

MDD7630-079

Surface Mount Detector Schottky Diodes



Applications

- 1, Sensitive RF and microwave detector circuits
- 2, High-volume wireless
- 3, Sampling and mixer circuits
- 4, Low-noise receivers in high-sensitivity ID tags
- 5, Radio designs



Features

- 1, Available as singles, pairs, and dual pairs
- 2, Ideal for low logic level applications
- 3, Tight parameter distribution
- 4, RoHS Compliance (Pb-Free)

Description

The MDD7630-079 is a low cost, surface mountable, plastic packaged schottky diodes are designed for RF and microwave mixers and detectors. It is ideal for a wide range applications including RFID, TEC, detector, mixer, as well as other high-frequency signal detection and RF to DC conversion applications. All components are 100% RF tested.

Absolute Maximum Ratings

Table 1. MDD7630-079 Absolute Maximum Rating

Parameter	Symbol	Minimum	Maximum	Units
Reverse voltage	Vr		30	V
Forward current, steady state	If		30	mA
Power dissipation	Pd		150	mW
Storage temperature	Tstg	-40	+125	°C
Operating temperature	Ta	-40	+125	°C
Junction temperature	Tj	-40	+125	°C

All the above data are based on specified demo board and tested in 25° environment.

Electrical Characteristics

Table 2. MDD7630-079 Electrical Characteristics

Characteristic	Symbol	Minimum	Maximum	Units
Reverse Breakdown Voltage	Vr	40		V
Forward Voltage	Vf		350	mV
Peak Reverse Current	Pd		0.5	uA
Total Capacitance	Ct		2.2	pF

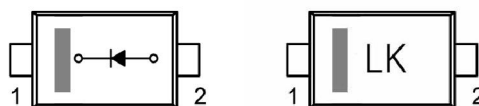
All Use For RF & Microwave

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Functional Block Diagram



Typical Performance Characteristics

Figure 1. Typical Detector Characteristics @ 1.8 GHz

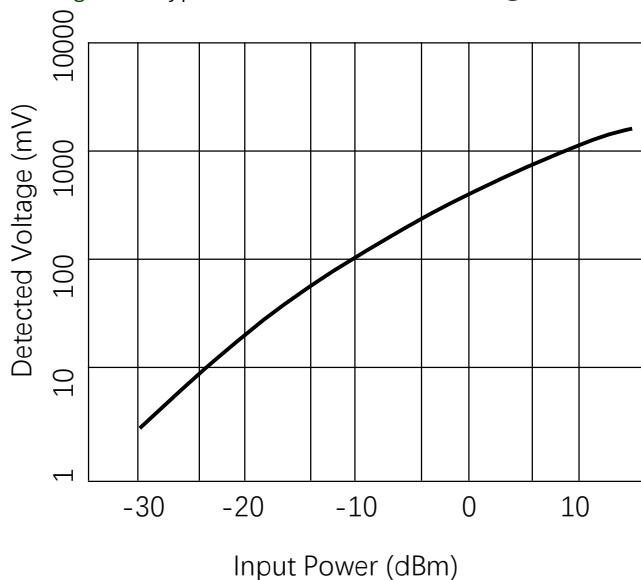
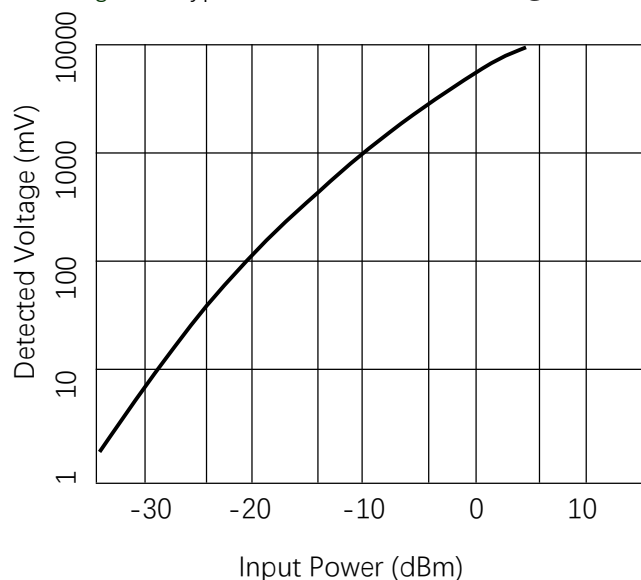
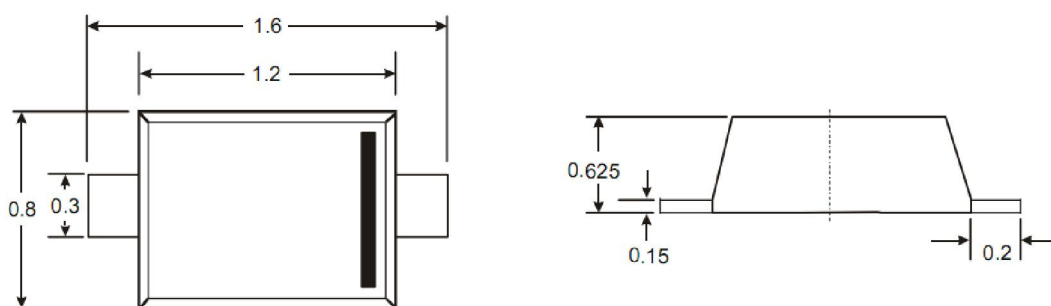


Figure 2. Typical Detector Characteristics @ 0.9 GHz



Outline Drawing

Figure 3. MDD7630-079 Outline Drawing

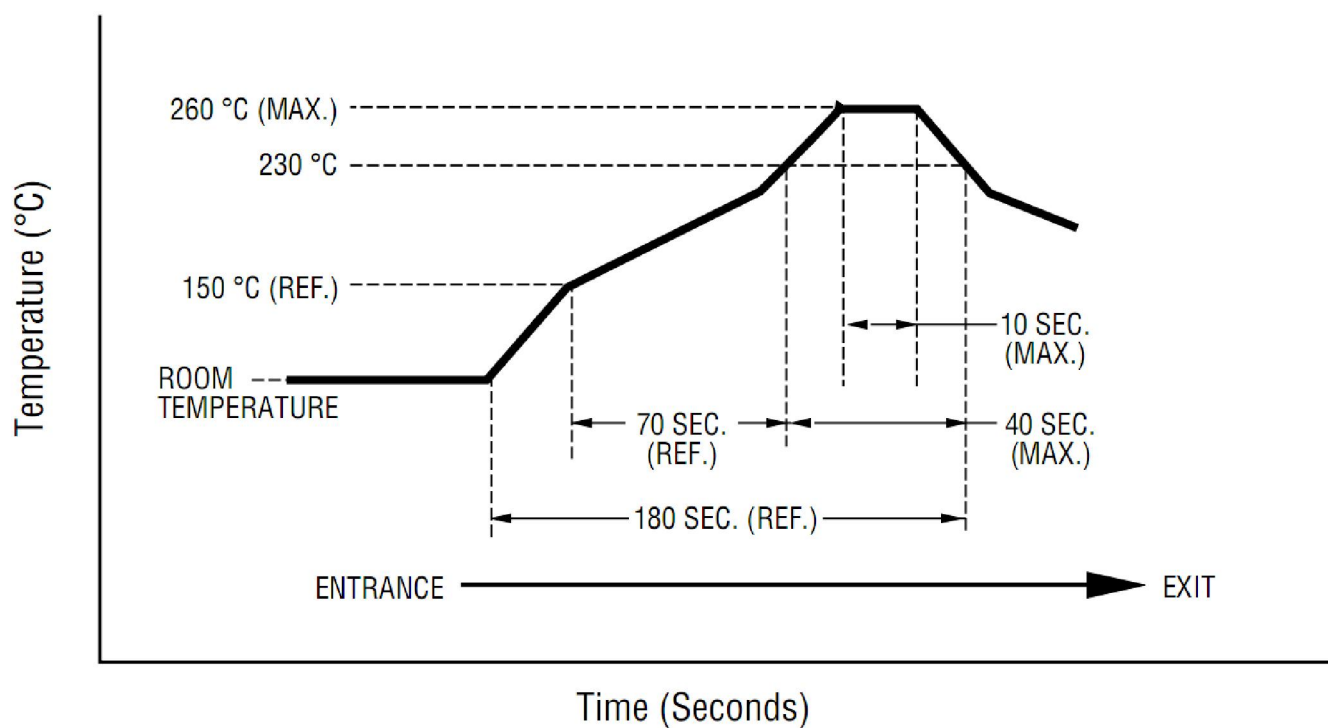


Unit: mm

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REFLOW PROFILE

Figure 4. MDD7630-079 Thermal Reflow Profile



Packaging and Ordering Information

Figure 5. MDD7630-079 Packaging Information

MDD7630-079

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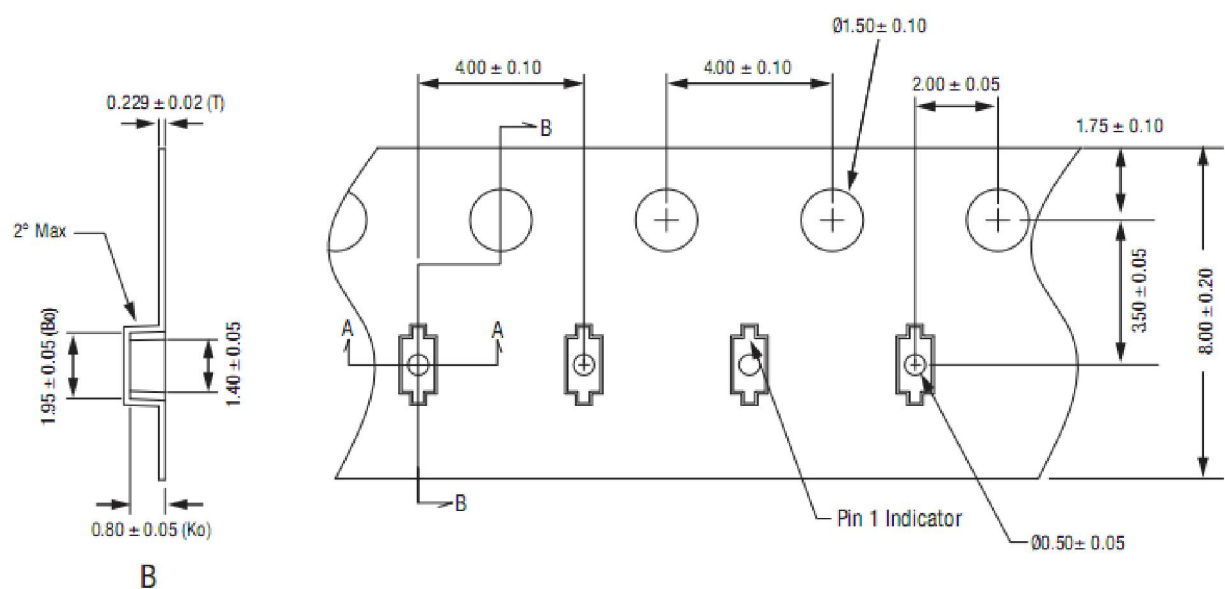


Table 3. MDD7630-079 Ordering Information

Part Number	Case	Packaging
MDD7630-079	SOD-523	3000/Tape & Reel

Revision	Description	Date
Rev0	Preliminary	2023/3/29
Rev1	Functional Block Diagram	2023/12/22
Rev1.1	Functional Block Diagram	2024/3/27