

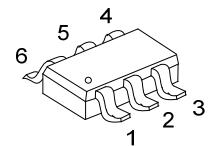
## BAV756S

DIODE

HIGH-SPEED SWITCHING  
DIODE

## ■ DESCRIPTION

The UTC **BAV756S** is a High-speed switching diode, encapsulated in a very small SOT363 Surface-Mounted Device (SMD) plastic package.

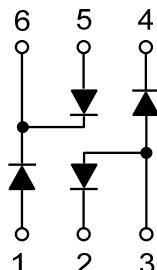


SOT-363

## ■ FEATURES

- \* High switching speed:  $t_{rr} \leq 6\text{ns}$
- \* Low capacitance:  $C_d \leq 3\text{pF}$
- \* Low leakage current
- \* Reverse voltage:  $V_R \leq 90\text{V}$

## ■ SYMBOL



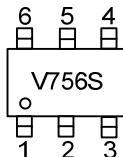
## ■ ORDERING INFORMATION

Ordering Number		Package	Pin Assignment						Packing
Lead Free	Halogen Free		1	2	3	4	5	6	
BAV756SL-AL6-R	BAV756SG-AL6-R	SOT-363	A1	K2	A2, A3	K3	A4	K1, K4	Tape Reel

Note: Pin Assignment: A: Anode    K: Cathode

 BAV756SG-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
<b>PER DIODE</b>				
Repetitive Peak Reverse Voltage	$V_{RRM}$	90		V
Working Peak Reverse Voltage	$V_{RWM}$	90		V
Reverse Voltage	$V_R$	90		V
Forward Current ( $T_S=60^\circ\text{C}$ )	$I_F$	250		mA
Repetitive Peak Forward Current	$I_{FRM}$	500		mA
Non-Repetitive Peak Forward Surge Current	$t = 1.0\mu\text{s}$	4		A
	$t = 1.0\text{ms}$	1		A
	$t = 1.0\text{s}$	0.5		A
Power Dissipation (Note 2)	$P_D$	350		mW
<b>PER DEVICE</b>				
Forward Current ( $T_S=60^\circ\text{C}$ )	$I_F$	100		mA
Junction Temperature	$T_J$	+150		°C
Storage Temperature	$T_{STG}$	-65 ~ +150		°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 an FR4 Printed-Circuit Board (PCB), single-sided copper, tin-plated and standard footprint.

## ■ THERMAL DATA

PARAMETER	SYMBOL	RATINGS		UNIT
Thermal Resistance From Junction to Solder Point	$\theta_{J-SP}$	255		K/W

Note: Device mounted on an FR4 Printed-Circuit Board (PCB), single-sided copper.

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

PARAMETER	SYMBOL	TEST CONDITIONS		MIN	TYP	MAX	UNIT
<b>PER DIODE</b>							
Forward Voltage	$V_F$	$I_F=1\text{mA}$	$t_P \leq 300\mu\text{s}, \delta \leq 0.02,$ Pulsed			715	mV
		$I_F=10\text{mA}$				855	mV
		$I_F=50\text{mA}$				1	V
		$I_F=150\text{mA}$				1.25	V
Leakage Current	$I_R$	$V_R=25\text{V}, T_A=25^\circ\text{C}$				30	nA
		$V_R=80\text{V}, T_A=25^\circ\text{C}$				0.5	µA
		$V_R=25\text{V}, T_J=150^\circ\text{C}$				30	µA
		$V_R=80\text{V}, T_J=150^\circ\text{C}$				150	µA
Diode Capacitance	$C_d$	$V_R=0, f=1.0\text{MHz}$				3	pF
Reverse Recovery Time	$t_{rr}$	$I_F=I_R=10\text{mA}, I_{rr}=1\text{mA}, R_L=100\Omega$				6	ns

Note: Short duration test pulse to minimize self-heating effect.

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