

### Description

Dual center tap Schottky rectifier designed for high frequency Switched Mode Power Supplies.

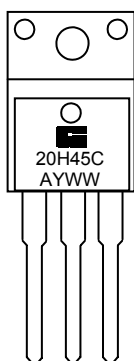
### Features

- High junction temperature capability
- Good trade off between leakage current and forward voltage drop
- Low leakage current

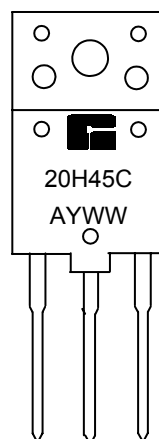
### Applications

- |                           |                        |
|---------------------------|------------------------|
| ■ Switching Power Supply  | ■ LCD Monitor/TV       |
| ■ Industrial Application  | ■ AC-DC Converter      |
| ■ Computer and Peripheral | ■ DC-DC Converter      |
| ■ Home Appliance          | ■ Telecommunication    |
| ■ Consumer Product        | ■ Free Wheeling Diodes |
| ■ Battery Charger/Adapter | ■ Polarity Protection  |

### Marking Information and Pin Configurations (Top View)



TO - 220FPAB & TO - 220AB



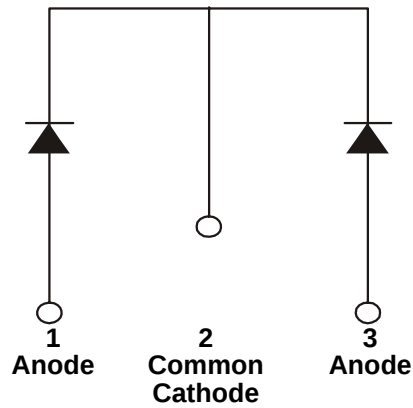
TO - 3PF

20: Maximum average forward rectified current - 20A  
 H: Low  $V_F$  family  
 45: Repetitive peak reverse voltage - 45V  
 C: Dual Cathode Common  
 A: Assembly Location  
 Y: Year  
 WW: Work Week

### Ordering Information

| ORDERING NUMBER | PACKAGE   | SHIPPING       |
|-----------------|-----------|----------------|
| GMR20H45CTB3T   | TO220AB   | 50 Units/ Tube |
| GMR20H45CTBF3T  | TO220FPAB | 50 Units/ Tube |
| GMR20H45CTPF3   | TO-3PF    | 30 Units/ Tube |

### Block Diagram



## Absolute Maximum Ratings

| PARAMETER                                                                                        | SYMBOL       | VALUE       | UNITS      |
|--------------------------------------------------------------------------------------------------|--------------|-------------|------------|
| Repetitive Peak Reverse Voltage                                                                  | $V_{RPM}$    | 45          | V          |
| RMS Forward Current                                                                              | $I_{F(RMS)}$ | 20          | A          |
| Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC METHOD) | $I_{FSM}$    | 135         | A          |
| Maximum Operating Junction Temperature                                                           | $T_J$        | 175         | °C         |
| Operating storage temperature                                                                    | $T_{STG}$    | -45 to +150 | °C         |
| Voltage Rate of Change                                                                           | $dV/dt$      | 10,000      | V/ $\mu$ s |
| Electrostatic Discharge Voltage. JEDEC Method. ESD HBM. Contact                                  | $V_{ESD}$    | $\pm 8$     | kV         |

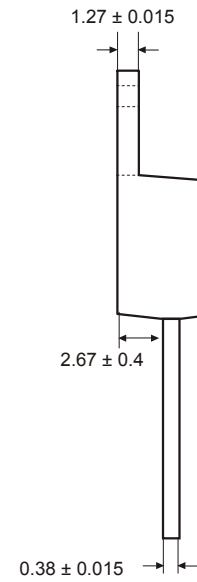
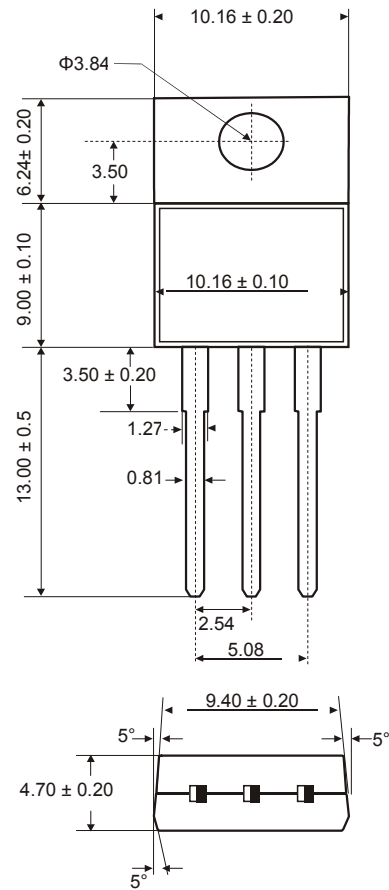
## Thermal Characteristics

| PARAMETER                  | SYMBOL        | TO220AB | TO220FPAB | TO-3PF | UNITS |
|----------------------------|---------------|---------|-----------|--------|-------|
| Typical thermal resistance | $\Theta_{JC}$ | 2.4     | 4.2       | 1.2    | °C/W  |

## Electrical Characteristics (per diode) $T_J = 25^\circ\text{C}$ , Unless otherwise noted

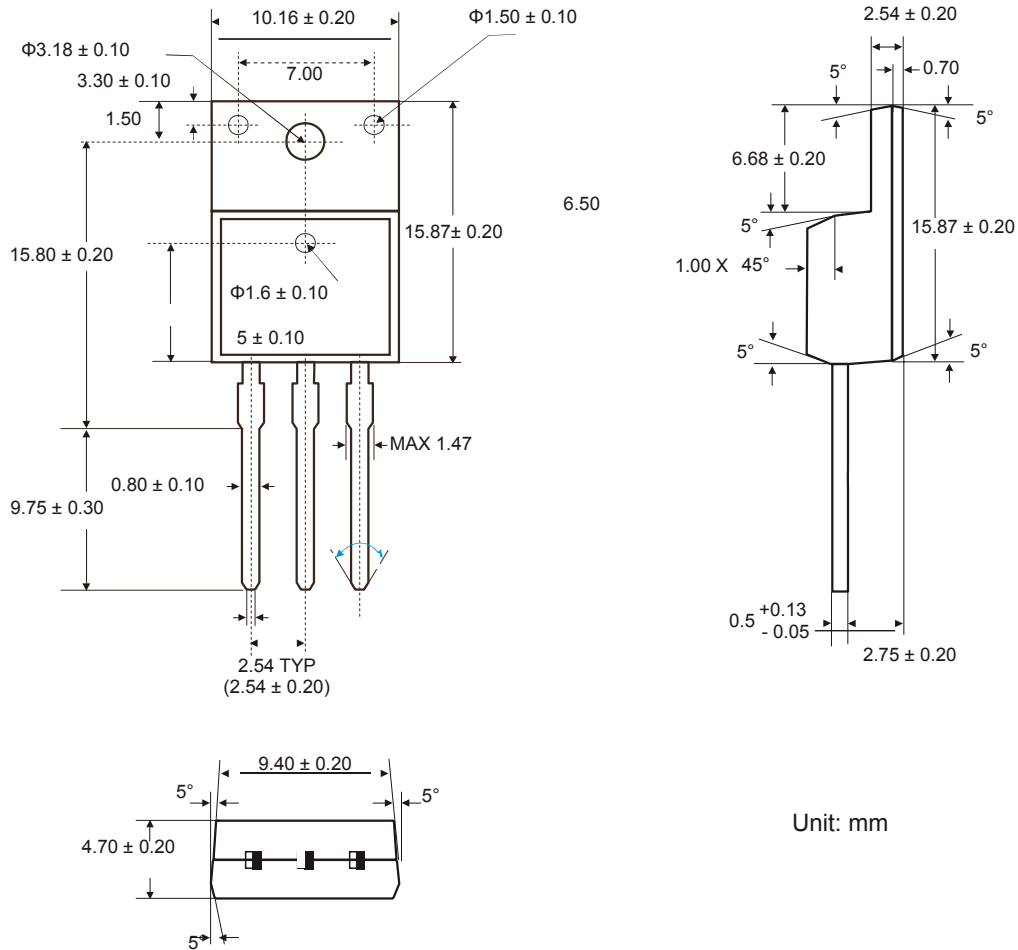
| PARAMETER                         | SYMBOL      | Test Condition                              | Min | Typ  | Max  | Units         |
|-----------------------------------|-------------|---------------------------------------------|-----|------|------|---------------|
| DC Forward Voltage                | $V_F$       | $I_F = 10\text{A}$                          |     | 0.66 | 0.68 | V             |
| Average Rectified Forward Current | $I_{F(AV)}$ |                                             |     |      | 10.0 | A             |
| Maximum Reverse Current           | $I_R$       | $V_R = 45\text{V}$                          | -   | -    | 5    | $\mu\text{A}$ |
|                                   |             | $V_R = 45\text{V}, T_J = 125^\circ\text{C}$ |     | -    | 6    | mA            |

## Package Outline Dimensions – TO220AB

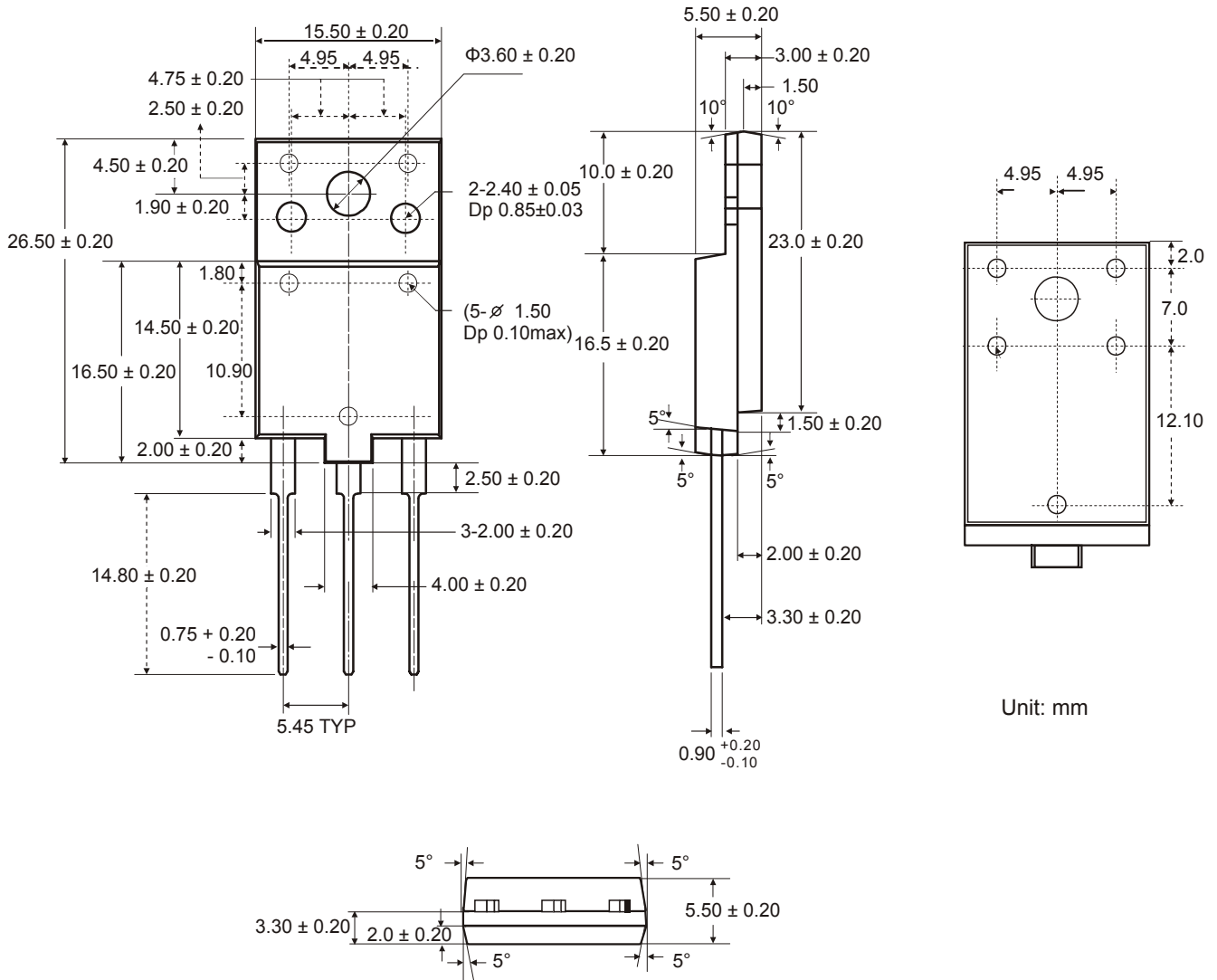


Unit: mm

### Package Outline Dimensions – TO220FPAB



### Package Outline Dimensions – TO-3PF



### Ordering Number

**GM**

APM  
Gamma  
Micro

**R**

Circuit  
Type:  
Rectifier

**20**

Rated  
Current  
10A

**H**

Low V<sub>F</sub>  
Family

**100**

Rated  
Voltage  
100V

**C**

Dual  
Cathode  
Common

**TB3**

Package

TB3: TO220AB  
TBF3: TO220FPAB  
TPF3: TO-3PF

**I**

Shipping

T: Tube  
R: Tape & Reel