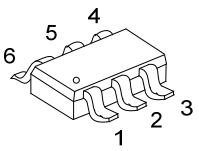
BAV756S

DIODE

HIGH-SPEED SWITCHING DIODE



SOT-363

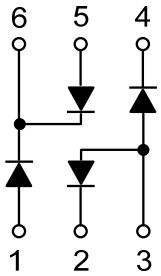
■ DESCRIPTION

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

■ FEATURES

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

■ SYMBOL



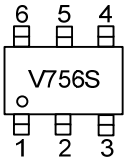
■ ORDERING INFORMATION

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

■ MARKING



■ ABSOLUTE MAXIMUM RATINGS (T_A=25°C, unless otherwise specified)

PARAMETER		SYMBOL	RATINGS	UNIT
PER DIODE				
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°C)		I_F	250	mA
Repetitive Peak Forward Current		I_{FRM}	500	mA
Non-Repetitive Peak Forward Surge Current	t = 1.0μs	I_{FSM}	4	A
	t = 1.0ms		1	A
	t = 1.0s		0.5	A
Power Dissipation (Note 2)		P_D	350	mW
PER DEVICE				
Forward Current (T_S=60°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	$\theta_{J\text{-}SP}$	255	K/W

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

■ ELECTRICAL CHARACTERISTICS (T_A=25°C, unless otherwise specified.)

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

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