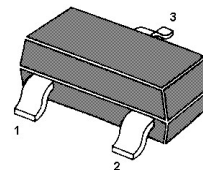


BAS40 / -04 / -05 / -06-CH

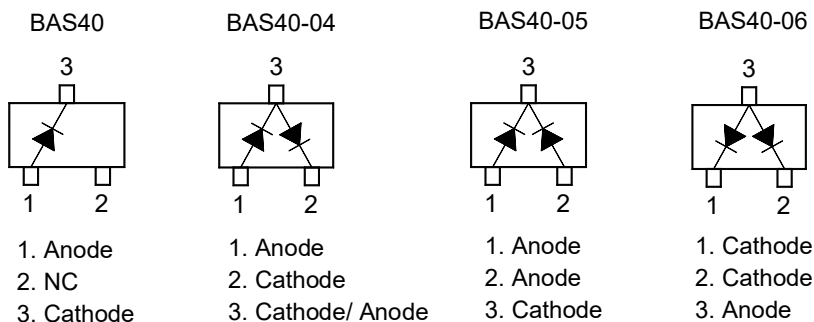
Surface Mount Schottky Barrier Diodes

Features

- AEC-Q101 Qualified
- Low forward voltage
- Fast switching
- Halogen and Antimony Free(HAF), RoHS compliant



SOT-23 Plastic Package



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

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	$^\circ\text{C}$

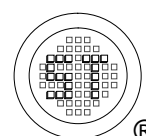
Thermal Resistance

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

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 $I_F = 1 \text{ mA}$ at $I_F = 40 \text{ mA}$	V_F V_F	- -	380 1000	mV mV
Reverse Current at $V_R = 30 \text{ V}$	I_R	-	200	nA
Reverse Recovery Time from $I_F = 10 \text{ mA}$ through $I_R = 10 \text{ mA}$ to $I_R = 1 \text{ mA}$	t_{rr}	-	5	ns
Total Capacitance at $V_R = 0 \text{ V}$, $f = 1 \text{ MHz}$	C_T	-	5	pF



Electrical Characteristics Curves

Fig 1. Reverse Characteristics Curve

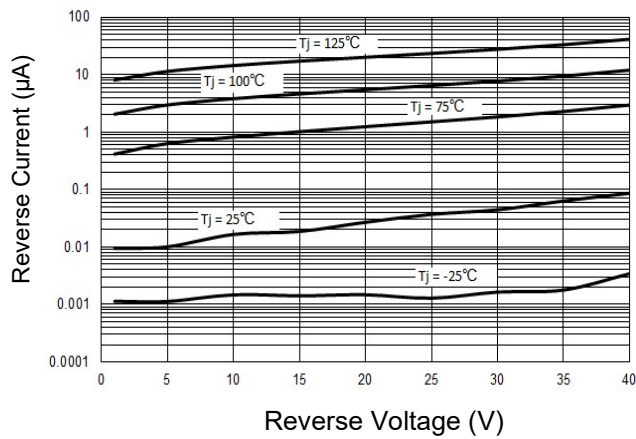


Fig 2. Forward Characteristics Curve

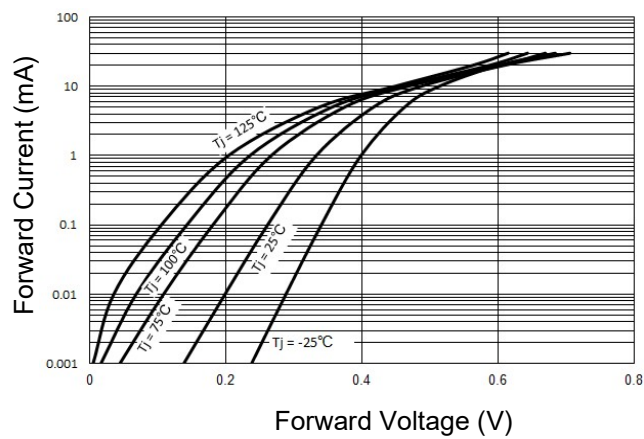


Fig 3. Junction Capacitance

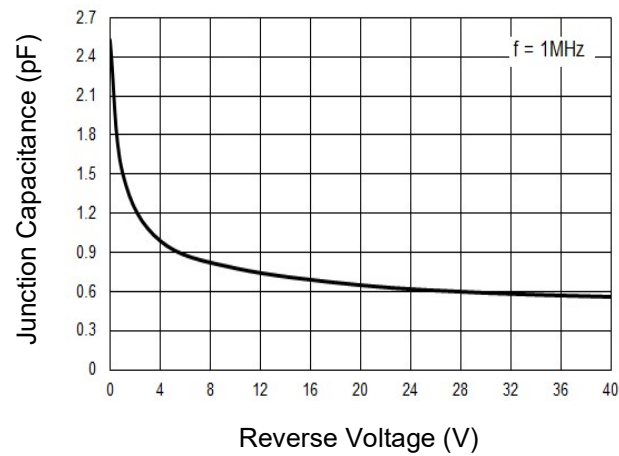
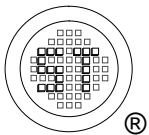
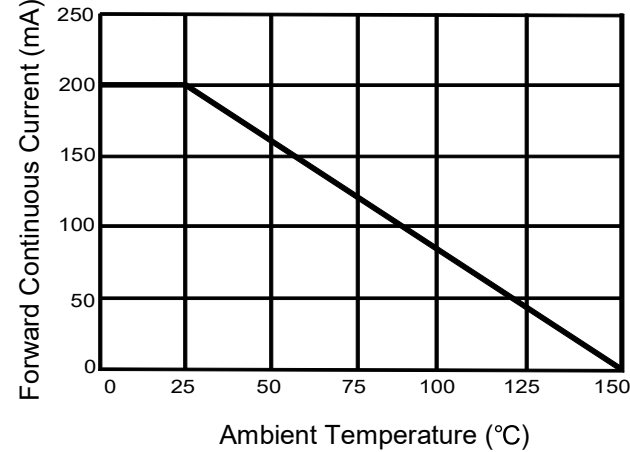


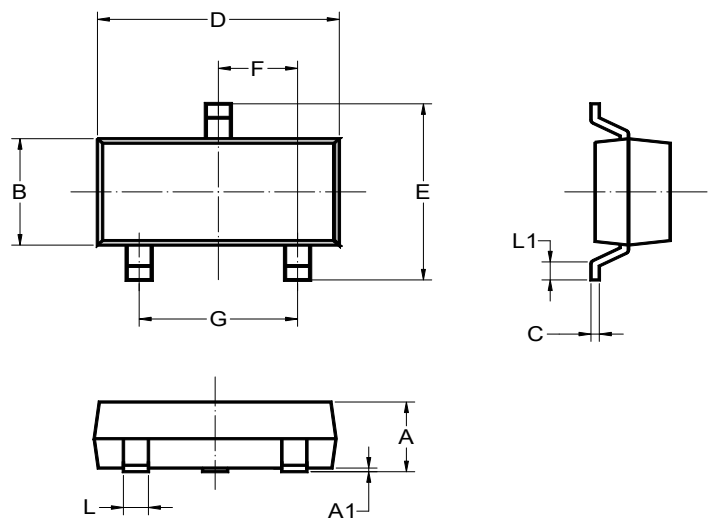
Fig 4. Forward Continuous Current Derating Curve



BAS40 / -04 / -05 / -06-CH

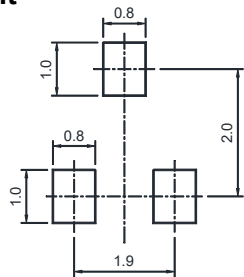
Package Outline (Dimensions in mm)

SOT-23



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

Recommended Soldering Footprint



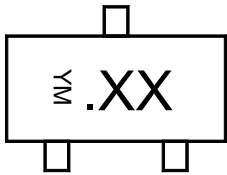
Packing information

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

" XX " = Marking Code.

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



" • " = HAF (Halogen and Antimony Free)

" YM " = Date Code Marking

" Y " = Year

" M " = Month

Font type: Arial

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