

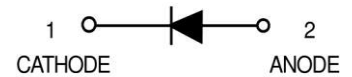
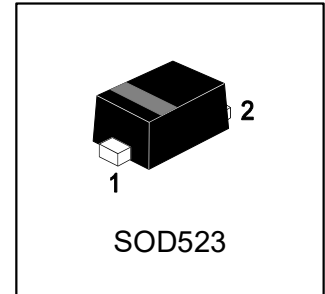
BAS516

S-BAS516

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. 100 V
- Repetitive peak reverse voltage: max. 100 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
BAS516	6	3000/Tape&Reel

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

Parameter	Symbol	Limit	Unit
repetitive peak reverse voltage	VRRM	100	V
continuous reverse voltage	VR	100	V
continuous forward current	IF	250	mA
repetitive peak forward current	IFRM	500	mA
non-repetitive peak forward current(square wave; Tj=25°C prior to surge)	IFSM	4	A
(t =1μs)		1	A
(t =1ms)		0.5	A
(t =1s)			
storage temperature	Tstg	-65~+150	°C
junction temperature	Tj	150	°C

5. THERMAL CHARACTERISTICS

Parameter	Symbol	Limits	Unit
Total Device Dissipation, FR-5 Board (Note 1) @ TA = 25°C Derate above 25°C	PD	200 1.6	mW mW/°C
Thermal Resistance, Junction-to-Ambient(Note 1)	RθJA	625	°C/W

1. FR-5 = 1.0×0.75×0.062 in.

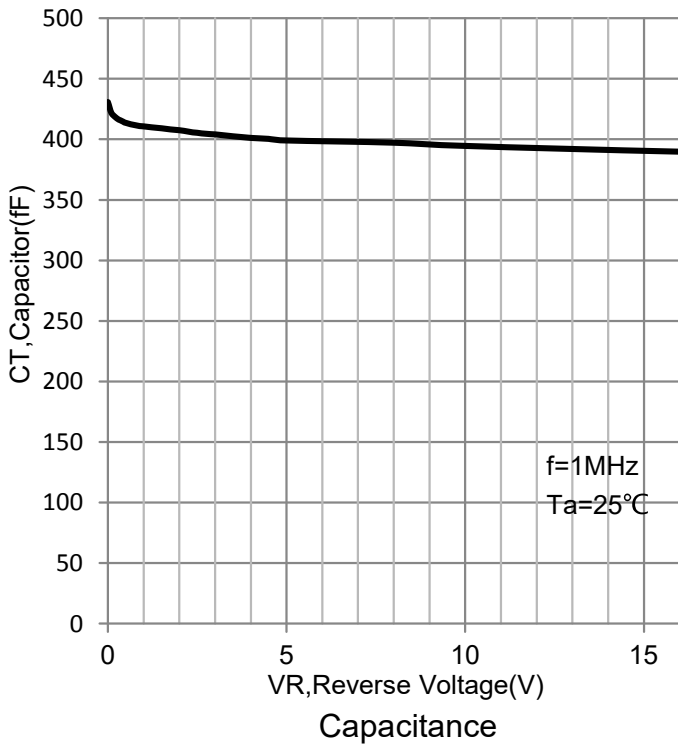
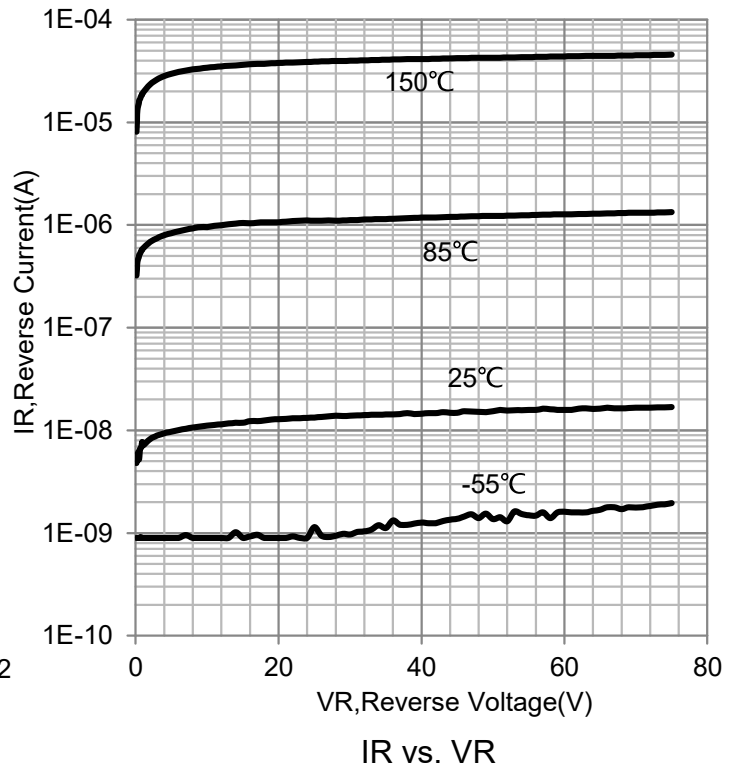
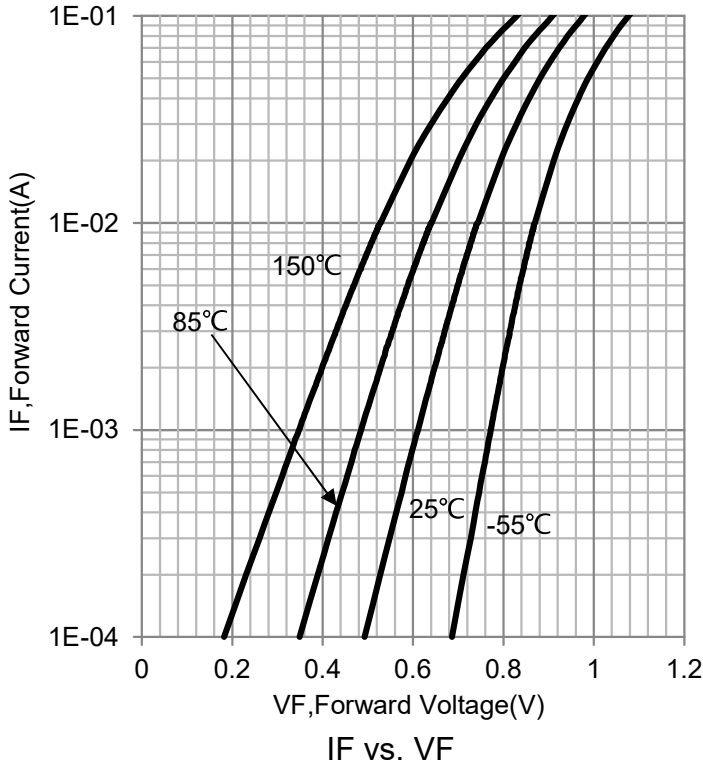


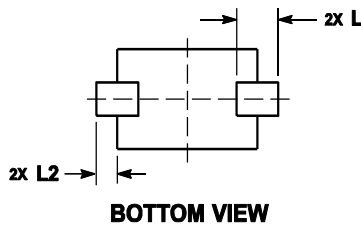
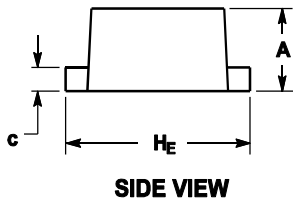
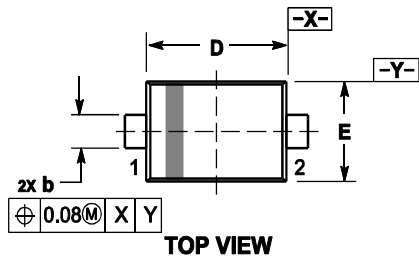
6. ELECTRICAL CHARACTERISTICS (T_j =25°C unless otherwise specified.)

Parameter	Symbol	MIN	MAX	Unit
Forward Voltage (IF= 1mA)	VF	-	715	mV
(IF= 10mA)		-	855	mV
(IF= 50mA)		-	1	V
(IF= 150mA)		-	1.25	V
Reverse Current (VR = 25 V)	IR	-	30	nA
(VR = 80 V)		-	0.5	μA
(VR = 25 V, T _j = 150°C)		-	30	μA
(VR = 75 V, T _j = 150°C)		-	50	μA
Diode Capacitance (f=1MHz, VR = 0)	Cd	-	1	pF
Reverse Recovery Time (When switched from IF=10mA to IR = 10mA;RL=100Ohm; measured at IR = 1mA)	trr	-	4	nS
Forward Recovery Voltage (when switched from IF=10mA; tr=20 ns)	Vfr	-	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 _E	1.50	1.60	1.70	0.059	0.063	0.067
L	0.30 REF			0.012 REF		
L ₂	0.15	0.20	0.25	0.006	0.008	0.010

9. SOLDERING FOOTPRINT
