



BAV70S

Preliminary

DIODE

DUAL SURFACE MOUNT SWITCHING DIODE

DESCRIPTION

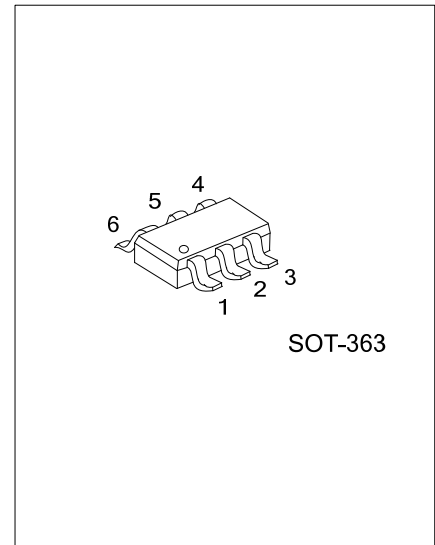
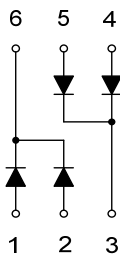
The UTC **BAV70S** is a dual surface mount switching diode providing the designers high switching speed, high conductance and high reliability.

The UTC **BAV70S** is suitable for common switching applications.

FEATURES

- * High Switching Speed
- * High Conductance
- * High Reliability
- * Low capacitance
- * Reverse voltage
- * Low leakage current

SYMBOL



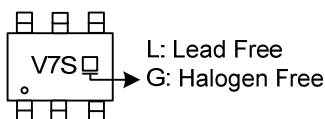
ORDERING INFORMATION

Ordering Number		Package	Pin Assignment						Packing
Lead Free	Halogen Free		1	2	3	4	5	6	
BAV70SL-AL6-R	BAV70SG-AL6-R	SOT-363	A1	A1	K2	A2	A2	K1	Tape Reel

Note: Pin Assignment: A: Anode K: Cathode

BAV70SG-AL6-R (1) Packing Type (2) Package Type (3) Green Package	(1) R: Tape Reel (2) AL6: SOT-363 (3) G: Halogen Free and Lead Free, L: Lead Free
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MARKING



■ **ABSOLUTE MAXIMUM RATINGS** ($T_A = 25^\circ\text{C}$ unless otherwise specified)

PARAMETER	SYMBOL	RATINGS	UNIT
Non-Repetitive Reverse Voltage	V_{RM}	100	V
Peak Repetitive Reverse Voltage	V_{RRM}	75	V
Working Peak Reverse Voltage	V_{RWM}	75	V
DC Blocking Voltage	V_R	75	V
Forward Continuous Current (Note 2)	I_F	150	mA
Average Rectified Output Current (Note 2)	I_O	75	mA
Repetitive Peak Forward Current (Note 2)	I_{FRM}	500	mA
Non-Repetitive Peak Forward Surge Current (Note 2)	$t = 1.0\mu\text{s}$	I_{FRM}	4
	$t = 1.0\text{ms}$		1
	$t = 1.0\text{s}$		0.5
Power Dissipation	P_D	350	mW
Operating Temperature	T_J	$-65 \sim +150$	$^\circ\text{C}$
Storage Temperature	T_{STG}	$-65 \sim +150$	$^\circ\text{C}$

Notes: 1. Absolute maximum ratings are those values beyond which the device could be permanently damaged.

Absolute maximum ratings are stress ratings only and functional device operation is not implied.

2. Device mounted on FR-4 substrate PC board, 2oz copper, with 1inch square copper plate.

■ **THERMAL DATA**

PARAMETER	SYMBOL	RATINGS	UNIT
Typical Thermal Resistance	θ_{JA}	500	$^\circ\text{C/W}$

■ **ELECTRICAL CHARACTERISTICS** ($T_A = 25^\circ\text{C}$ unless otherwise specified.)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Reverse Breakdown Voltage (Note 1)	$V_{(BR)R}$	$I_R = 0.5\mu\text{A}$	85			V
Forward Voltage (Note 2)	V_F	$I_F = 1.0\text{mA}$			0.715	V
		$I_F = 10\text{mA}$			0.855	V
		$I_F = 50\text{mA}$			1	V
		$I_F = 150\text{mA}$			1.25	V
Reverse Current	I_R	$V_R = 25\text{V}$			30	nA
		$V_R = 80\text{V}$			0.5	μA
		$V_R = 25\text{V}, T_J = 150^\circ\text{C}$			30	μA
		$V_R = 80\text{V}, T_J = 150^\circ\text{C}$			100	μA
Reverse Recovery Time	t_{rr}	$I_F = I_R = 10\text{mA}, I_{rr} = 0.1I_R, R_L = 100\Omega$			4	ns

Notes: 1. Short duration test pulse used to minimize self-heating effect.

2. Pulse Test: Pulse width $\leq 300\mu\text{s}$, Duty cycle $\leq 1\%$.

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