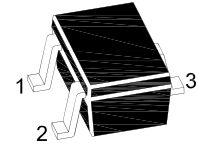


# BAS40E / -04E / -05E / -06E

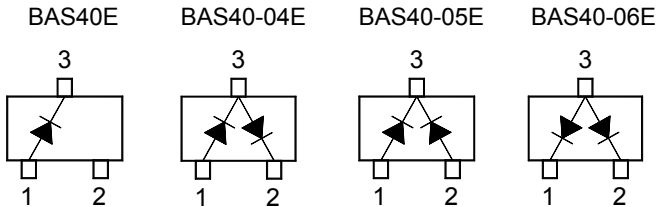
## Surface Mount Schottky Barrier Diodes

### Features

- Low forward voltage
- Fast switching



SOT-523 Plastic Package

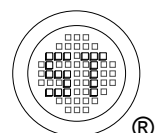


### Absolute Maximum Ratings ( $T_a = 25^\circ\text{C}$ )

Parameter	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	$V_{RRM}$	40	V
DC Blocking Voltage	$V_R$	40	V
Average Rectified Forward Current	$I_{F(AV)}$	200	mA
Peak Forward Surge Current (at $t_p \leq 8.3$ ms)	$I_{FSM}$	600	mA
Power Dissipation	$P_D$	150	mW
Junction Temperature	$T_J$	150	$^\circ\text{C}$
Storage Temperature Range	$T_{Stg}$	- 65 to + 150	$^\circ\text{C}$

### 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 at $I_F = 40$ mA	$V_F$	- -	0.38 1	V
Reverse Current at $V_R = 30$ V	$I_R$	-	200	nA
Total Capacitance at $V_R = 0$ V, $f = 1$ MHz	$C_T$	-	5	pF
Reverse Recovery Time at $I_F = I_R = 10$ mA, $I_{rr} = 0.1 I_R$	$t_{rr}$	-	5	ns



## Electrical Characteristics Curves

Fig 1. Average Rectified Current Derating Curve

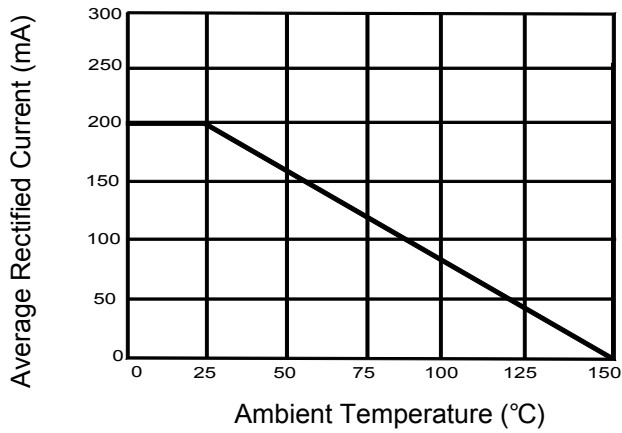


Fig 2. Forward Characteristics Curve

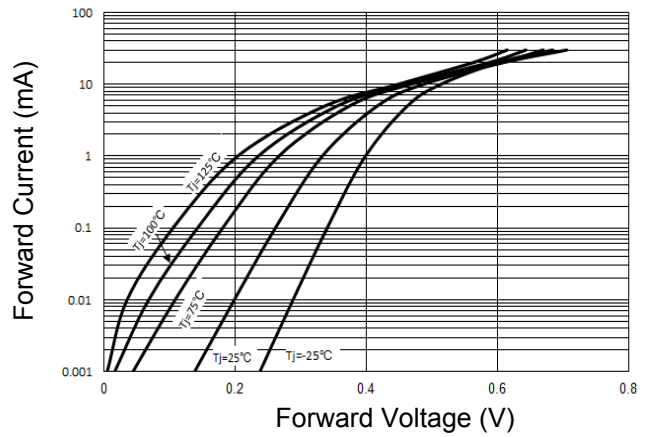


Fig 3. Reverse Characteristics Curve

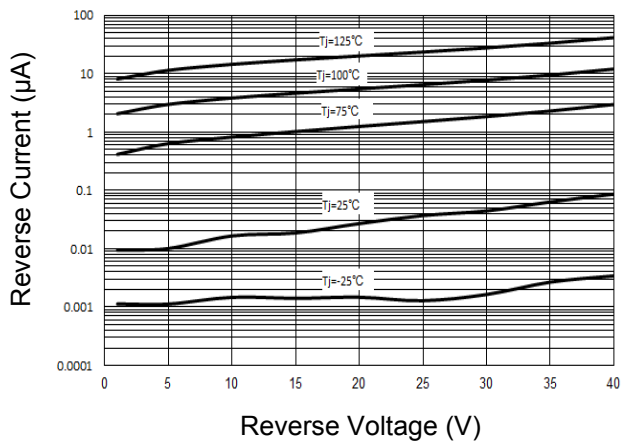
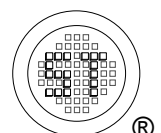
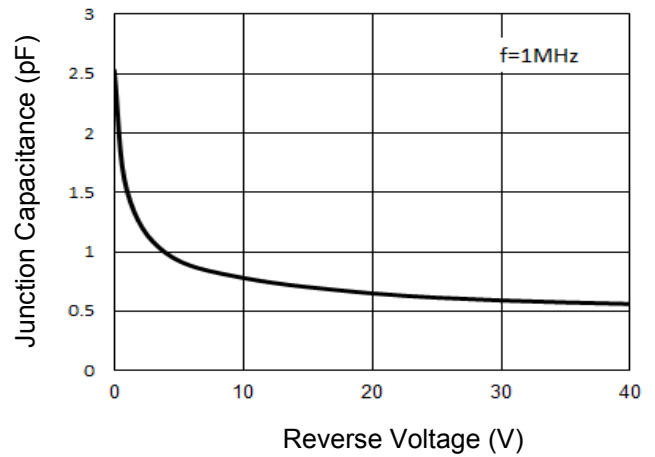


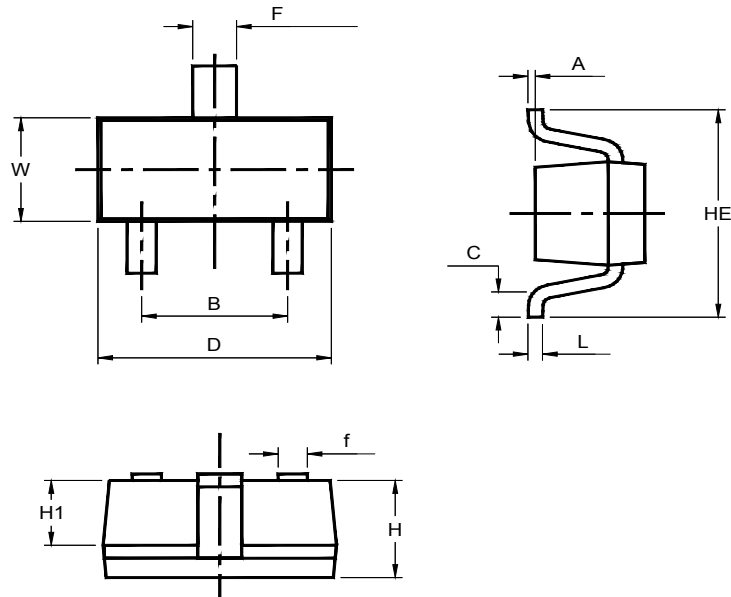
Fig 4. Junction Capacitance Curve



# BAS40E / -04E / -05E / -06E

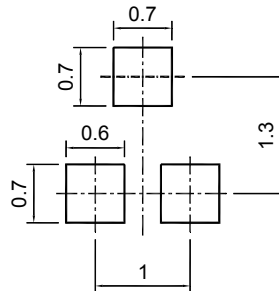
## Package Outline Dimensions (Units: mm)

SOT-523



UNIT	A	B	C	D	H	H1	HE	F	f	L	W
mm	0.1 MAX.	1.05 0.95	0.17 MIN.	1.7 1.5	0.85 0.65	0.6 0.4	1.7 1.5	0.35 0.25	0.25 0.15	0.15 0.05	0.9 0.7

## Recommended Soldering Footprint



## Packing information

Package	Tape Width (mm)	Pitch		Reel Size		Per Reel Packing Quantity
		mm	inch	mm	inch	
SOT-523	8	4 ± 0.1	0.157 ± 0.004	178	7	4,000

## Marking information

" 4\* " = Part No.

Type	Marking	Type	Marking
BAS40E	43	BAS40-04E	44
BAS40-05E	45	BAS40-06E	46

" YM " = Date Code Marking

" Y " = Year

" M " = Month

Font type: Arial

