

## Ultrafast Recovery Die

### FEATURES / BENEFITS:

- ✓ Die fabricated on a MIL-PRF-19500 manufacturing line
- ✓ Class H and Class K element evaluation available
- ✓ All ratings are @  $T_A = 25\text{ }^\circ\text{C}$  unless otherwise specified

### ELECTRICAL CHARACTERISTICS:

#### Maximum Ratings:

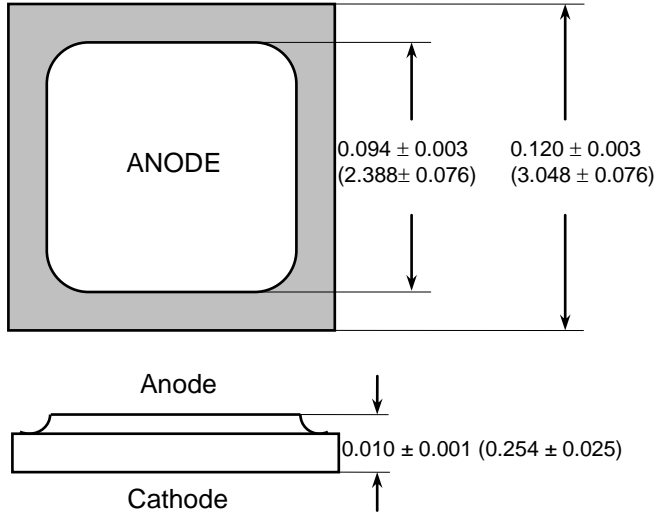
Characteristics	Symbol	Condition	Max.	Units
Peak Inverse Voltage 1C6657 1C6658 1C6659	$V_{RWM}$	-	100 150 200	V
Max. Average Forward Current	$I_{F(AV)}$	@ 100°C	15	A
Die Size	-	-	120	mil
Max. Junction Temperature	$T_J$	-	-55 to +200	°C
Max. Storage Temperature	$T_{stg}$	-	-55 to +200	°C

#### Electrical Characteristics:

Characteristics	Symbol	Condition	Max.	Units
Max. Forward Voltage Drop	$V_{F1}$	@ 10A, Pulse, $T_J = 25\text{ }^\circ\text{C}$	1.0	V
		@ 20A, Pulse, $T_J = 25\text{ }^\circ\text{C}$	1.2	
		Duty cycle $\leq 2\%$ , pulse width $\leq 300\mu\text{s}$		
Max. Reverse Current	$I_{R1}$	@ $V_R = V_{RWM}$ , Pulse, $T_J = 25\text{ }^\circ\text{C}$	10	$\mu\text{A}$
	$I_{R2}$	@ $V_R = V_{RWM}$ , Pulse, $T_J = 100\text{ }^\circ\text{C}$	1000	$\mu\text{A}$
Reverse Recovery Time	$t_{rr}$	$I_f = 1\text{A}$ , $I_r = 1\text{A}$ , $I_{rm} = 100\text{mA}$	35	ns
Junction Capacitance	$C_J$	$V_R = 10\text{Vdc}$ , $f = 1.0\text{MHz}$ , $V_{SIG} = 50\text{mV}$	150	pF

**TECHNICAL DATA**  
**DATA SHEET 5433, REV. -**

**PACKAGE DIMENSIONS (inches/mm):**



**PART ORDERING INFORMATION:**

**1CXXXX XX X -X**

*Part Number*

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

Suffix	Top	Bottom	Part Number
blank	Al	Ag	1C6657
AG	Al	Au	1C6657AG
BB	Ag	Ag	1C6657BB
BG	Ag	Au	1C6657BG
GG	Au	Au	1C6657GG
GB	Au	Ag	1C6657GB

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 (12kA) (TOP) / Ti (1.2 kA) / Ni (1.8 kA) / Au (4kA) (BOTTOM)

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

Suffix	Part Number	Description
blank	1C6657	Commercial level
H	1C6657H	Class H level
K	1C6657AGK	Class K level Al top/Au bottom

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

Suffix	Top	Bottom	Part Number
blank	Anode	Cathode	1C6657
-R	Cathode	Anode	1C6657AGK-R

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