

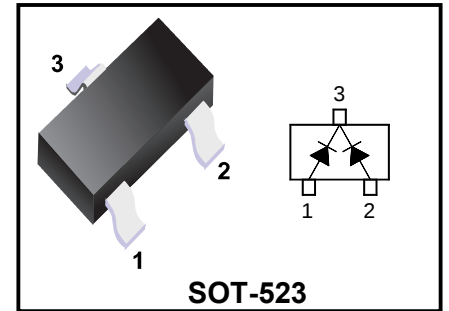
Switching Diodes

Features

- Fast switching speed
- High conductance

Mechanical Data

- Case: SOT-523
- Molding Compound: UL Flammability Classification Rating 94V-0
- Terminals: Matte tin-plated leads; solderability-per MIL-STD-202, Method 208



Ordering Information

Part Number	Marking Code
BAV70T	JJ

Maximum Ratings (@ TA = 25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Repetitive Peak Reverse Voltage	V_{RRM}	85	V
DC Blocking Voltage	V_R	75	V
Forward Continuous Current	I_F	150	mA
Repetitive Peak Forward Current	I_{FRM}	500	mA
Peak Forward Surge Current, 1 μ s Single Half-sine-wave	I_{FSM}	4	A
Peak Forward Surge Current, 1ms Single Half-sine-wave	I_{FSM}	1	A
Peak Forward Surge Current, 1s Single Half-sine-wave	I_{FSM}	0.5	A

Thermal Characteristics

Parameter	Symbol	Value	Unit
Power Dissipation ($T_S = 90^\circ\text{C}$, one diode loaded)	P_D	170	mW
Operating Junction Temperature Range	T_J	-65 ~ +150	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-65 ~ +150	$^\circ\text{C}$

Electrical Characteristics (@ TA = 25°C unless otherwise specified)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Reverse Breakdown Voltage	$V_{(BR)R}$	$I_R = 2.5\mu A$	75	-	-	V
Forward Voltage	V_F	$I_F = 1mA$	-	-	0.715	V
		$I_F = 10mA$	-	-	0.855	V
		$I_F = 50mA$	-	-	1.000	V
		$I_F = 150mA$	-	-	1.250	V
Maximum Peak Reverse Current	I_R	$V_R = 25V$	-	-	30	nA
		$V_R = 75V$	-	-	2	μA
		$V_R = 25V, T_J = 150^\circ C$	-	-	60	μA
		$V_R = 75V, T_J = 150^\circ C$	-	-	100	μA
Total Capacitance	C_J	$V_R = 0V, f = 1.0MHz$	-	-	1.5	pF
Reverse Recovery Time	t_{rr}	$I_F = I_R = 10mA$ $I_{rr} = 0.1 \times I_R, R_L = 100\Omega$	-	-	4	ns

Ratings and Characteristics Curves (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)

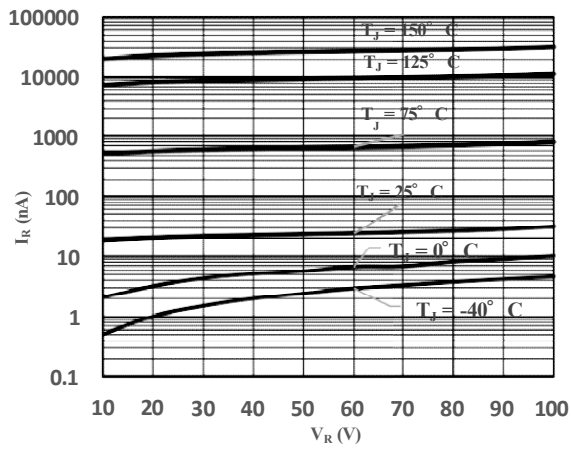


Fig 1 Typical Reverse Characteristic

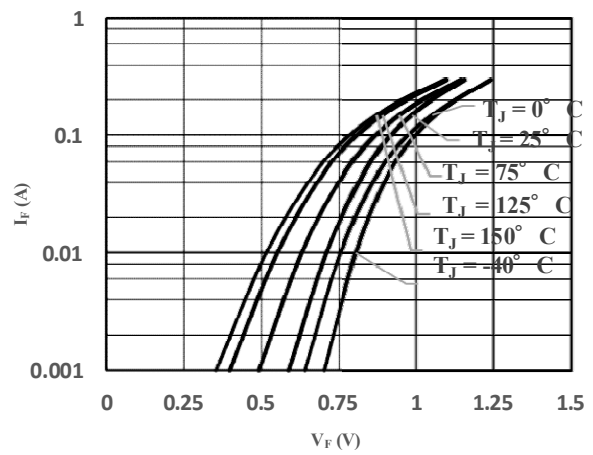


Fig 2 Typical Forward Characteristics

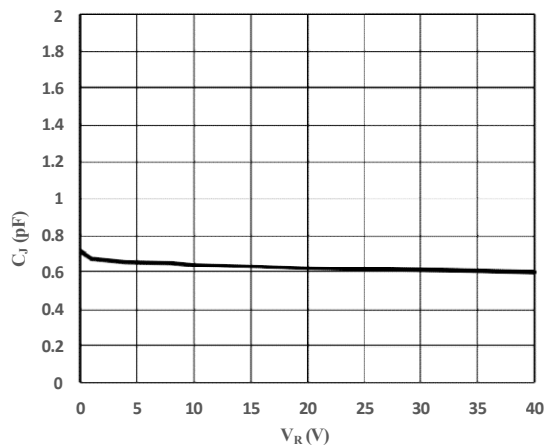


Fig 3 Capacitance vs. Reverse Voltage

Ordering information

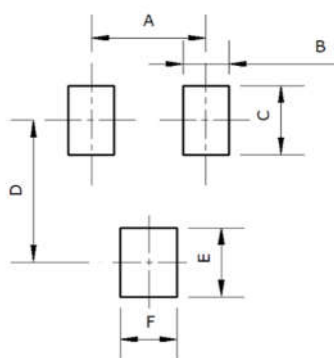
Package	Packing Description	Base Quantity	Packing Quantity
SOT-523	Tape/Reel, 7" reel	3000pcs/Reel	24000PCS/Box 120000PCS/Carton

Package Dimensions

SOT-523

Dim.	Millimeter (mm)		mil	
	Min.	Max.	Min.	Max.
A	1.50	1.70	59	67
B	0.75	0.85	30	33
C	1.45	1.75	57	69
D	0.50TYP		0.020TYP	
E	0.90	1.10	35	43
G	0.00	0.10	0	4
H	0.60	0.80	24	31
J	0.10	0.20	4	8
K	0.15	0.35	6	14
L	0.26	0.46	10	18

The recommended mounting pad size



Millimeter (mm)	
Dim.	TYP
A	1.00
B	0.40
C	0.60
D	1.24
E	0.60
F	0.50

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