

SOT-23 Surface Mount Schottky Barrier Rectifier

Features

- V_R 40V
- $I_{F(AV)}$ 0.2A
- High Current Capability
- Low Forward Voltage Drop
- Extremely Fast Switching Speed

Applications

These Schottky barrier diodes are designed for high speed switching applications, circuit protection, and voltage clamping.

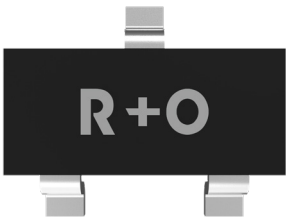
Mechanical Data

- Case: SOT-23
Molding compound meets UL 94V-0 flammability rating, RoHS-compliant, halogen-free
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: Cathode line denotes the cathode end

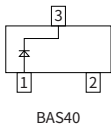
Function Diagram

Reverse Voltage
40 V
Forward Current
0.2 Ampere

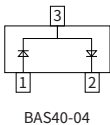
SOT-23



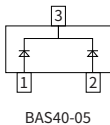
Marking:
BAS40:43
BAS40-04:44
BAS40-05:45
BAS40-06:46



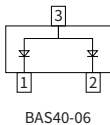
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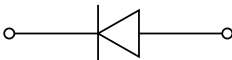
BAS40-04



BAS40-05



BAS40-06



Maximum Ratings (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	VALUE
Maximum repetitive peak reverse voltage	V_{RRM}	V	40
Maximum RMS voltage	V_{RMS}	V	28
Maximum DC blocking voltage	V_{DC}	V	40
Maximum average forward rectified current	$I_{F(AV)}$	mA	200
Non-repetitive Peak Forward Surge Current @ t=8.3ms Half-sine wave	I_{FSM}	mA	600
Power Dissipation	P_D	mW	200
Junction Temperature	T_j	°C	+125
Storage temperature range	T_{STG}	°C	-55 ~+150
Typical thermal resistance	$R_{\theta JA}$	°C /W	500

Electrical Characteristics (Ta=25°C Unless otherwise noted)

Table with 7 columns: PARAMETER, TEST CONDITIONS, SYMBOL, UNIT, Min, Typ, Max. It lists electrical characteristics such as Maximum forward voltage, Maximum reverse current, Type junction capacitance, and Maximum reverse recovery time.

Ratings And Characteristics Curves (Ta=25°C Unless otherwise specified)

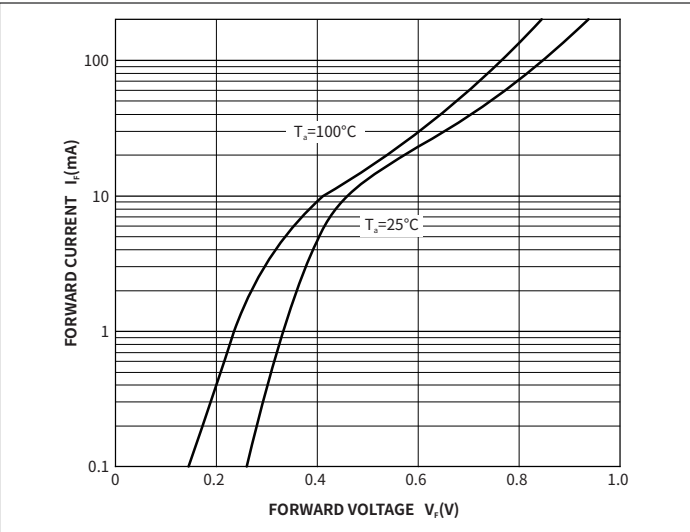


Fig.1 Typical Instantaneous Forward Characteristics

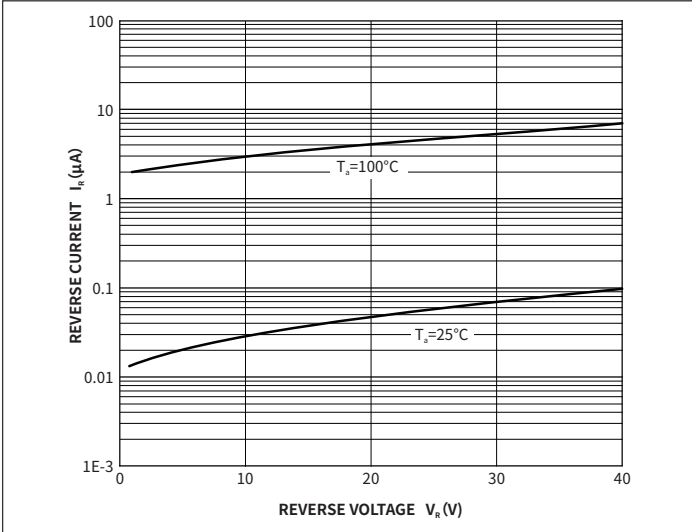


Fig.2 Typical Reverse Characteristics

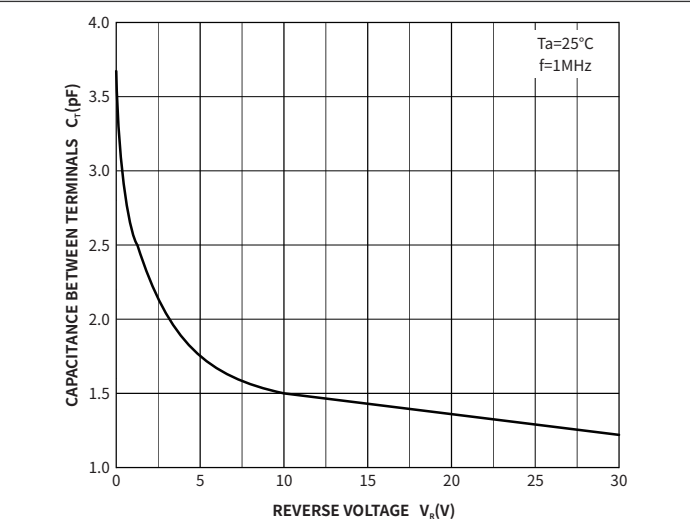


Fig.3 Typical Junction Capacitance

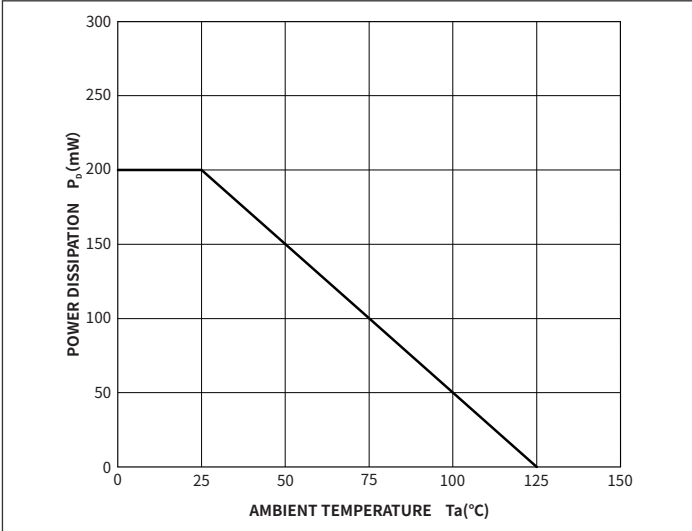


Fig.4 Power Derating Curve

● Ordering Information

PACKAGE	PACKAGE CODE	UNIT WEIGHT(g)	REEL(pcs)	BOX(pcs)	CARTON(pcs)	DELIVERY MODE
SOT-23	R1	0.008	3000	45000	180000	7"

● Package Outline Dimensions (SOT-23)

Symbol	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	0.90	1.15	0.035	0.045
A1	-	0.10	-	0.004
A2	0.90	1.05	0.035	0.041
b	0.30	0.50	0.012	0.020
c	0.10	0.20	0.004	0.008
D	2.80	3.00	0.110	0.118
E	1.20	1.40	0.047	0.055
E1	2.25	2.55	0.089	0.100
e	0.950TYP		0.037TYP	
e1	1.80	2.00	0.071	0.079
L	0.550REF		0.022REF	
L1	0.30	0.50	0.012	0.020
θ	-	8°	-	8°

● Suggested Pad Layout

Symbol	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
J	0.75	0.85	0.030	0.033
K	0.85	0.95	0.033	0.037
M	1.95	2.05	0.077	0.081
N	1.85	1.95	0.073	0.077