Small Signal Schottky Barrier Diode

RB421D RB451F

Features

- Small mold type
- Low I_R
- High reliability

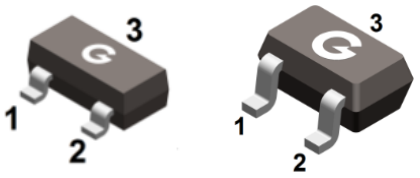
HF

Typical Applications

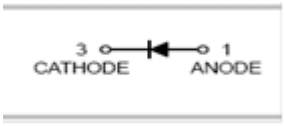
- Low power rectification

Mechanical Data

- Case: SOT-23 , SOT-323
- Molding compound, UL flammability classification rating 94V-0
- Terminals: Tin plated leads, solderable per MIL-STD-202, Method 208



RB421D SOT-23 RB451F SOT-323



Ordering Information

Part Number	Package	Shipping	Marking Code
RB421D	SOT-23	3000 pcs / Tape & Reel	D3C
RB451F	SOT-323	3000 pcs / Tape & Reel	3C

Maximum Ratings (@ T_A = 25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Repetitive Reverse Voltage DC Reverse Voltage	V_{RRM} V_R	40	V
Aveage Rectified Forward Current	I_O	100	mA
Forward Current Surge Peak	I_{FSM}	1	A

Thermal Characteristics

Parameter	Symbol	RB421D	RB451F	Unit
Power Dissipation	P_D	350	250	mW
Typical Thermal Resistance per leg	$R_{\Theta JA}$*	286	400	°C /W
Operating Junction Temperature Range	T_J	-40 to 125		°C
Storage Temperature Range	T_{STG}	-40 to +150		°C

* Part mounted on FR-4 board with recommended pad layout

Electrical Characteristics (@ T_A = 25°C unless otherwise specified)

Parameter	Symbol	Test conditions	Min.	Typ.	Max.	Unit
Reverse Breakdown Voltage	$V_{(BR)R}$	I_R = 100μA	40	-	-	V
Forward Voltage	V_F*	I_F=10mA	-	-	0.34	V
		I_F=100mA	-	-	0.55	
Reverse Current	I_R**	V_R=10V	-	-	30	uA
Capacitance Between Terminals	C_T	V_R=10V,f=1MHz	-	6	-	pF

*Pulse width ≤380 uS, Duty cycle < 2%

**pulse test ， tp≤5ms

Ratings and Characteristic Curves (@ T_A = 25°C unless otherwise specified)

FIG 1.TYPICAL REVERSE CHARACTERISTIC

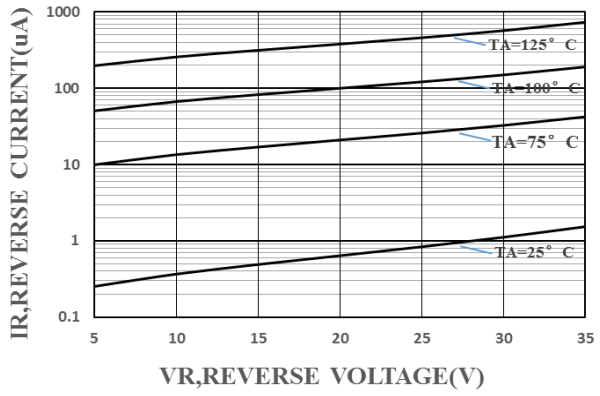


FIG 2.TYPICAL FORWARD CHARACTERISTIC

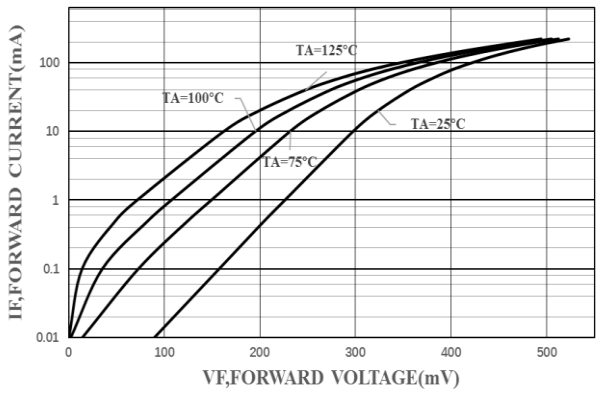
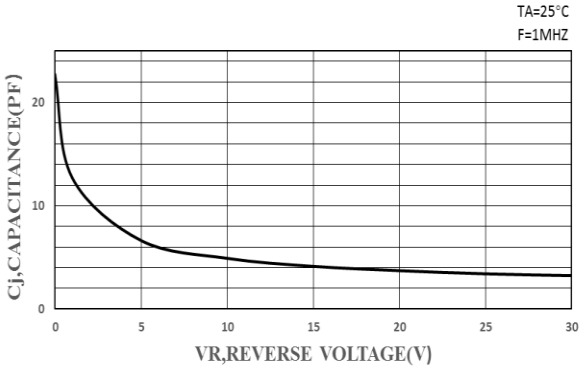
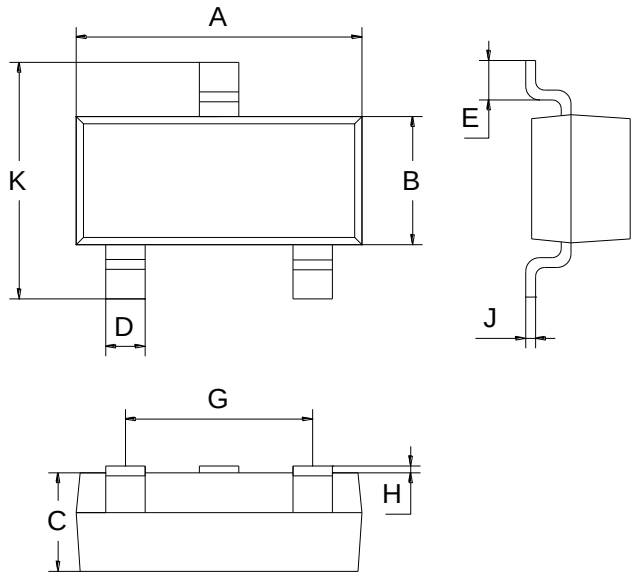


FIG 3.CAPACITANCE VS REVERSE VOLTAGE



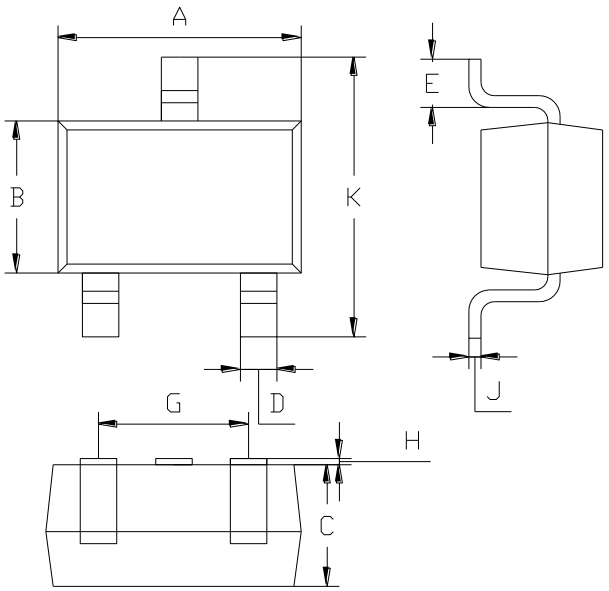
Package Outline Dimensions (unit: mm)

SOT-23



SOT-23		
Dim	Min	Max
A	2.70	3.10
B	1.10	1.50
C	0.90	1.10
D	0.30	0.50
E	0.35	0.48
G	1.80	2.00
H	0.02	0.10
J	0.05	0.15
K	2.20	2.60

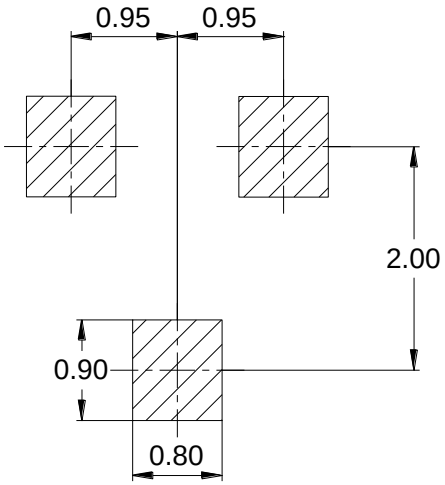
SOT-323



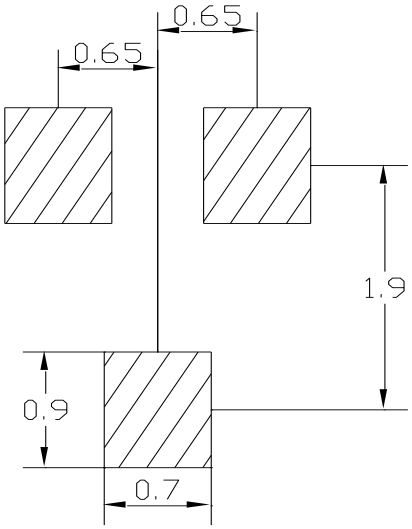
SOT-323		
Dim	Min	Max
A	2.00	2.20
B	1.15	1.35
C	0.90	1.10
D	0.15	0.35
E	0.25	0.40
G	1.20	1.40
H	0.02	0.10
J	0.05	0.15
K	2.20	2.40

Mounting Pad Layout (unit: mm)

SOT-23



SOT-323



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