



# 800V 1A Standard Rectifier – 1N4006

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.

## Ordering Information

The following part suffixes apply:

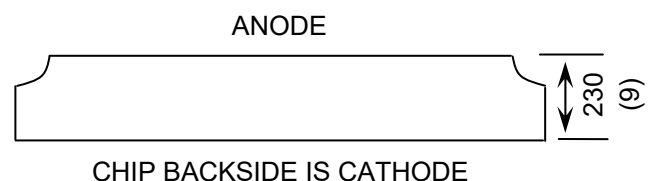
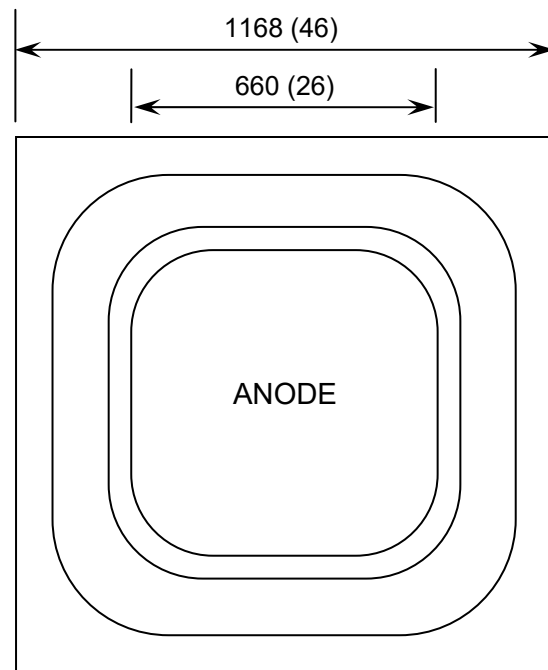
- No suffix - MIL-STD-750 /2073 Visual Inspection
- “H” - MIL-STD-750 /2073 Visual Inspection  
+ MIL-PRF-38534 Class H LAT
- “K” - MIL-STD-750 /2073 Visual Inspection  
+ MIL-PRF-38534 Class K LAT

LAT = Lot Acceptance Test.

For further information on LAT process flows see below.

[www.siliconsupplies.com/quality/bare-die-lot-qualification](http://www.siliconsupplies.com/quality/bare-die-lot-qualification)

## Die Dimensions in $\mu\text{m}$ (mils)



## 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	$\mu\text{m}$ mils
Anode Pad Size	660 x 660 25.98 x 25.98	$\mu\text{m}$ mils
Die Thickness	230 ( $\pm 20$ ) 9.06 ( $\pm 0.79$ )	$\mu\text{m}$ mils
Top Metal Composition	Al 6.5 $\mu\text{m}$	
Back Metal Composition	Ti/Ni/Ag	





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## Absolute Maximum Ratings $T_J = 25^\circ\text{C}$ unless otherwise stated

PARAMETER	SYMBOL	VALUE	UNIT
Peak Repetitive Reverse Voltage	$V_{RRM}$	800	V
DC Blocking Voltage	$V_R$	800	V
RMS Reverse Voltage	$V_{R(RMS)}$	560	V
Average forward rectified current	$I_{F(AV)}$ , $T_J = 75^\circ\text{C}$	1	A
Peak forward surge current <sup>1</sup>	$I_{FSM}$	30	A
Operating Junction temperature	$T_J$	-65 to 150	$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-65 to 150	$^\circ\text{C}$

## Electrical Characteristics $T_J = 25^\circ\text{C}$ unless otherwise stated

PARAMETER	SYMBOL	CONDITIONS	MIN	TYP	MAX	UNIT
Maximum instantaneous Forward Voltage <sup>2</sup>	$V_F$	$I_F = 1\text{A}$	-	-	1.1	V
Maximum Reverse Leakage Current	$I_{RM} @ V_{RRM}$	$V_{RRM} = 800\text{V}$ , $T_J = 25^\circ\text{C}$	-	-	5	$\mu\text{A}$
		$V_{RRM} = 800\text{V}$ , $T_J = 100^\circ\text{C}$	-	-	50	
Maximum Junction Capacitance	$C_J$	$V_R = 0$ , $f = 1.0\text{MHz}$	-	-	40	pF

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

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