

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*0.3mm³)
- 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-o2LS: 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-o2LS : Super tiny RF Schottky detector diode in leadless package (0.6*0.3*0.3mm³ only)

BAT63-o2V: very low forward voltage combined with tiny package (1.6*0.8*0.55mm³ only)

Family	V _R max [V]	I _F max [mA]	C _T at 0V [pF]	V _F [V]	I _F [mA]	R ₀ [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

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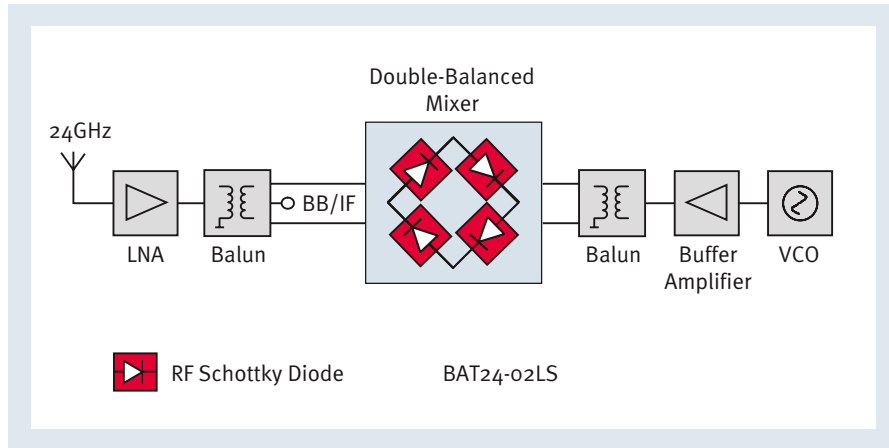
Small Signal Discretes



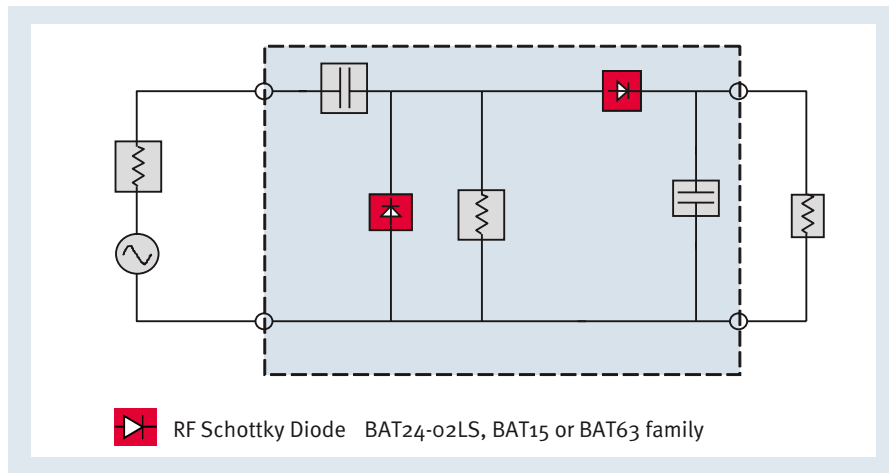
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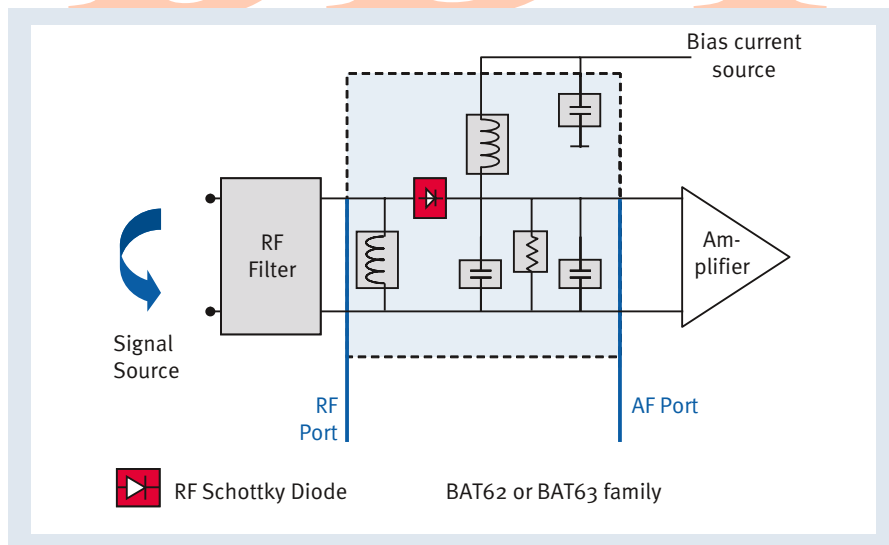
Application Examples



BAT24-02LS for 24GHz Radar Mixer Cell



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



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

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