1000V 1A Standard Rectifier – 1N4007

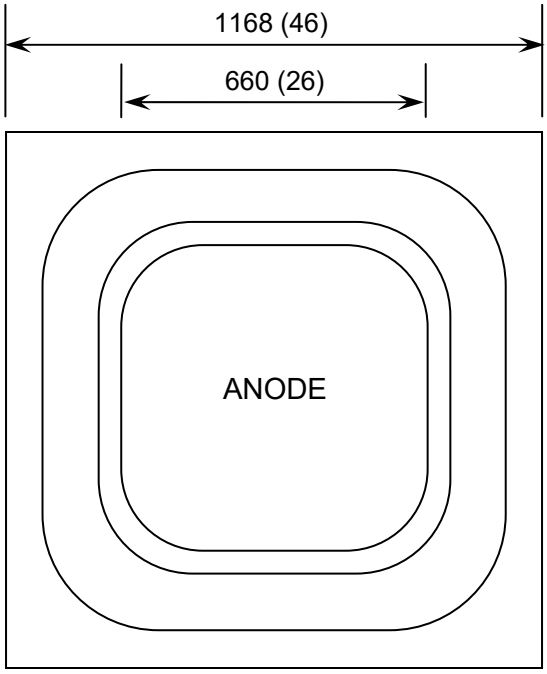
Rev 1.0
21/05/25

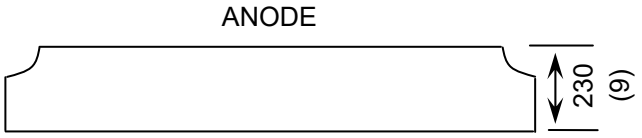
Standard recovery rectifier diode in bare die form

Features:

- Low leakage current
- High forward surge current capability
- Low forward voltage drop
- Robust construction
- High reliability tested grades.

Die Dimensions in µm (mils)





CHIP BACKSIDE IS CATHODE

Ordering Information

The following part suffixes apply:

- No suffix - MIL-STD-750 /2073 Visual Inspection
- "**H**" - MIL-STD-750 /2073 Visual Inspection
  + MIL-PRF-38534 Class H LAT
- "**K**" - MIL-STD-750 /2073 Visual Inspection
  + MIL-PRF-38534 Class K LAT

LAT = Lot Acceptance Test.

For further information on LAT process flows see below.

www.siliconsupplies.com\quality\bare-die-lot-qualification

Supply Formats:

- Default – Die in Waffle Pack (400 per tray capacity)
- Sawn Wafer on Tape – By specific request
- Unsawn Wafer – By specific request
- With additional electrical selection – By specific request

Mechanical Specification

Die Size (Unsawn)	1168 x 1168 46 x 46	µm mils
Anode Pad Size	660 x 660 25.98 x 25.98	µm mils
Die Thickness	230 (±20) 9.06 (±0.79)	µm mils
Top Metal Composition	Al 6.5µm	
Back Metal Composition	Ti/Ni/Ag	

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Absolute Maximum Ratings T_J = 25°C unless otherwise stated

PARAMETER	SYMBOL	VALUE	UNIT
Peak Repetitive Reverse Voltage	V_{RRM}	1000	V
DC Blocking Voltage	V_R	1000	V
RMS Reverse Voltage	$V_{R\ (RMS)}$	700	V
Average forward rectified current	$I_{F(AV)}$, T_J = 75°C	1	A
Peak forward surge current[1]	I_{FSM}	30	A
Operating Junction temperature	T_J	-65 to 150	°C
Storage Temperature Range	T_{STG}	-65 to 150	°C

Electrical Characteristics T_J = 25°C unless otherwise stated

PARAMETER	SYMBOL	CONDITIONS	MIN	TYP	MAX	UNIT
Maximum instantaneous Forward Voltage[2]	V_F	I_F = 1A	-	-	1.1	V
Maximum Reverse Leakage Current	I_{RM} @ V_{RRM}	V_{RRM} = 1000V, T_J = 25°C	-	-	5	µA
		V_{RRM} = 1000V, T_J = 100°C	-	-	50	
Maximum Junction Capacitance	C_J	V_R = 0, f = 1.0MHz	-	-	40	pF

1. Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load
2. Pulse Width = 3.8ms