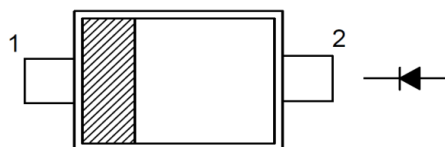


SILICON EPITAXIAL PLANAR BAND SWITCHING DIODE

DESCRIPTION:



The ALPBA592WS is a Silicon Epitaxial Planar Band Switching and encapsulated in the SOD323 plastic package.



FEATURES:

- Very low forward resistance
- Small capacitance
- RoHS Compliant
- REACH Compliant

APPLICATIONS:

- For band switching in TV/VTR tuners and mobile applications

MECHANICAL CHARACTERISTICS

- Epoxy: UL94-V0 rated flame retardant.
- Case: Molded plastic, SOD323.
- Polarity: Color band denotes cathode
- Mounting Position: Any.

ORDERING PART NUMBER

PART NUMBER	ORDERING PART NUMBER
ALPBA592WS	ALPBA592WS-TD

TYPICAL DEVICE CHARACTERISTICS
ABSOLUTE MAXIMUM RATINGS ($T_A = 25\text{ }^{\circ}\text{C}$ unless otherwise noted)

PARAMETER	SYMBOL	VALUES	UNIT
Diode Reverse Voltage	V_R	35	V
Forward Current	I_F	100	mA
Operating Junction Temperature Range	T_j	-55 to +125	$^{\circ}\text{C}$
Storage Temperature Range	T_{stg}	-55 to +150	$^{\circ}\text{C}$

ELECTRICAL CHARACTERISTICS ($T_A = 25\text{ }^{\circ}\text{C}$ unless otherwise noted)

PARAMETER	TEST CONDITIONS	SYMBOL	MIN.	TYP.	MAX.	UNIT
Reverse Breakdown Voltage	$I_R = 10\text{ }\mu\text{A}$	$V_{(BR)R}$	35			V
Forward Voltage	$I_F = 100\text{ mA}$	V_F			1	V
Reverse current	$V_R = 20\text{ V}$	I_R			20	nA
Diode capacitance	$V_R = 1\text{ V}; f=1\text{ MHz}$	C_T	0.65		1.4	pF
	$V_R = 3\text{ V}; f=1\text{ MHz}$		0.60		1.1	
Reverse Parallel Resistance	$V_R = 0\text{ V}; f=100\text{ MHz}$	R_P		100		$\text{K}\Omega$
Forward Resistance	$I_F=3\text{ mA}, f=100\text{ MHz}$	R_F			0.7	Ω
	$I_F=10\text{ mA}, f=100\text{ MHz}$				0.6	

TYPICAL DEVICE CHARACTERISTICS CURVES ($T_A = 25^\circ\text{C}$ unless otherwise noted)

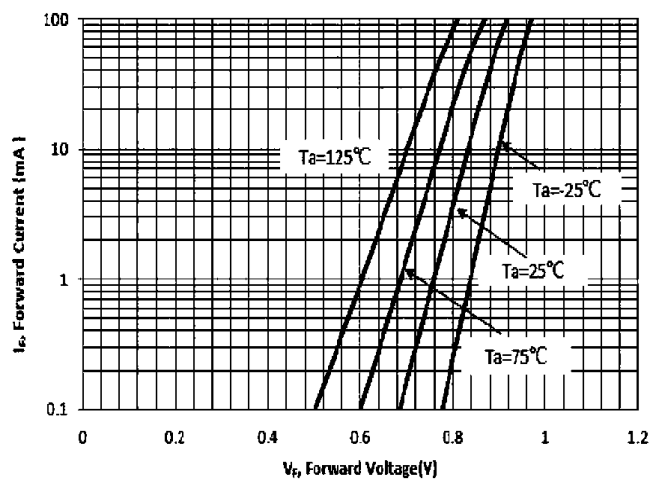


Fig.1 FORWARD CHARACTERISTICS

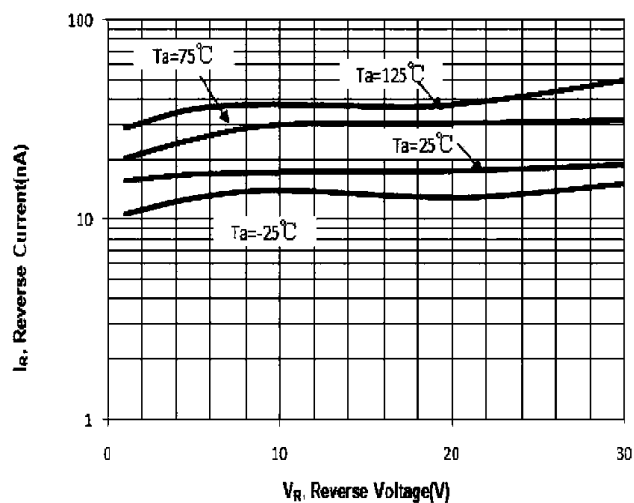


Fig.2 REVERSE CHARACTERISTICS

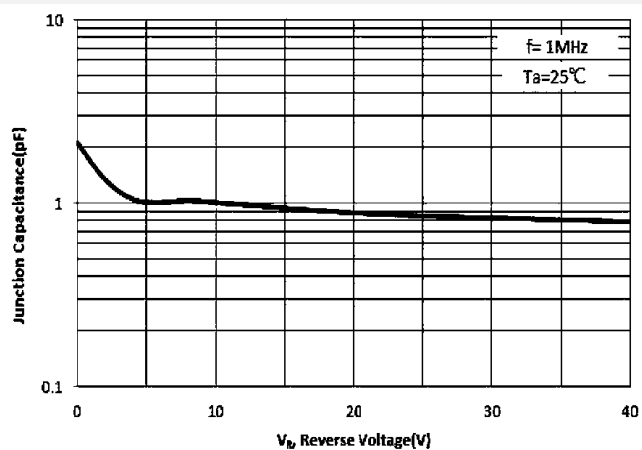


Fig.3 CAPACITANCE CHARACTERISTICS

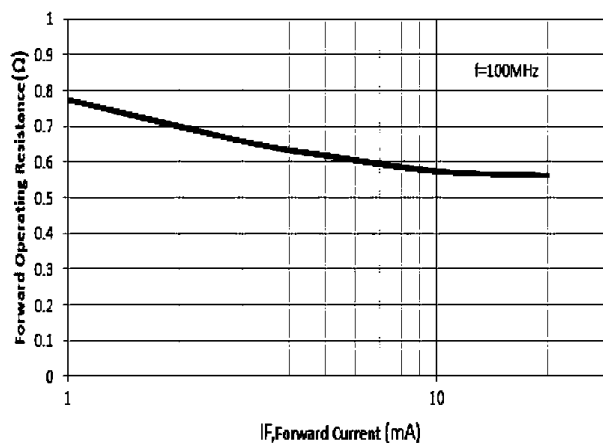


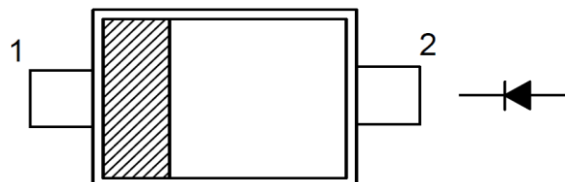
Fig.4 RESISTANCE CHARACTERISTICS

PINNING INFORMATION

PIN

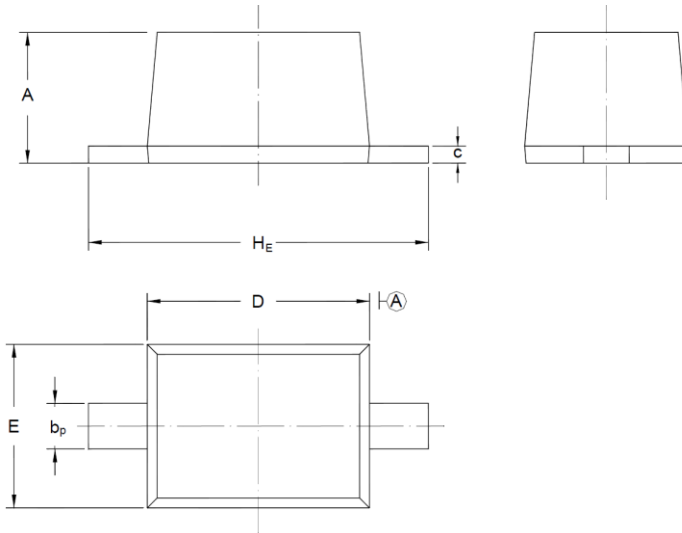
- 1 – CATHODE
- 2 – ANODE

SCHEMATIC DIAGRAM



PACKAGE INFORMATION

SOD323

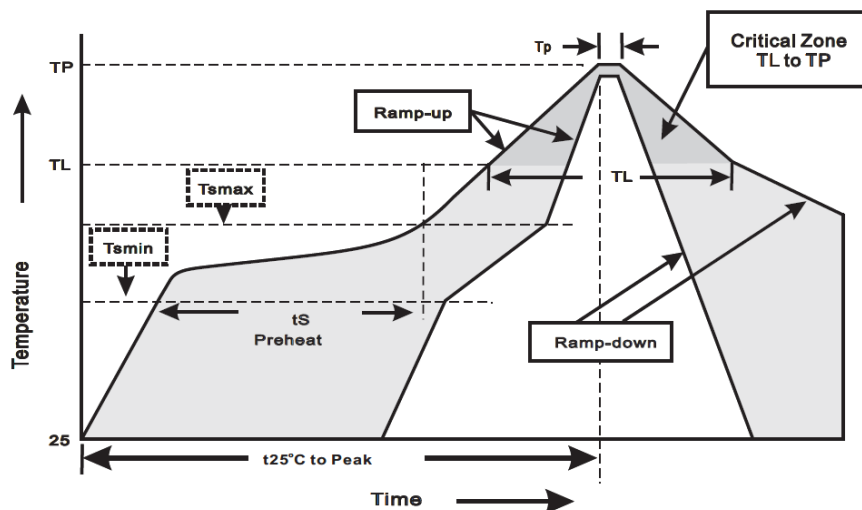


OUTLINE DIMENSIONS				
DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	0.80	1.10	0.031	0.043
b _p	0.25	0.40	0.010	0.016
C	0.10	0.15	0.004	0.006
D	1.60	1.80	0.063	0.071
E	1.15	1.35	0.045	0.053
H _E	2.30	2.80	0.091	0.110
NOTES - Controlling dimension: millimeters. - Dimensioning and tolerances per ANSI Y14.5M, 1985. - Dimensions are exclusive of mold flash and metal burrs.				

SOLDERING PARAMETERS

SUGGESTED THERMAL PROFILES FOR SOLDERING PROCESSES

1. Storage environment: Temperature=5 °C~40 °C Humidity=55% ±25%
2. Reflow soldering of surface-mount devices



3. Reflow soldering

PROFILE FEATURE	SOLDERING CONDITION
Average ramp-up rate (T_L to T_P)	<3 °C/sec
Preheat	
- Temperature Min (T_{smin})	150 °C
- Temperature Max (T_{smax})	200 °C
- Time (min to max) (t_s)	60 ~ 120 sec
T_{smax} to T_L	
- Ramp-upRate	<3 °C/sec
Time maintained above:	
- Temperature (T_L)	217 °C
- Time(t_L)	60 ~ 260 sec
Peak Temperature (T_P)	255 °C-0/+5 °C
Time within 5 °C of actual Peak Temperature(t_P)	10 ~ 30 sec
Ramp-down Rate	<3 °C/sec
Time 25 °C to Peak Temperature	<6 minutes



beyond boundaries...

ALPBA592WS
SOD323

CUSTOMER NOTE:

DISCLAIMER

The product information and the selection guide facilitates the selection of the ALPINESEMI™'s Semiconductor Device(s) best suited for application in your product(s) as per your requirement. It is recommended that you completely review the Data sheet(s) so as to confirm that the Device(s) meets functionality parameters for your application. The information furnished on the Data Sheet and the ALPINESEMI™'s Web Site is believed to be accurate and reliable at the time of preparation of this document. ALPINESEMI™ however, does not assume any inaccuracies that may arise when the components are mounted and removed. Furthermore, ALPINESEMI™ does not assume liability whatsoever, arising out of the application or the use of any of ALPINESEMI™'s product(s). Neither, does it convey any license under its patent rights nor the rights of others. These products are not guaranteed for use in life saving/support appliances or systems. ALPINESEMI™'s customers using these products (either as individual Semiconductor Devices or incorporated in their end products), in any life saving/support appliances or systems or applications do so at their own risk and ALPINESEMI™ will not be responsible in any way(s) for any damage(s) resulting from such use.

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Component Disposal Instructions

1. ALPINESEMI™ Semiconductor Devices are RoHS compliant and hence customers are requested to dispose as per the prevailing Environmental Legislation put forth in their specific country.
2. In Europe, please dispose as per EU Directive 2002/96/EC on Waste Electrical and Electronic Equipment (WEEE).



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