RF Schottky Diodes for High Frequency Detector, Mixer or Power Leveling

General description

- Excellent RF Schottky Diodes available as single, double, triple and quad
- Various diode configurations (e. g. common anode, common cathode)
- All products have additional guard-ring diode integrated on chip for overvoltage protection
- RoHS compliant package portfolio including industry standard sizes (e. g. SOT3x3) and super thin-small-leadless-packages (e. g. world smallest diode package TSSLP2, 0.6*0.3*0.3mm^3)
- Automotive (AECQ101) qualified

Target applications

Detector, mixer and power leveling for:
Wireless LAN detector, cellular phone, 24GHz radar system, video detector, …

RF Mixer Diodes Performance Table & Product Highlights:

BAT24-02LS: Premium parasitic inductance combined with small capacitance values, best fit for high frequency up to 24GHz
BAT15x: Best-in-class RF mixer/detector diodes in various packages and configurations

Family	$V_R$max [V]	$I_F$max [mA]	C_T at 0V [pF]	V_F [V] at 1mA	Package	Configuration[1]
BAT15	4	110	0.26	230	TSLP2/SOD323/SOT323/TSLP4/ SOT143	S/D/Q
BAT17	4	130	0.55	340	SOT23/SOT323/SOT143	S/D
BAT24	4	110	0.21	230	TSSLP2	S

RF Signal Detection and Power Leveling Diodes Performance Table & Product Highlights:

BAT62-02LS : Super tiny RF Schottky detector diode in leadless package (0.6*0.3*0.3mm^3 only)
BAT63-02V: very low forward voltage combined with tiny package (1.6*0.8*0.55mm^3 only)

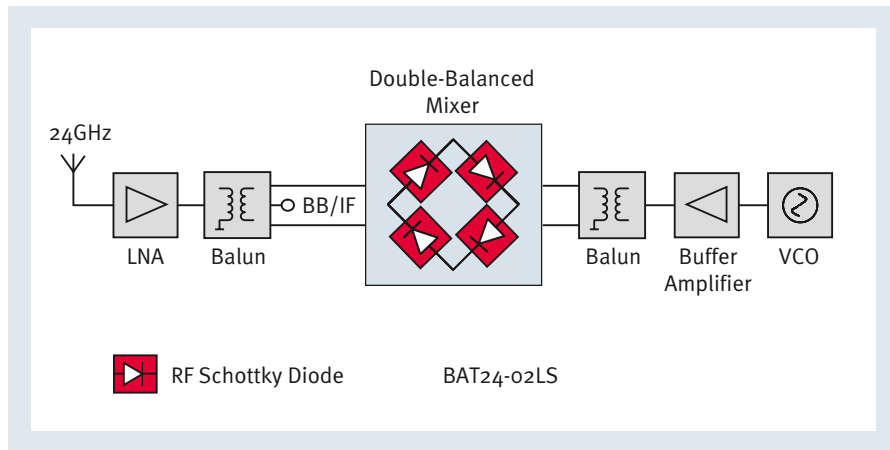| Family	$V_R$max [V]	$I_F$max [mA]	C_T at 0V [pF]	V_F [V]	I_F [mA]	R_O [kΩ] @ V =0V	Package	Configuration[1]
BAT62	40	20	0.35	580	2	225	SOT143/SOD323/SOT343 TSLP2/TSSLP2/SCD80/TSLP4	S/D
BAT63	3	100	0.65	190	1	30	SC79/SOT343	S/D
BAT68	8	130	0.75	318	1		SOT23/SOT323/SOT343/SOT363	S/D

1) Configuration: S=Single, D=Dual, T=Triple, Q=Quad

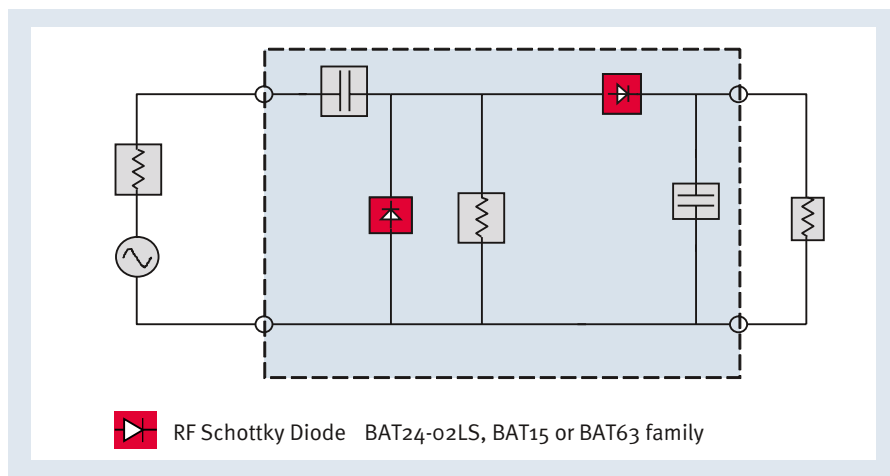www.infineon.com/schottkydiodes

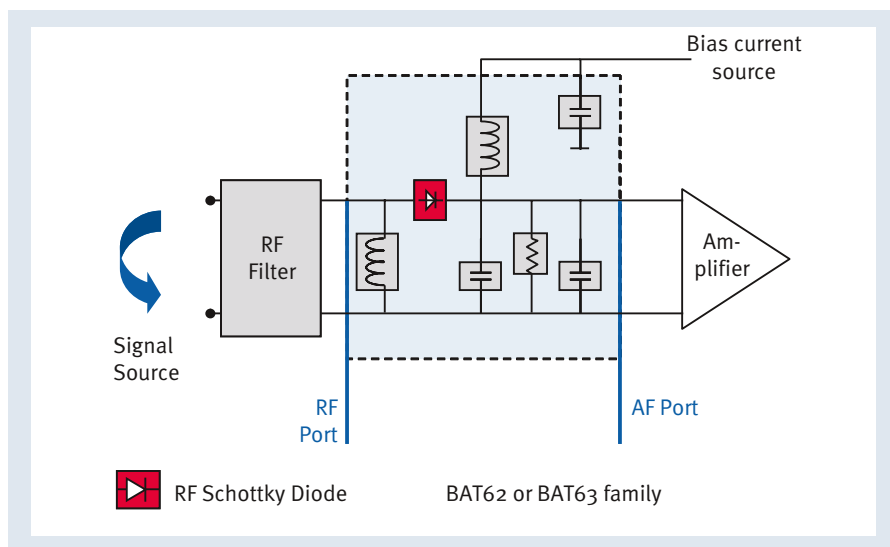# Small Signal Discretes

Never stop thinking

Application Examples

BAT24-02LS for 24GHz Radar Mixer Cell

Double-Balanced Mixer

24GHz

LNA Balun BB/IF Balun Buffer Amplifier VCO

RF Schottky Diode   BAT24-02LS

**Virtual battery using
BAT15, BAT24 or BAT63 family**

RF Schottky Diode   BAT24-02LS, BAT15 or BAT63 family

**High Frequency RF Detection using
BAT62 or BAT63 family**

Bias current source

RF Filter

Amplifier

Signal Source

RF Port   AF Port

RF Schottky Diode   BAT62 or BAT63 family

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