

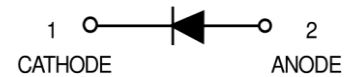
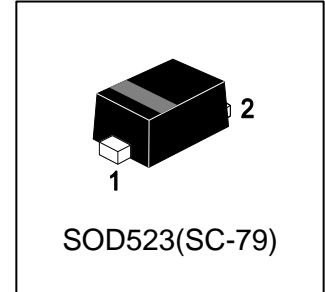
# LBAS516T1G

## S-LBAS516T1G

High-speed Diode

### 1. FEATURES

- We declare that the material of product compliance with RoHS requirements and Halogen Free.
- S- prefix for automotive and other applications requiring unique site and control change requirements; AEC-Q101 qualified and PPAP capable.
- Ultra small plastic SMD package
- High switching speed: max. 4 ns
- Continuous reverse voltage: max. 75 V
- Repetitive peak reverse voltage: max. 85 V
- Repetitive peak forward current: max. 500 mA.



### 2. APPLICATIONS

- High-speed switching in e.g. surface mounted circuits.

### 3. DEVICE MARKING AND ORDERING INFORMATION

Device	Marking	Shipping
LBAS516T1G	6	3000/Tape&Reel
LBAS516T3G	6	10000/Tape&Reel

### 4. MAXIMUM RATINGS(In accordance with the Absolute Maximum Rating System IEC134)

Parameter	Symbol	Limit	Unit
repetitive peak reverse voltage	VRRM	85	V
continuous reverse voltage	VR	75	V
continuous forward current( $T_s = 90^\circ\text{C}$ )(Note 1)	IF	250	mA
repetitive peak forward current	IFRM	500	mA
non-repetitive peak forward current(square wave; $T_j = 25^\circ\text{C}$ prior to surge)	IFSM	4	A
( $t = 1\mu\text{s}$ )		1	A
( $t = 1\text{ms}$ )		0.5	A
total power dissipation( $T_s = 90^\circ\text{C}$ )(Note 1)	Ptot	500	mW
storage temperature	Tstg	-65~+150	$^\circ\text{C}$
junction temperature	$T_j$	150	$^\circ\text{C}$

1.  $T_s$  is the temperature at the soldering point of the cathode tab.

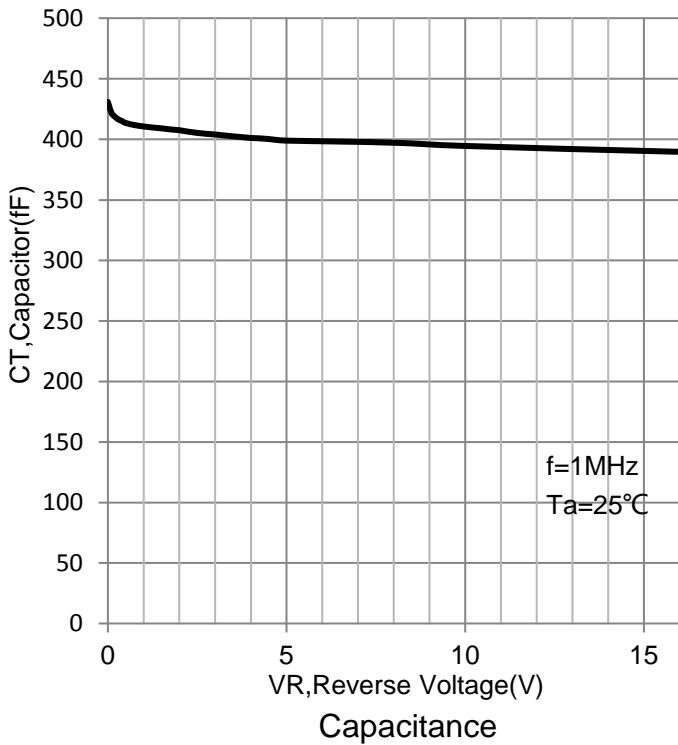
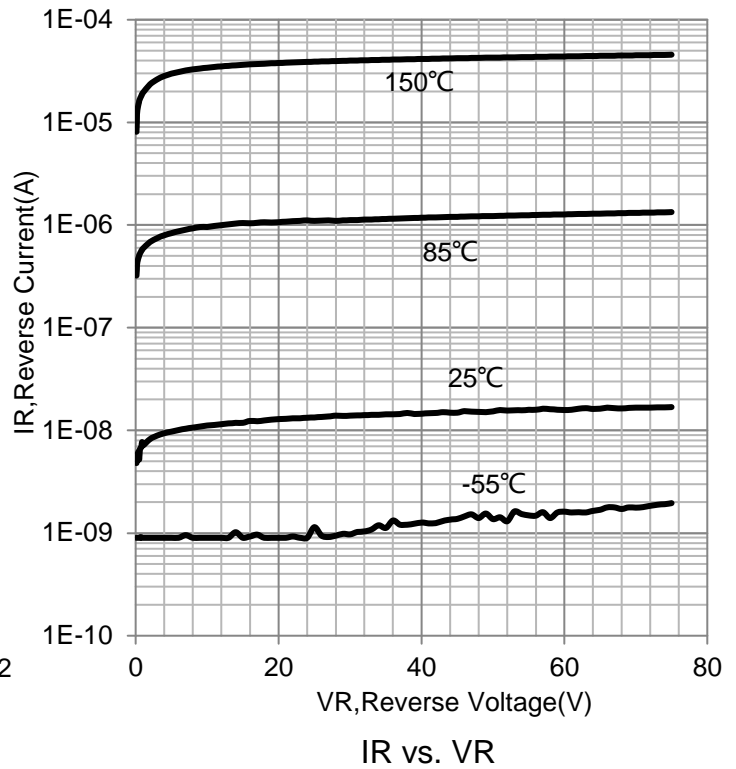
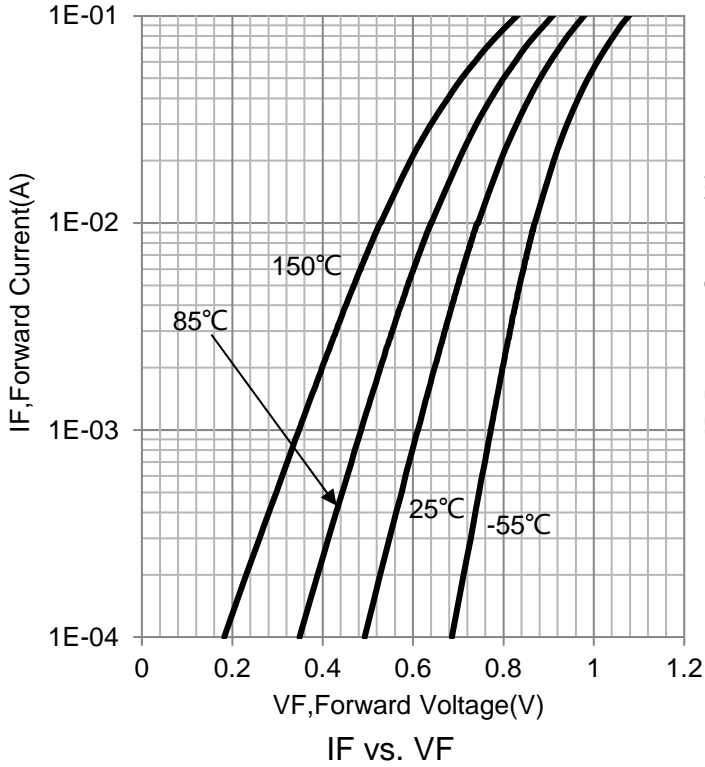
### 5. THERMAL CHARACTERISTICS

Parameter	Symbol	Value	Unit
Thermal Resistance From Junction to Soldering Point	$R\theta_{js}$	120	K/W

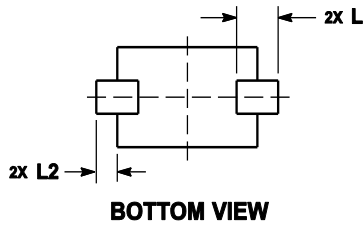
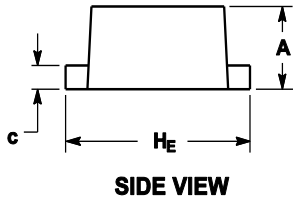
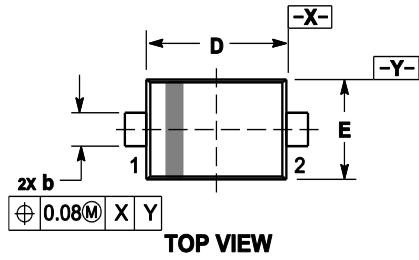
**6. ELECTRICAL CHARACTERISTICS (T<sub>j</sub> = 25°C unless otherwise specified.)**

Parameter	Symbol	MIN	MAX	Unit
Forward Voltage (I <sub>F</sub> = 1mA)	V <sub>F</sub>	-	715	mV
(I <sub>F</sub> = 10mA)		-	855	mV
(I <sub>F</sub> = 50mA)		-	1	V
(I <sub>F</sub> = 150mA)		-	1.25	V
Reverse Current (V <sub>R</sub> = 25 V)	I <sub>R</sub>	-	30	nA
(V <sub>R</sub> = 75 V)		-	1	μA
(V <sub>R</sub> = 25 V, T <sub>j</sub> = 150°C)		-	30	μA
(V <sub>R</sub> = 75 V, T <sub>j</sub> = 150°C)		-	50	μA
Diode Capacitance (f = 1MHz, V <sub>R</sub> = 0)	C <sub>d</sub>	-	1	pF
Reverse Recovery Time (When switched from I <sub>F</sub> = 10mA to I <sub>R</sub> = 10mA; R <sub>L</sub> = 100Ω; measured at I <sub>R</sub> = 1mA)	t <sub>rr</sub>	-	4	nS
Forward Recovery Voltage (when switched from I <sub>F</sub> = 10mA; t <sub>r</sub> = 20 ns)	V <sub>fr</sub>	-	1.75	V

**7.ELECTRICAL CHARACTERISTICS CURVES**



### 8. OUTLINE AND DIMENSIONS

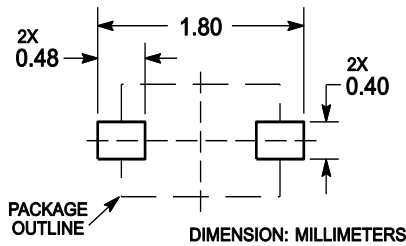


Notes:

1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: MILLIMETERS.
3. MAXIMUM LEAD THICKNESS INCLUDES LEAD FINISH. MINIMUM LEAD THICKNESS IS THE MINIMUM THICKNESS OF BASE MATERIAL.
4. DIMENSIONS D AND E DO NOT INCLUDE MOLD FLASH, PROTRUSIONS OR GATE BURRS.

DIM	MILLIMETERS			INCHES		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.50	0.60	0.70	0.020	0.024	0.028
b	0.25	0.30	0.35	0.010	0.012	0.014
c	0.07	0.14	0.20	0.003	0.006	0.008
D	1.10	1.20	1.30	0.043	0.047	0.051
E	0.70	0.80	0.90	0.028	0.031	0.035
H <sub>E</sub>	1.50	1.60	1.70	0.059	0.063	0.067
L	0.30 REF			0.012 REF		
L <sub>2</sub>	0.15	0.20	0.25	0.006	0.008	0.010

### 9. SOLDERING FOOTPRINT



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