ± 0.1	1.75 ± 0.1	3.5 ± 0.05	$2.1^{+0.25}_{-0.1}$	$1.50^{+0.1}_{-0.0}$
符号	D_1	W	$10P_0$	K		
标准	1.0MIN	$8.0^{+0.3}_{-0.1}$	40.0 ± 0.2	1.5MAX		

卷盘

