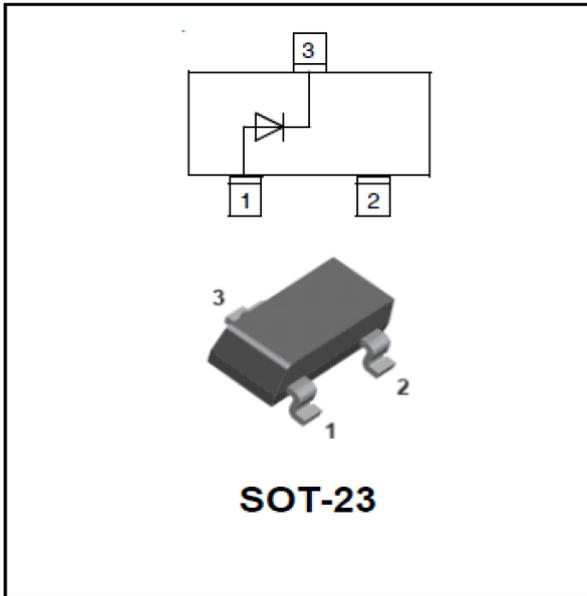


## Schottky Barrier Rectifier



### Features

- VR 40V
- IF 0.1A
- For Surface Mount Application and High Current Capability
- Low Forward Voltage Drop
- Epoxy Meets UL 94 V-0 Flammability Rating
- Moisture Sensitivity Level 1

### Mechanical Data

- **Package:** SOT-23
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Marking:** A2

### ■ Maximum Rating, ( $T_a=25^\circ\text{C}$ Unless otherwise specified)

Item	Symbol	Unit	Value
Peak Reverse Voltage	$V_{RRM}$	V	40
Reverse Voltage	$V_R$	V	40
Forward Continuous Current	$I_F$	mA	100
Non-Repetitive Peak Forward Surge Current @8.3ms, Half sine-wave	$I_{FSM}$	A	1
Power Dissipation	$P_D$	mW	200
Thermal Resistance, Junction to Ambient	$R_{thJA}$	$^\circ\text{C}/\text{W}$	500
Storage Temperature	$T_{STG}$	$^\circ\text{C}$	-55 to +125
Operating Junction Temperature	$T_j$	$^\circ\text{C}$	-55 to +125

### ■ Ordering Information (Example)

PREFERRED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
RB420DS	F2	Approximate 0.009	3000	30000	120000	7" reel

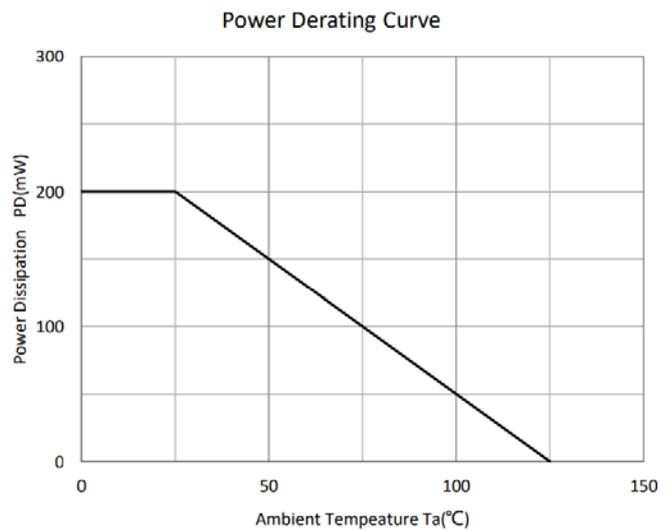
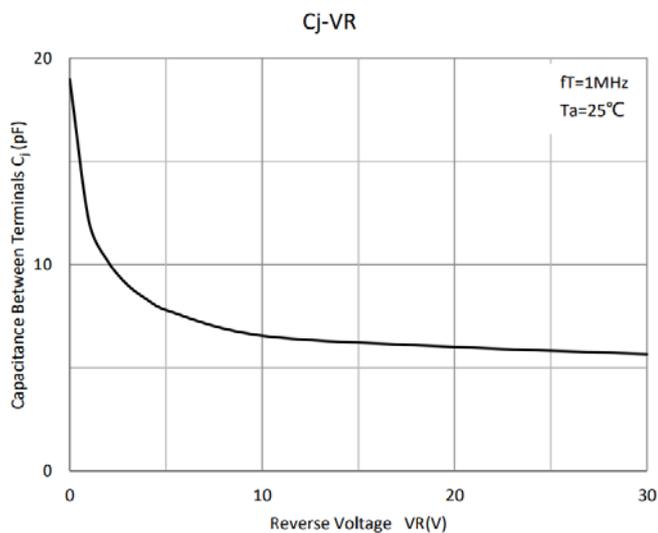
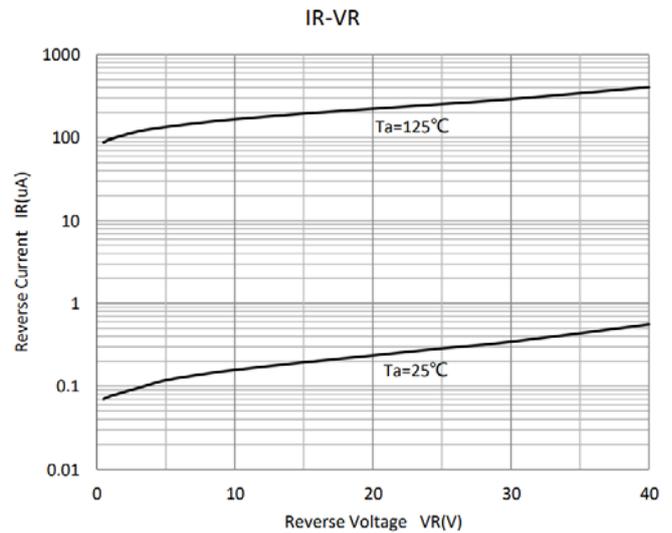
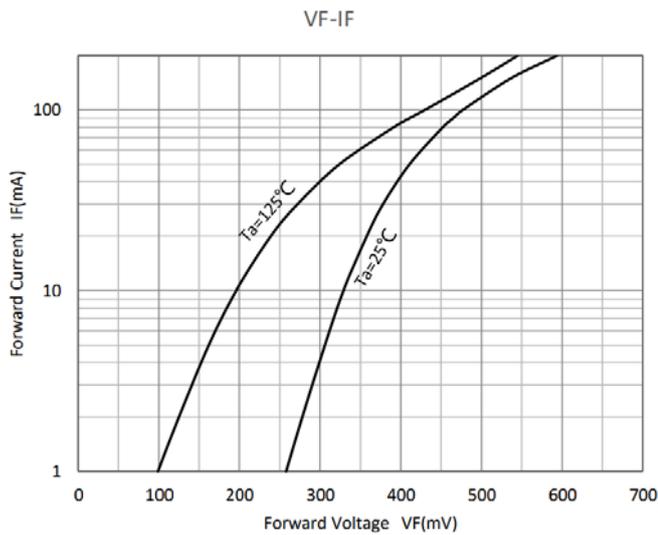


# RB420DS

## ■ Electrical Characteristics (Ta=25°C Unless otherwise specified)

Item	Symbol	Unit	Conditions	MIN	TYP	MAX
Reverse Voltage	V <sub>R</sub>	V	I <sub>R</sub> =100uA	40		
Forward Voltage	V <sub>F</sub>	V	I <sub>F</sub> =1mA		0.28	0.35
			I <sub>F</sub> =10mA		0.36	0.45
			I <sub>F</sub> =100mA			0.6
Reverse Current	I <sub>R</sub>	uA	V <sub>R</sub> =10V			1
			V <sub>R</sub> =40V			5
Diode capacitance	C <sub>j</sub>	pF	V <sub>R</sub> =0V, f <sub>T</sub> =1MHz			25

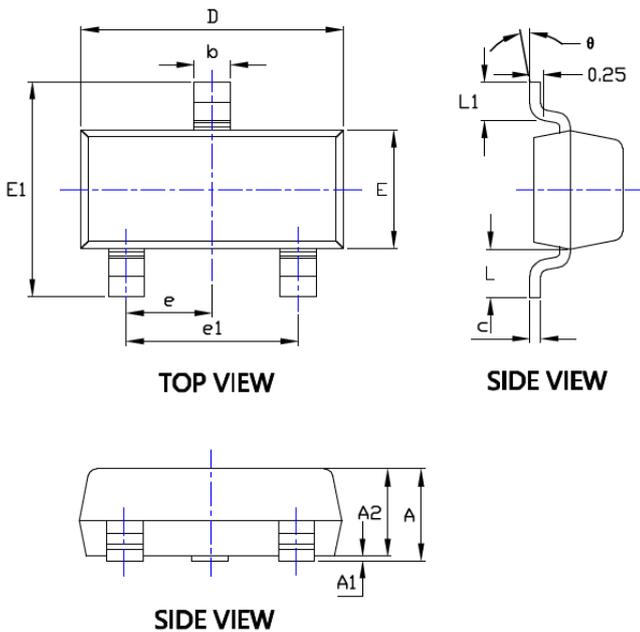
## ■ Typical Characteristics





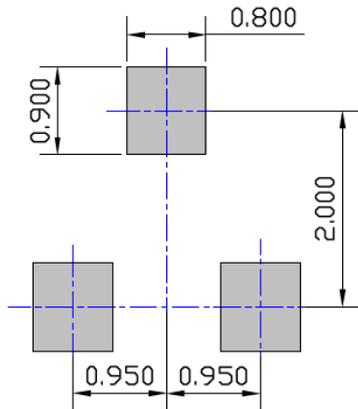
# RB420DS

## ■SOT-23 Package Outline Dimensions



SYMBOL	DIMENSIONS			
	INCHES		Millimeter	
	MIN.	MAX.	MIN.	MAX.
A	0.035	0.045	0.900	1.150
A1	0.000	0.004	0.000	0.100
A2	0.035	0.041	0.900	1.050
b	0.012	0.020	0.300	0.500
c	0.004	0.008	0.100	0.200
D	0.110	0.118	2.800	3.000
E	0.047	0.055	1.200	1.400
E1	0.089	0.100	2.250	2.550
e	0.037TYP		0.950TYP	
e1	0.071	0.079	1.800	2.000
L	0.022REF		0.550REF	
L1	0.012	0.020	0.300	0.500
θ	0°	8°	0°	8°

## ■SOT-23 Suggested Pad Layout



UNIT: mm

### Note:

- All dimensions are in millimeters (mm) unless otherwise specified.  
[所有尺寸均以毫米为单位, 除非另有说明]
- General tolerances:  $\pm 0.10\text{mm}$  unless otherwise specified.  
[通用公差为 $\pm 0.10\text{mm}$ , 除非另有说明]
- Dimensions and tolerances per ASME Y14.5M-2018.  
[尺寸和公差遵循 ASME Y14.5M-2018 标准]
- All dimensions shown are exclusive of burrs and gate residues. Burrs and gate vestiges shall not exceed 0.15 mm in maximum.  
[所有尺寸均不包括毛刺和浇口残留。毛刺与浇口残留的尺寸最大不得超过 0.15mm]
- Dimension b does not include dambar protrusion of max 0.100 mm per side.  
[尺寸b不包括单边最大0.100 mm的中筋凸出部分]
- Dimensions D and E are the overall extreme outer dimensions of the mold compound. These dimensions exclude mold flash, lead flash, protrusions and burrs but include the maximum allowable mold mismatch.  
[D和E是塑封体的外部极限尺寸, 不包括包封溢料、内引线溢料、凸出部分以及胶体毛刺, 但是包含了包封错位的最大尺寸]
- Formed leads shall be planar with respect to one another within a maximum of 0.076 mm relative to the seating plane.  
[成型的管脚应为同一平面, 共面性最大为0.1mm]



## RB420DS

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