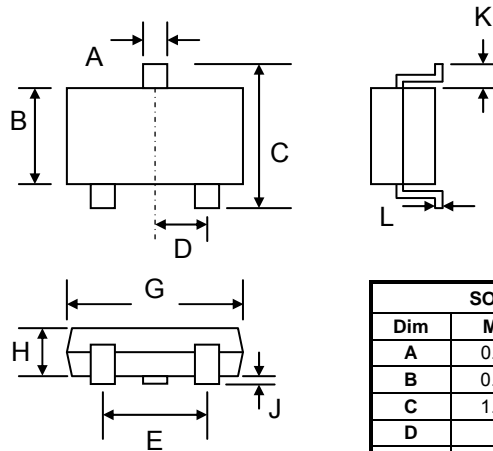


Features

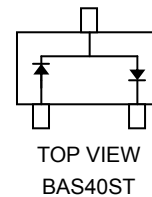
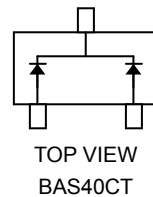
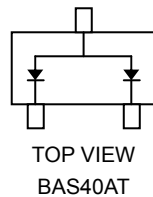
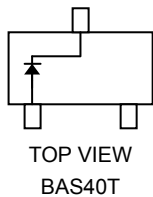
- Single and Dual Diode
- Low Forward Voltage
- PN Junction Guard Ring for Transient and ESD Protection
- For General Purpose Switching Applications
- Plastic Material – UL Recognition Flammability Classification 94V-0



SOT-523		
Dim	Min	Max
A	0.15	0.30
B	0.75	0.85
C	1.45	1.75
D	0.50 Typical	
E	0.90	1.10
G	1.50	1.70
H	0.60	0.80
J	0.02	0.10
K	0.10	0.30
L	0.10	0.20
All Dimensions in mm		

Mechanical Data

- Case: SOT-523, Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: See Diagrams Below
- Weight: 0.002 grams (approx.)
- Marking: Device Code, See Page 3
- Mounting Position: Any
- **Lead Free: For RoHS / Lead Free Version, Add "-LF" Suffix to Part Number, See Page 4**



Maximum Ratings @T_A=25°C unless otherwise specified

Characteristic	Symbol	Value	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V _{RRM} V _{RW} V _R	40	V
Forward Continuous Current	I _F	200	mA
Non-Repetitive Peak Forward Surge Current @ t < 1.0s	I _{FSM}	600	mA
Operating Temperature Range	T _J	-55 to +125	°C
Storage Temperature Range	T _{STG}	-65 to +150	°C

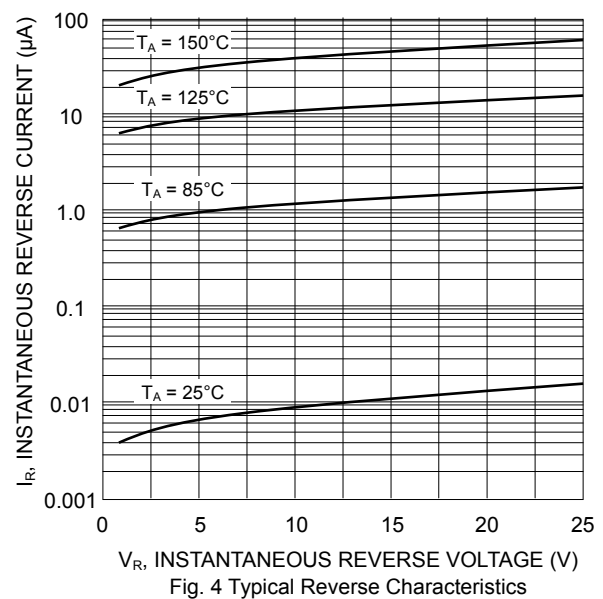
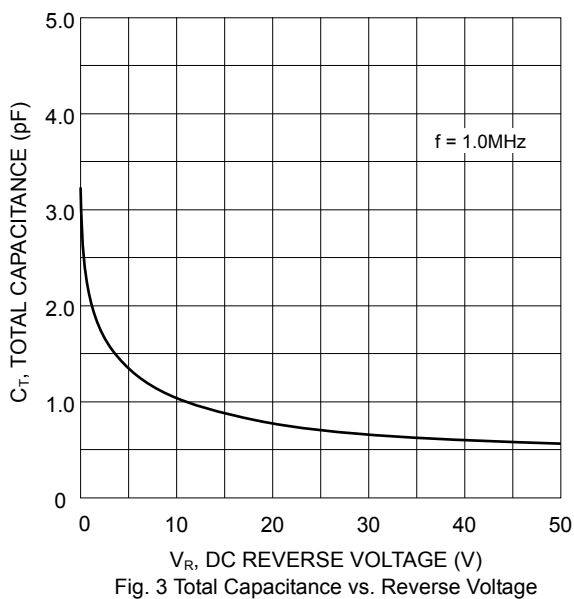
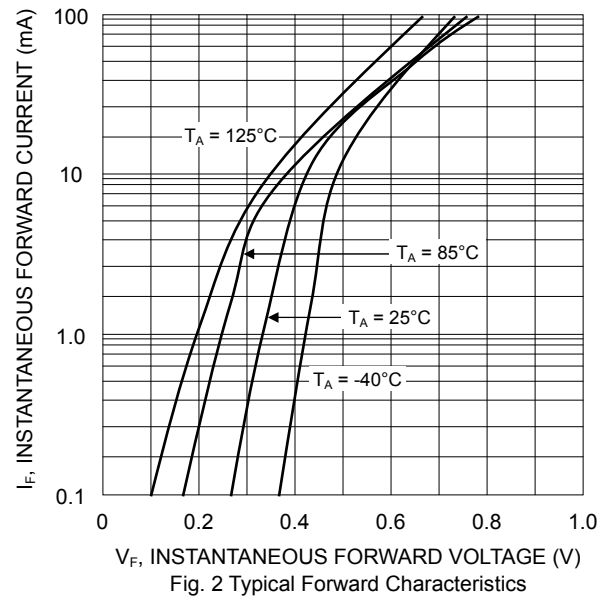
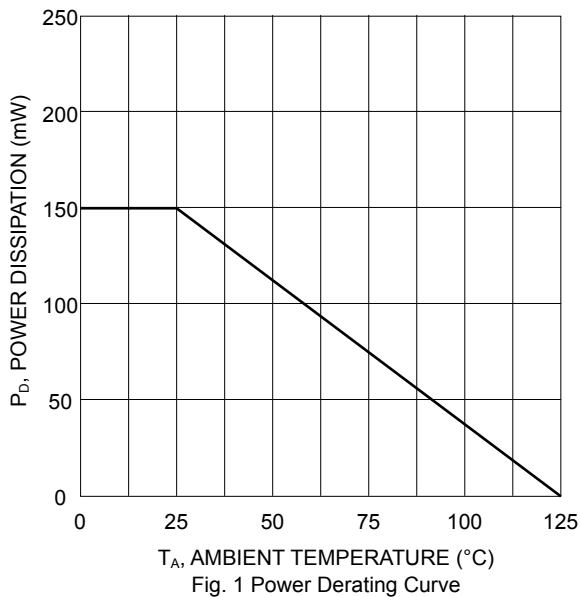
Thermal Characteristics

Characteristic	Symbol	Value	Unit
Power Dissipation (Note 1)	P _D	150	mW
Thermal Resistance, Junction to Ambient (Note 1)	R _{JA}	833	°C/W

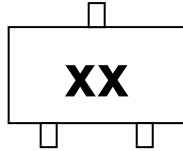
Note: 1. Mounted on FR-4 PC board with minimum recommended pad layout.

Electrical Characteristics @ $T_A=25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	Min.	Typ.	Max.	Unit
Reverse Breakdown Voltage @ $I_R = 10\mu\text{A}$	$V_{(BR)}$	40			V
Forward Voltage Drop @ $I_F = 1.0\text{mA}$ @ $I_F = 40\text{mA}$	V_F			0.38 1.00	V
Reverse Leakage Current @ $V_R = 30\text{V}$	I_R		20	200	nA
Diode Capacitance ($V_R = 0\text{V}$, $f = 1.0\text{MHz}$)	C_D		4.0	5.0	pF
Reverse Recovery Time ($I_F = I_R = 10\text{mA}$, $I_{RR} = 0.1 \times I_R$, $R_L = 100\Omega$)	t_{rr}			5.0	nS



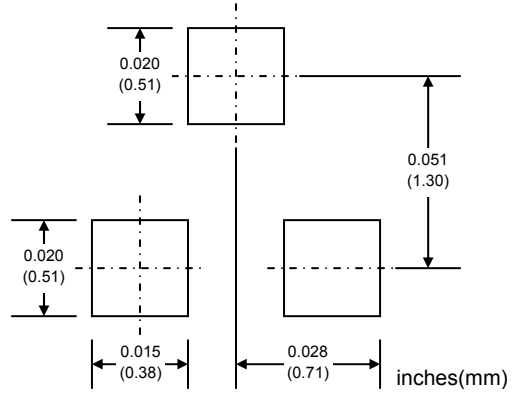
MARKING INFORMATION



xx = Device Code, See Table Below

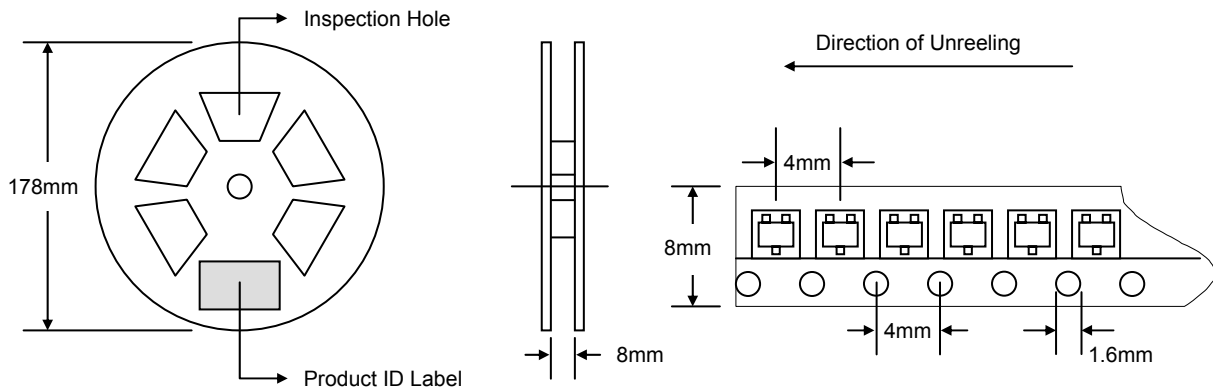
BAS40T	BAS40AT	BAS40CT	BAS40ST
43	46	45	44

RECOMMENDED FOOTPRINT



PACKAGING INFORMATION

TAPE & REEL



Reel Diameter (mm)	Quantity (PCS)	Inner Box Size L x W x H (mm)	Quantity (PCS)	Carton Size L x W x H (mm)	Quantity (PCS)	Approx. Gross Weight (KG)
178	3,000	187 x 187 x 65	15,000	390 x 240 x 420	150,000	8.0

Note: 1. Anti-static plastic reel, white, water clear or blue color. Inspection hole might be varied in different alignment.
2. Components are packed in accordance with EIA standard 481-1 and 481-2.

ORDERING INFORMATION

Product No.	Package Type	Shipping Quantity
BAS40T-T1	SOT-523	3000/Tape & Reel
BAS40AT-T1	SOT-523	3000/Tape & Reel
BAS40CT-T1	SOT-523	3000/Tape & Reel
BAS40ST-T1	SOT-523	3000/Tape & Reel

1. Shipping quantity given is for minimum packing quantity only. For minimum order quantity, please consult the Sales Department.
2. **To order RoHS / Lead Free version (with Lead Free finish), add "-LF" suffix to part number above. For example, BAS40T-T1-LF.**

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WARNING: DO NOT USE IN LIFE SUPPORT EQUIPMENT. WTE power semiconductor products are not authorized for use as critical components in life support devices or systems without the express written approval.

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