ZOWIE

Rectifier Diode

**(200V~1000V / 2.0A)**

# GC20DH THRU GC20MH

## FEATURES

* Halogen-free type
* Compliance to RoHS product
* GPRC (Glass passivated rectifier chip) inside
* Glass passivated cavity-free junction
* Lead less chip form, no lead damage
* Low forward voltage drop
* Plastic package has Underwriters Laboratory Flammability Classification 94V-0

## APPLICATION

* General purpose rectification
* Surge absorption

## MECHANICAL DATA

**Case :** Packed with FRP substrate and epoxy underfilled
**Terminals :** Pure Tin plated (Lead-Free), solderable per MIL-STD-750, Method 2026.
**Polarity :** Cathode Band, Laser marking
**Weight :** 0.02 gram

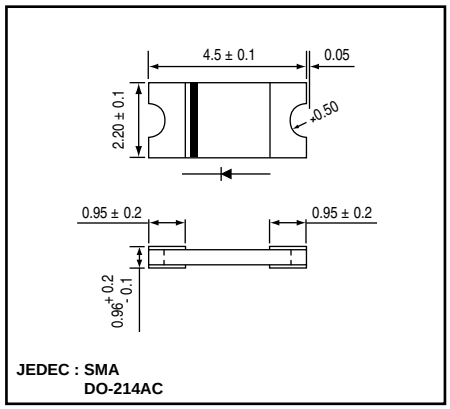
## PACKING

* **3,000 pieces per 7" (178mm ± 2mm) reel**
* **4 reels per box**
* **6 boxes per carton**

## OUTLINE DIMENSIONS

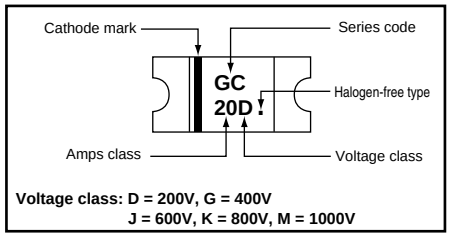
**Case : 2010**

Unit : mm




**JEDEC : SMA**
**DO-214AC**

## MARKING




**Voltage class: D = 200V, G = 400V**
**J = 600V, K = 800V, M = 1000V**

## Absolute Maximum Ratings (Ta = 25 °C)

| ITEM | Symbol | Rating | | | | | Unit |
|---|---|---|---|---|---|---|---|
| | | *GC20DH* | *GC20GH* | *GC20JH* | *GC20KH* | *GC20MH* | |
| Repetitive peak reverse voltage | $V_{RRM}$ | 200 | 400 | 600 | 800 | 1000 | V |
| Average forward current | $I_{F(AV)}$ | 2.0 | | | | | A |
| Peak forward surge current (8.3ms single half sine-wave) | $I_{FSM}$ | 50 | | | | | |
| Operating junction temperature Range | $T_j$ | -65 to +175 | | | | | °C |
| Storage temperature Range | $T_{STG}$ | -65 to +175 | | | | | |

## Electrical characteristics (Ta = 25 °C)

| ITEM | Symbol | Conditions | Min. | Typ. | Max. | Unit |
|---|---|---|---|---|---|---|
| Forward voltage | $V_F$ | $I_F$ = 2.0A | - | 0.96 | 1.00 | V |
| Repetitive peak reverse current | $I_{RRM}$ | $V_R$ = Max. $V_{RRM}$ , Ta = 25 °C | - | 0.10 | 5 | uA |
| Junction capacitance | $C_j$ | $V_R$ = 4V, f = 1.0 MHz | - | 15 | - | pF |
| Thermal resistance | $R_{th(JA)}$ | Junction to ambient (NOTE) | - | 85 | - | °C/W |
| | $R_{th(JL)}$ | Junction to lead (NOTE) | - | 16 | - | |

NOTES : (1) Thermal resistance from junction to ambient and from junction to lead P.C.B. mounted on 0.2 x 0.2" (5.0 x 5.0mm) copper pad areas.
(2) Preliminary draft.

FIG.1 - FORWARD CURRENT DERATING CURVE

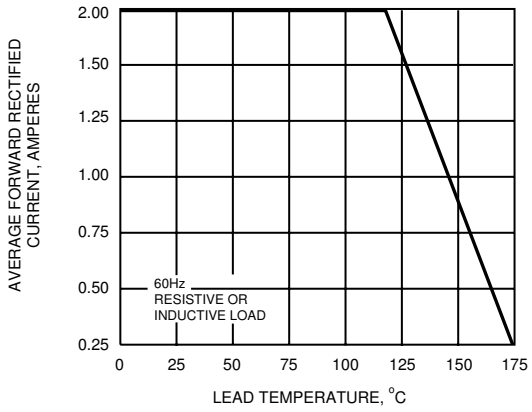



FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

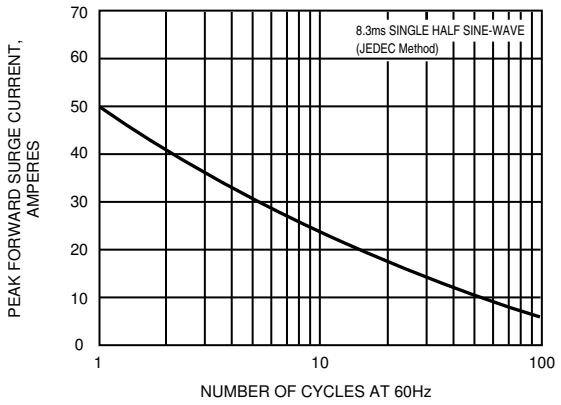



FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

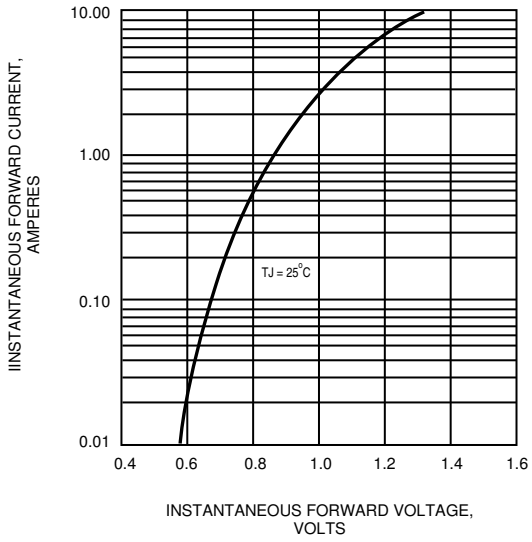



FIG.4 - TYPICAL REVERSE CHARACTERISTICS

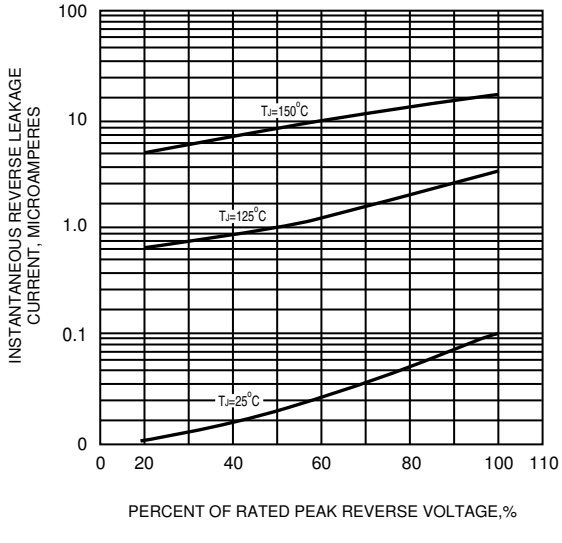



FIG.5 - TYPICAL JUNCTION CAPACITANCE