

DM314: Fast Temperature-Stable Microwave Detector

General description

DM314 is a tunnel diode microwave coaxial detector intended for 5800 MHz industrial applications.

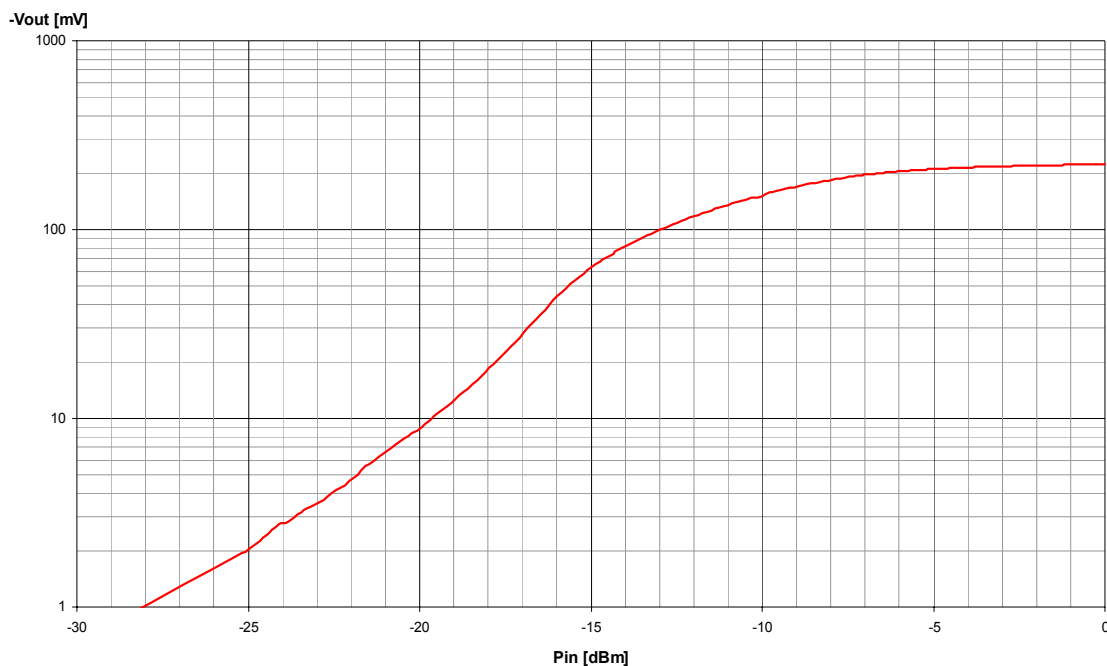
The detector delivers well-scaled DC voltage proportional to the input power and assures high temperature stability of the output voltage and low video resistance for fast pulse rise/fall times.



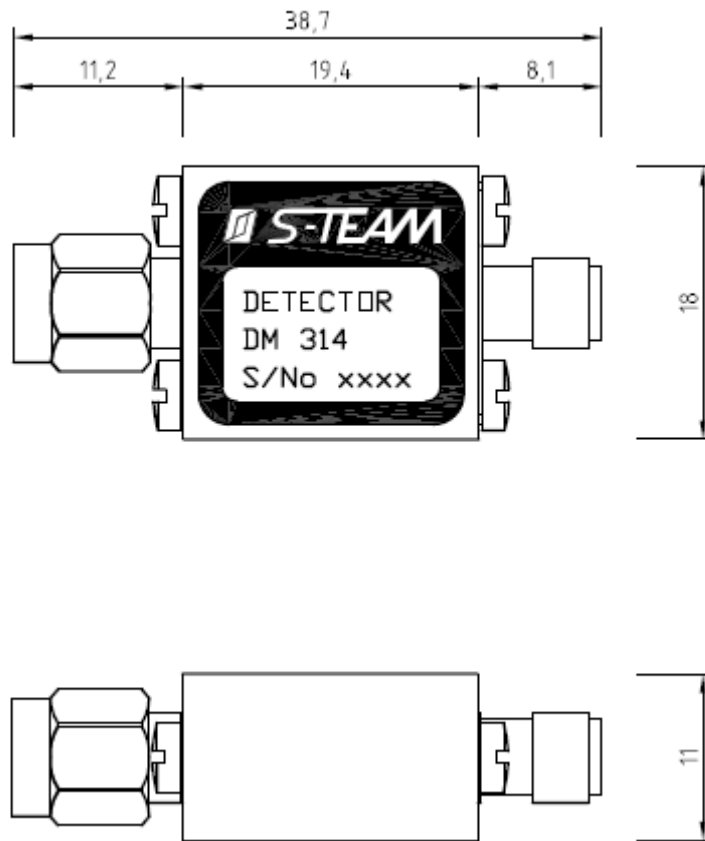
Specifications

Frequency range	5.5 ÷ 6.1 GHz
Output voltage ($P_{IN} = 1 \text{ mW}$, $R_{LOAD} = 33 \text{ k}\Omega$)	220 mV typ
Frequency response variation	$\pm 0.5 \text{ dB max}$
Statistical spread of output voltage	$\pm 1 \text{ dB (3-}\sigma \text{ deviation)}$
Output voltage temperature variation (5 to 65 °C)	< 0.5 dB
Output voltage polarity	Negative
Maximum input working power	1 mW
Max input power (destruction limit)	20 mW
VSWR	1.3 typ, 2 max
Video resistance	120 Ω typ
Input connector	SMA-M
DC output connector	SMA-F
Dimensions in mm (L x W x H)	38.7 x 18 x 11

Typical transfer characteristic ($f = 5.8 \text{ GHz}$, $R_{LOAD} = 33 \text{ k}\Omega$, $T_A = 25 \text{ }^\circ\text{C}$)



Dimensional drawing (all dimensions in millimeters)



Actual size

