

## SILICON ULTRA-FAST RECOVERY EPITAXIAL 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:

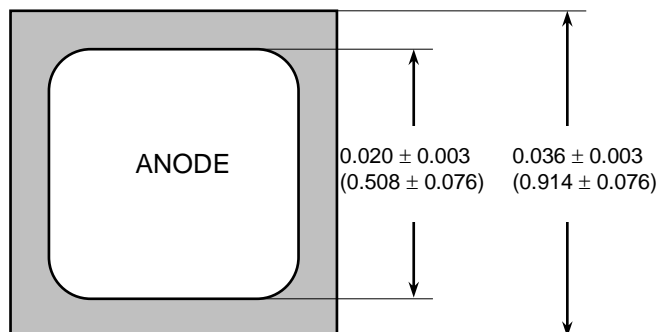
Characteristics	Symbol	Condition	Max.	Units
Peak Inverse Voltage	$V_{RWM}$	-	600	V
Max. Output Current	$I_o$	$T_A = 25^\circ\text{C}$ ; 50% duty cycle, halfsine including reverse voltage amplitude at 600V	1.2	A
Max. Peak One Cycle Non-Repetitive Surge Current <sup>(1)</sup>	$I_{FSM}$	8.3 ms, sine pulse	20	A
Max. Junction Temperature	$T_J$	-	-65 to +150	$^\circ\text{C}$
Max. Storage Temperature	$T_{stg}$	-	-65 to +175	$^\circ\text{C}$

Note (1): Surge ratings are dependent on the package used

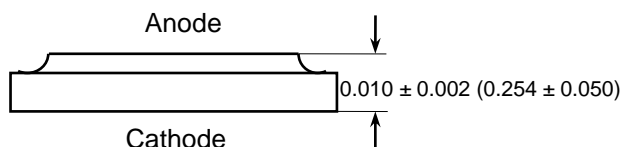
### Electrical Characteristics:

Characteristics	Symbol	Condition	Min.	Max.	Units
Breakdown Voltage	$V_{RM}$	$I_R = 50 \mu\text{A}$ ; $T_J = 25^\circ\text{C}$	660		V
Forward Voltage Drop	$V_{F1}$	$I_F = 1.2 \text{ A}$ , pulse, $T_J = 25^\circ\text{C}$		1.4	V
	$V_{F2}$	$I_F = 2.0 \text{ A}$ , pulse, $T_J = 25^\circ\text{C}$		1.6	
	$V_{F3}$	$I_F = 1.0 \text{ A}$ , pulse, $T_J = -65^\circ\text{C}$		1.76	
Max. Reverse Leakage Current	$I_{R1}$	$V_R = V_{RWM}$ , pulse, $T_J = 25^\circ\text{C}$		0.5	$\mu\text{A}$
	$I_{R2}$	$V_R = V_{RWM}$ , pulse, $T_J = 150^\circ\text{C}$		150	$\mu\text{A}$
Max. Junction Capacitance	$C_T$	$V_R = 10 \text{ V}$ , $T_C = 25^\circ\text{C}$ , $f = 0.1$ to $1 \text{ MHz}$ ,		10	pF
Reverse Recovery Time	$t_{rr}$	$I_F = 0.5 \text{ A}$ , $I_{RM} = 1.0 \text{ A}$ , $I_{R(REC)} = 0.25 \text{ A}$		30	ns

### Mechanical Dimensions: In Inches (mm)



Top side metalization: Al - 45kÅ nominal  
 Bottom side metalization: Ti/Ni/Ag - 30 kÅ nominal  
 Bottom side is cathode, top side is anode.



## SENSITRON

TECHNICAL DATA  
DATASHEET 345, REV C

## PART ORDERING INFORMATION:

1 C6622XX X X

Part Number

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

Suffix	Top	Bottom	Part Number
blank	Al	Ag	1C6622
AG	Al	Au	1C6622AG
BB	Ag	Ag	1C6622BB
BG	Ag	Au	1C6622BG

A = Ti (0.3 kA) / Al (25 kA)

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

G = Ti (1.2 kA) / Ni (1.8 kA) / Au (4kA) (BOTTOM)

**Quality Level (blank is commercial level):**

Suffix	Part Number	Description
blank	1C6622	Commercial level
H	1C6622H	Class H level
K	1C6622AGK	Class K level Al top/Au bottom

**Polarity (blank is anode top/cathode bottom):**

Suffix	Top	Bottom	Part Number
blank	Anode	Cathode	1C6622
-R	Cathode	Anode	1C6622AGK-R

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