

Feature

- ◇ IEC 61000-4-2 (ESD)
 - ±30kV Contact Discharge
 - ±30kV Air Discharge
- ◇ 350W Peak pulse Power (8/20us)
- ◇ IEC 61000-4-4 EFT Protection
 - 40A (5/50ns)
- ◇ Halogen free and RoHS compliant
- ◇ Protects one directional I/O line
- ◇ Transient protection for high-speed data lines
- ◇ Low clamping voltage
- ◇ Low leakage current
- ◇ AEC-Q101 qualified



Ordering Information

Part Number	Package	Marking	Material	Packing	Quantity per reel	Flammability Rating	Reel Size
ASH1524CBA	SOD-323	AM	Halogen free	Tape & Reel	3,000 PCS	UL 94V-0	7 inches

Maximum Ratings (Ta = 25 °C)

Symbol	Parameter	Value	Units
$V_{ESD-Air}$	ESD Voltage IEC61000-4-2 Air	±30	kV
$V_{ESD-contact}$	ESD Voltage IEC61000-4-2 Contact	±30	kV
T_J	Junction Temperature	150	°C
T_{OP}	Operating temperature	-55 to +150	°C
T_{STG}	Storage Temperature	-55 to +150	°C
P_{PK}	Peak pulse power((tp=8/20us)@25°C)	350	W
I_{PP}	(tp=8/20us, pin1 to 2)@25°C	12	A
I_{PP}	(tp=8/20us, pin2 to 1)@25°C	8	A
T_L	Lead temperature	260	°C

Pinning Information

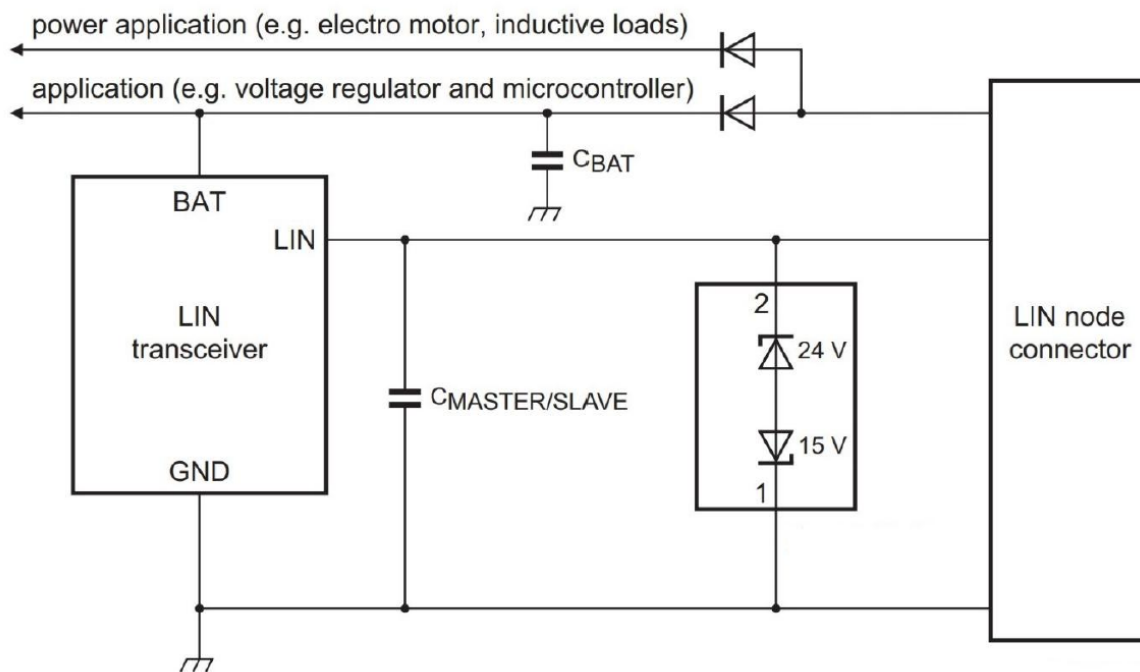
Pin	Description	Outline	Circuit Diagram
1	IO1		
2	IO2		

Electrical Characteristics (Ta = 25 °C)

Symbol	Parameter	Conditions	Min	Typ	Max	Units
V_{RWM}	Reverse Stand-off Voltage	Pin1 to Pin2			15	V
		Pin2 to Pin1			24	V
V_{BR}	Reverse Breakdown Voltage	IT=1mA, Pin1 to Pin2	16.5			V
		IT=1mA, Pin2 to Pin1	26.7			V
I_R	Reverse Leakage Current	$V_{RWM}=15V$			1	uA
		$V_{RWM}=24V$			1	uA
V_C	Clamping Voltage	$I_{PP}=1A$; Pin1 to 2; tp=8/20us		25		v
		$I_{PP}=12A$; Pin1 to 2; tp=8/20us		30		v
		$I_{PP}=1A$; Pin2 to 1; tp=8/20us		40		v
		$I_{PP}=8A$; Pin2 to 1; tp=8/20us		45		v
C_J	Junction Capacitance	I/O to GND; VR=0V; f=1MHz		35		pF

Typical Application

Typical Interface Application



Ratings and Characteristic Curves (TA =25°C unless otherwise noted)

Figure 1. Pulse rating curve

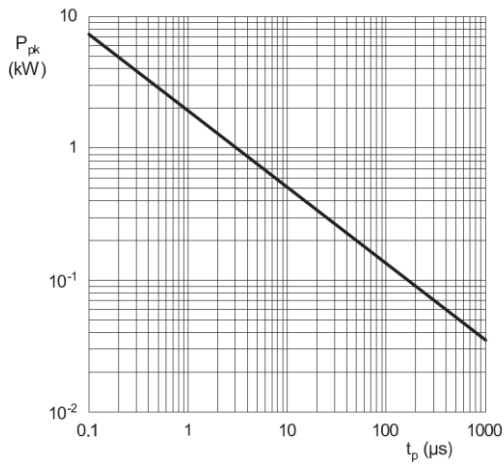


Figure 2 Peak pulse power derating curve

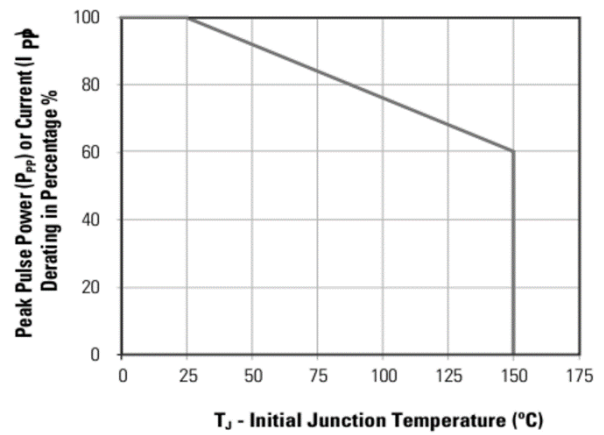


Figure 3 Pulse waveform

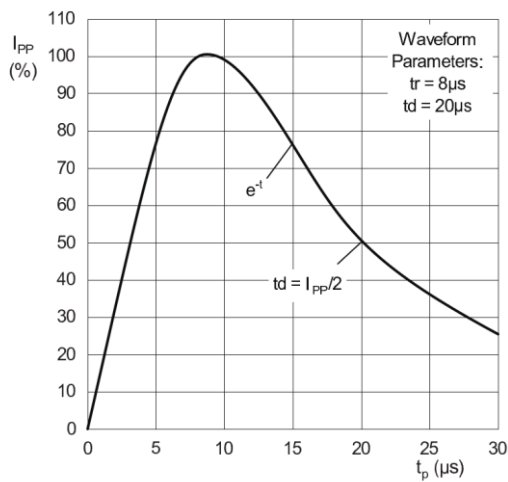
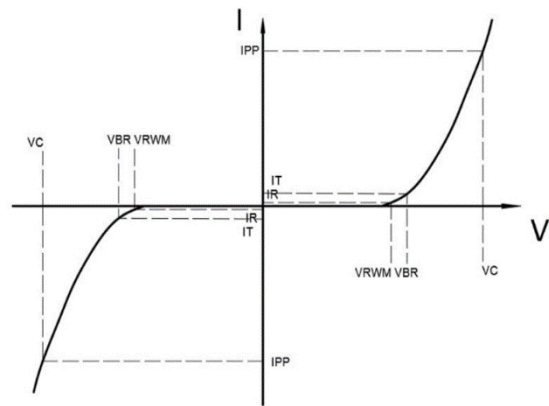
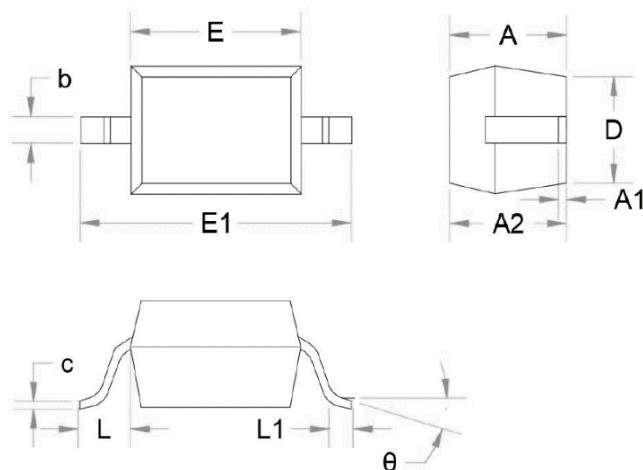


Figure 4 Parameters



Package Dimensions



Symbol	Dimensions in Millimeters		Dimensions in Inches	
	Min.	Max.	Min.	Max.
A		1.000		0.039
A1	0.000	0.100	0.000	0.004
A2	0.800	0.950	0.031	0.037
b	0.250	0.350	0.010	0.014
C	0.080	0.150	0.003	0.006
D	1.200	1.400	0.047	0.055
E	1.600	1.800	0.063	0.071
E1	2.400	2.750	0.094	0.108
L	0.475REF		0.019REF	
L1	0.250	0.400	0.010	0.016
θ	0°	8°	0°	8°

Revision history of Specification

Version	Change Items	Effective Date
1.0	Initial Release	1-Apr-2024