

Confronto fra vari RF detector commerciali
ed il diodo schottky DDC2353

uscita in c.c. da ogni tipo di detector

RF input level dBm	DDC2353 zero bias schottky (@ 10 GHz)	Telonic 8554 low barrier schottky (@ 1 GHz)	Suhner 1001.01A low barrier schottky (@ 1 GHz)	HP 8472A point contact diode #1 -- #2 (@ 10 GHz)	HP 8470B low barrier schottky (@ 10 GHz)	Alfred 1001 point contact diode (@ 10 GHz)
-30	1.5 mV	0.84 mV	0.41 mV	0.98 mV 0.85	0.7 mV	0.8 mV
-25	4.5 mV	2.1 mV	1.7 mV	2.7 mV 2.4	2.1 mV	2.2 mV
-20	14 mV	8.1 mV	5.5 mV	8 mV 7.3	6.3 mV	6.4 mV
-15	38 mV	19 mV	16.4 mV	22 mV 20	18 mV	18 mV
-10	85 mV	59 mV	43 mV	54 mV 50	4.8 mV	46 mV
-5	180 mV	115 mV	103 mV	120 mV 113	110 mV	106 mV
-0	360 mV	280 mV	226 mV	246 mV 234	233 mV	223 mV
+5	698 mV	503 mV	460 mV	480 mV 460	470 mV	440 mV

NB la sensibilità del diodo DDC2353, a giudicare dalla tabella, sembrerebbe essere molto superiore anche rispetto a RF detector molto rinomati e costosi, questo è dovuto anche al fatto che i detector commerciali sono tutti dotati di rete di matching sul diodo che comporta una perdita di alcuni dB (circa 3 dB), rispetto al nostro diodo invece montato senza rete di matching. Ne consegue che la sensibilità reale dei diodi è all'incirca simile fra tutti i vari tipi.

Comparison with several commercial RF detectors
and the Schottky diode DDC2353

dc output from each type of detectors

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Note: the sensitivity of the DDC2353 diode, judging from the table, would seem to be much higher than very famous and expensive RF detectors, this is due to the fact that commercial detectors are all equipped with a matching network on the diode that causes a loss of about 3 dB compared to our diode that has been tested without a matching network instead. The result is that the real sensitivity of the diodes is quite similar among the various types.