



70V 70mA Schottky Diode – BAS70

Rev 1.0
01/02/19

Small-signal ultra-fast switching schottky diode in bare die form

Features:

- Ultra-fast switching speed
- Low forward voltage drop
- 70V breakdown voltage
- Guard-Ring for over-voltage protection
- High reliability tested grades & matched characteristic options.

Ordering Information

The following part suffixes apply:

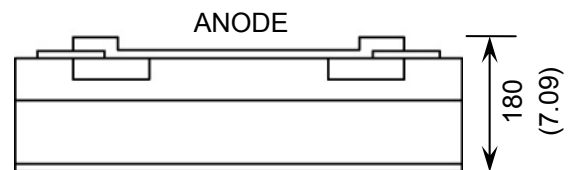
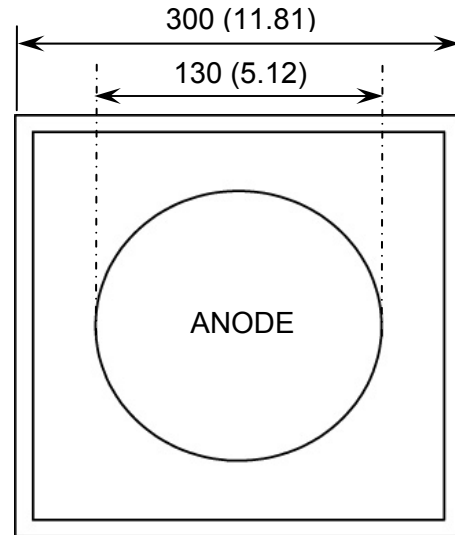
- No suffix - MIL-STD-750 /2073 Visual Inspection
- "H" - MIL-STD-750 /2073 Visual Inspection
+ MIL-PRF-38534 Class H LAT
- "K" - MIL-STD-750 /2073 Visual Inspection
+ MIL-PRF-38534 Class K LAT

LAT = Lot Acceptance Test.

For further information on LAT process flows see below.

www.siliconsupplies.com/quality/bare-die-lot-qualification

Die Dimensions in μm (mils)



Supply Formats:

- Default – Die in Waffle Pack (400 per tray capacity)
- Sawn Wafer on Tape – By specific request
- Unsawn Wafer – By specific request
- Die Thickness \leftrightarrow 180 μm (7 Mils) – On request
- With additional electrical selection – On request

Mechanical Specification

Die Size (with scribe line)	300 x 300 11.81 x 11.81	μm mils
Anode Pad Size	130 \varnothing 5.1 \varnothing	μm mils
Die Thickness	180 (± 15) 7.09 (± 0.59)	μm mils
Top Metal Composition	Al	
Back Metal Composition	AuAs	





70V 70mA Schottky Diode – BAS70

Rev 1.0
01/02/19

Absolute Maximum Ratings¹ $T_J = 25^\circ\text{C}$ unless otherwise stated

PARAMETER	SYMBOL	VALUE	UNIT
Repetitive Peak Reverse Voltage	V_{RRM}	70	V
Repetitive Peak Working Voltage	V_{RWM}	70	V
DC Blocking Voltage	V_R	70	V
DC Forward Current	I_F	70	mA
Non-repetitive Peak forward surge current ²	I_{FSM}	100	mA
Power Dissipation	P_D	400	mW
Operating Junction temperature	T_J	-65 to 125	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-65 to 200	$^\circ\text{C}$

Electrical Characteristics $T_J = 25^\circ\text{C}$ unless otherwise stated

PARAMETER	SYMBOL	CONDITIONS	MIN	TYP	MAX	UNIT
Breakdown Voltage ³	V_{BR}	$I_R = 10\mu\text{A}$	70	-	-	V
Forward Voltage ³	V_F	$I_F = 1\text{mA}$	-	-	0.41	V
		$I_F = 15\text{mA}$	-	-	1	V
Reverse Leakage ³	I_R	$V_R = 50\text{V}$	-	-	100	nA
Junction Capacitance	C_J	$V_R = 0\text{V}, f = 1\text{MHz}$	-	-	2	pF
Reverse Recovery Time	t_{rr}	$I_F = I_R = 10\text{mA},$ $I_{rr} = 0.1 \times I_R, R_L = 100\Omega$	-	-	5	ns

1. Operation above the absolute maximum rating may cause device failure. Operation at the absolute maximum ratings, for extended periods, may reduce device reliability. 2. 8.3ms single half sine-wave. 3. Pulse test; $t_p \leq 300\mu\text{s}$

Typical Characteristics $T_J = 25^\circ\text{C}$ unless otherwise stated

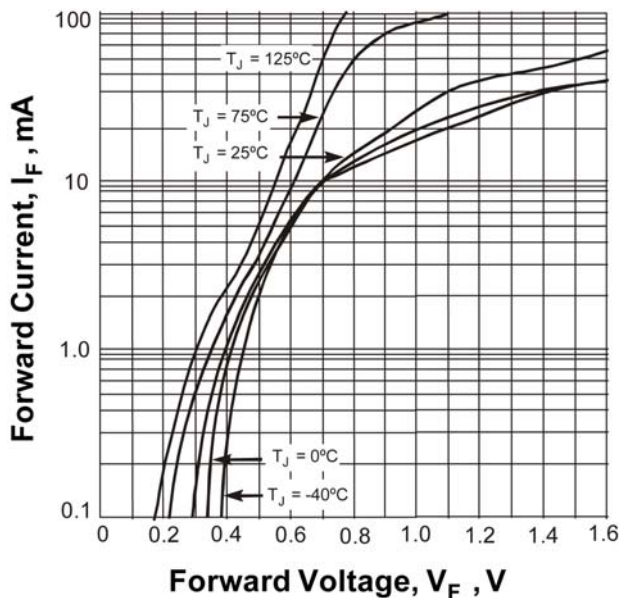


FIGURE 1. Forward Voltage Characteristics

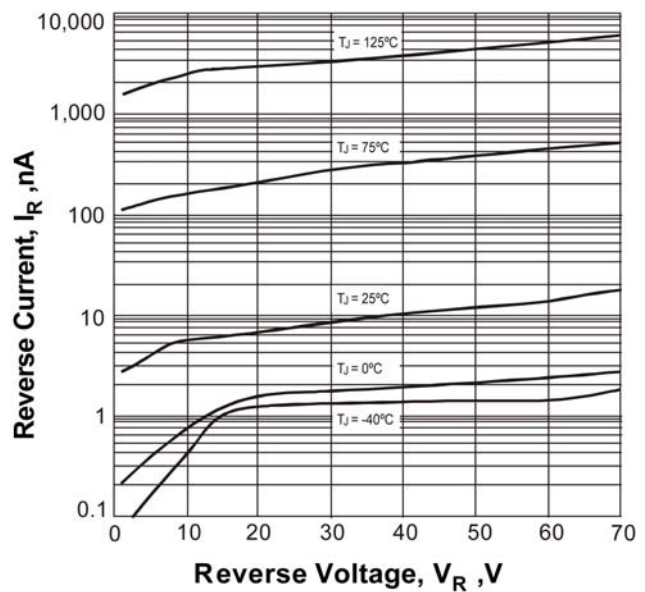


FIGURE 2. Reverse Current Versus Reverse Voltage





70V 70mA Schottky Diode – BAS70

Rev 1.0
01/02/19

Typical Characteristics $T_J = 25^\circ\text{C}$ unless otherwise stated

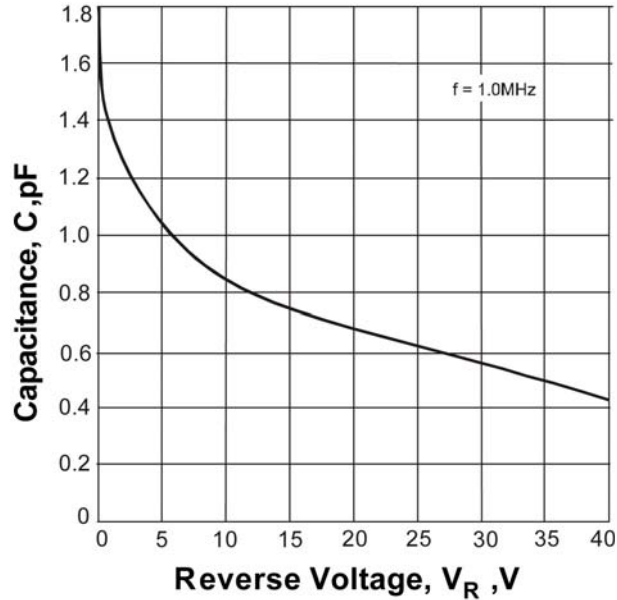


FIGURE 3. Junction Capacitance Versus Reverse Voltage

DISCLAIMER: The information given in this document shall in no event be regarded as a guarantee of conditions or characteristics. With respect to any examples or hints given herein, any typical values stated herein and/or any information regarding the application of the device, Silicon Supplies Ltd hereby disclaims any and all warranties and liabilities of any kind.

LIFE SUPPORT POLICY: Silicon Supplies Ltd components may be used in life support devices or systems only with the express written approval of Silicon Supplies Ltd, if a failure of such components can reasonably be expected to cause the failure of that life support device or system or to affect the safety or effectiveness of that device or system. Life support devices or systems are intended to be implanted in the human body or to support and/or maintain and sustain and/or protect human life. If they fail, it is reasonable to assume that the health of the user or other persons may be endangered.

