

STANDARD RECOVERY SILICON RECTIFIER DIE

Applications:

- Switching Power Supply • Converters • Free-Wheeling Diodes • Polarity Protection Diode

Features:

- Glass Passivated Epitaxial Diode with Mesa Structure
- Soft Reverse Recovery at Low and High Temperature
- Low Forward Voltage Drop and Low Reverse Current
- Electrically and Mechanically Stable during and after Packaging

Maximum Ratings:

Characteristics	Symbol	Condition	Max.	Units
Peak Inverse Voltage 1C5550 1C5551 1C5552 1C5553 1C5554	V_{RWM}	-	200 400 600 800 1000	V
Max. Output Current	I_O	50% duty cycle, rectangular wave form; $T_A = 55^\circ\text{C}$	3.0	A
Max. Peak One Cycle Non-Repetitive Surge Current	I_{FSM}	8.3 ms, sine pulse ⁽¹⁾	100	A
Max. Junction Temperature	T_J	-	-55 to +175	$^\circ\text{C}$
Max. Storage Temperature	T_{stg}	-	-55 to +200	$^\circ\text{C}$
Reverse Recovery Time	t_{rr}	$I_F=0.5\text{A}, I_R=1.0\text{A}, I_{RM}=0.25\text{A}$	2.0	μS

Electrical Characteristics:

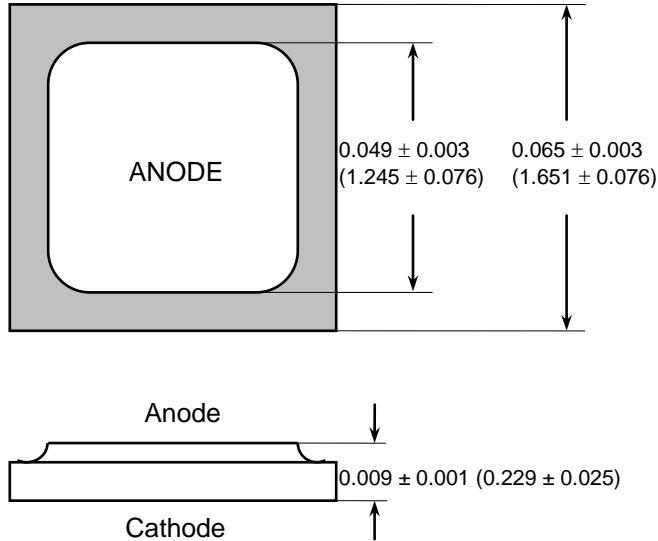
Characteristics	Symbol	Condition	Max.	Units
Max. Forward Voltage Drop 1C5550 1C5551 1C5552 1C5553 1C5554	V_{F1}	9A, pulse, $T_J = 25^\circ\text{C}$	1.2 1.2 1.2 1.3 1.3	V
Max. Reverse Current	I_{R1}	$V_R = V_{RWM}$, pulse, $T_J = 25^\circ\text{C}$	1.0	μA
	I_{R2}	$V_R = V_{RWM}$, pulse, $T_J = 125^\circ\text{C}$	60	μA

⁽¹⁾ in TO package

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**TECHNICAL DATA
DATASHEET 4312, REV C**

Dimensions in inches (mm):



Bottom side metalization: Ti/Ni/Ag - 30 kÅ nominal
 Top side metalization: Al - 25 kÅ minimum
 Bottom side is cathode, top side is anode.

PART ORDERING INFORMATION:

1 CXXXX XX X -X

Part Number

Metal Combinations (blank is Al top/Ag bottom):

Suffix	Top	Bottom	Part Number
blank	Al	Ag	1C5550
AG	Al	Au	1C5550AG
BB	Ag	Ag	1C5550BB
BG	Ag	Au	1C5550BG
GG	Au	Au	1C5550GG
GB	Au	Ag	1C5550GB

A = Ti (0.3 kÅ) / Al (25 kÅ)

B = Ti (1.2 kÅ) / Ni (1.8 kÅ) / Ag (30kÅ)

G = Ti (1.2 kÅ) / Ni (1.8 kÅ) / Au (12kÅ) (TOP) / Ti (1.2 kÅ) / Ni (1.8 kÅ) / Au (4kÅ) (BOTTOM)

Quality Level (blank is commercial level):

Suffix	Part Number	Description
blank	1C5550	Commercial level
H	1C5550H	Class H level
K	1C5550AGK	Class K level Al top/Au bottom

Polarity (blank is anode top/cathode bottom):

Suffix	Top	Bottom	Part Number
blank	Anode	Cathode	1C5550
-R	Cathode	Anode	1C5550AGK-R

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**TECHNICAL DATA
DATASHEET 4312, REV C****DISCLAIMER:**

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