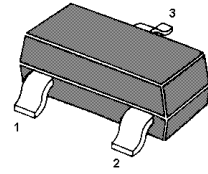


BAS40 / -04 / -05 / -06

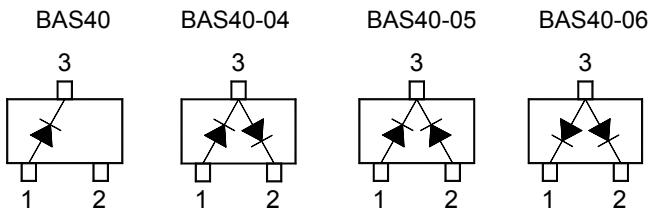
Surface Mount Schottky Barrier Diodes

Features

- Low forward voltage
- Fast switching



SOT-23 Plastic Package



Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	V_{RRM}	40	V
DC Blocking Voltage	V_R	40	V
Forward Continuous Current	I_F	200	mA
Peak Forward Surge Current (at $t_p < 1$ s)	I_{FSM}	600	mA
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	- 55 to + 150	$^\circ\text{C}$

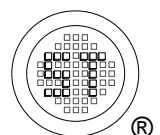
Thermal Resistance

Parameter	Symbol	Value	Unit
Typical Thermal Resistance Junction to Ambient ¹⁾	$R_{\theta JA}$	500	$^\circ\text{C}/\text{W}$

¹⁾ Device mounted on FR-4 substrate PC board, 2oz copper, with minimum recommended pad layout.

Characteristics at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Min.	Max.	Unit
Reverse Breakdown Voltage at $I_R = 10 \mu\text{A}$	$V_{(BR)R}$	40	-	V
Forward Voltage at $I_F = 1$ mA	V_F	-	380	mV
at $I_F = 40$ mA	V_F	-	1000	mV
Reverse Current at $V_R = 30$ V	I_R	-	200	nA
Reverse Recovery Time from $I_F = 10$ mA through $I_R = 10$ mA to $I_R = 1$ mA	t_{rr}	-	5	ns
Total Capacitance at $V_R = 0$ V, $f = 1$ MHz	C_T	-	5	pF



Electrical Characteristics Curves

Fig 1. Reverse Characteristics Curve

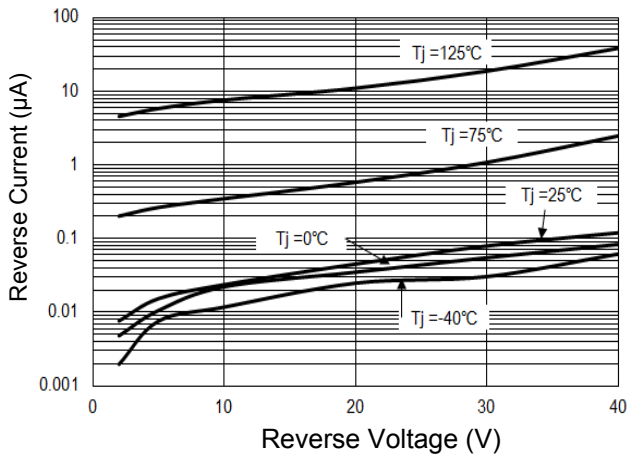


Fig 2. Forward Characteristics Curve

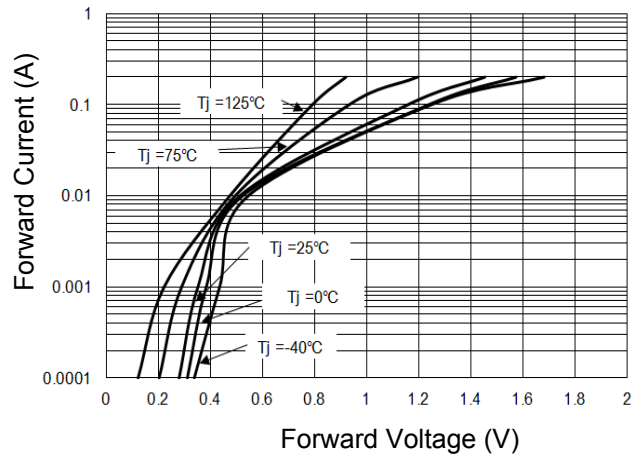


Fig 3. Junction Capacitance

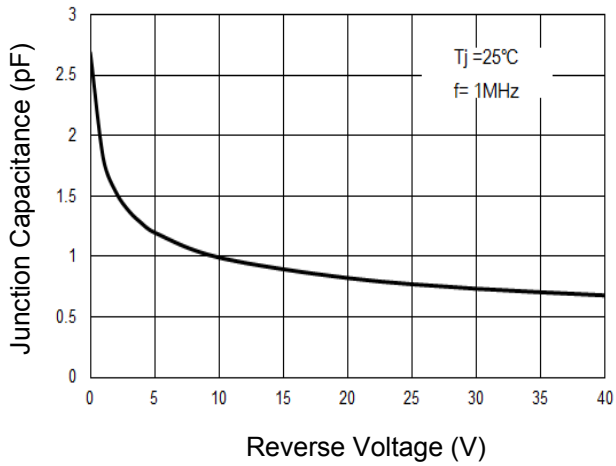
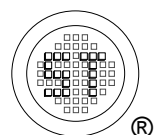
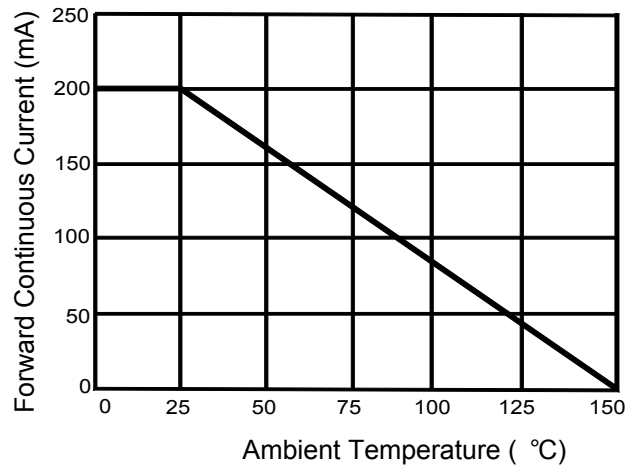


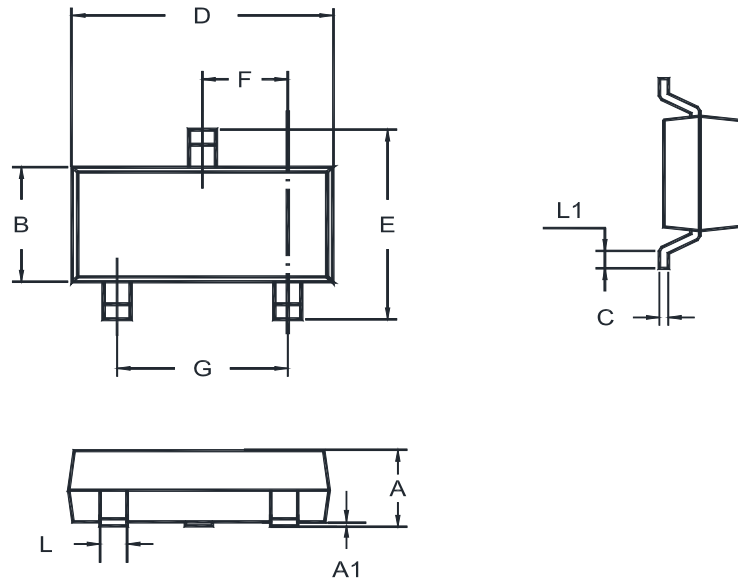
Fig 4. Forward Continuous Current Derating Curve



BAS40 / -04 / -05 / -06

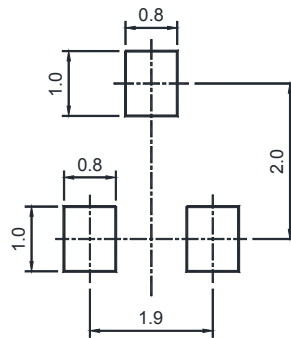
Package Outline (Dimensions in mm)

SOT-23



Unit	A	A1	B	C	D	E	F	G	L	L1
mm	1.20	0.100	1.40	0.19	3.04	2.6	1.02	2.04	0.51	0.2
	0.89	0.013	1.20	0.08	2.80	2.2	0.89	1.78	0.37	MIN

Recommended Soldering Footprint



Packing information

Package	Tape Width (mm)	Pitch		Reel Size		Per Reel Packing Quantity
		mm	inch	mm	inch	
SOT-23	8	4 ± 0.1	0.157 ± 0.004	178	7	3,000

Marking information

" 4* " = Part No.

Type	Marking	Type	Marking
BAS40	43	BAS40-04	44
BAS40-05	45	BAS40-06	46

" YM " = Date Code Marking

" Y " = Year

" M " = Month

Font type: Arial

