

## Product Specification

GOODARK Type

**MUR860,MUR860F**

Construction : Ultra Fast Recover diode

Application : For power switch

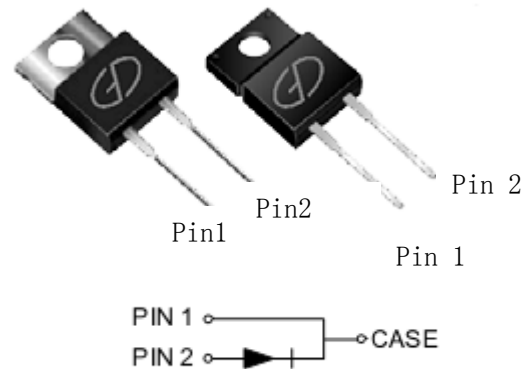
(Manufacturer) :

Suzhou Goodark Electronics Co.,Ltd

Prepared on Sep. 17<sup>th</sup>, 2008

Prepared: R & D Department

Approval:

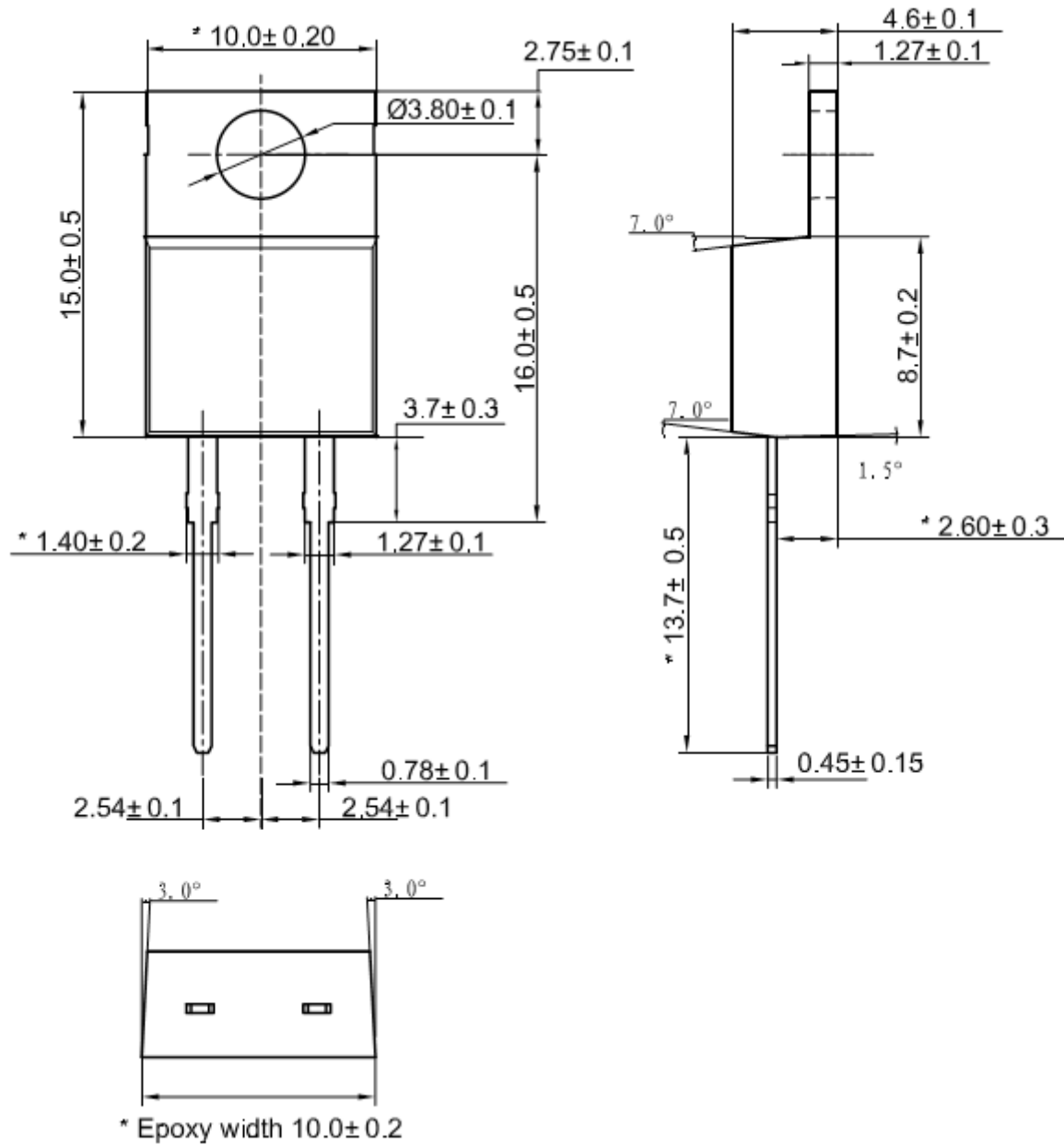


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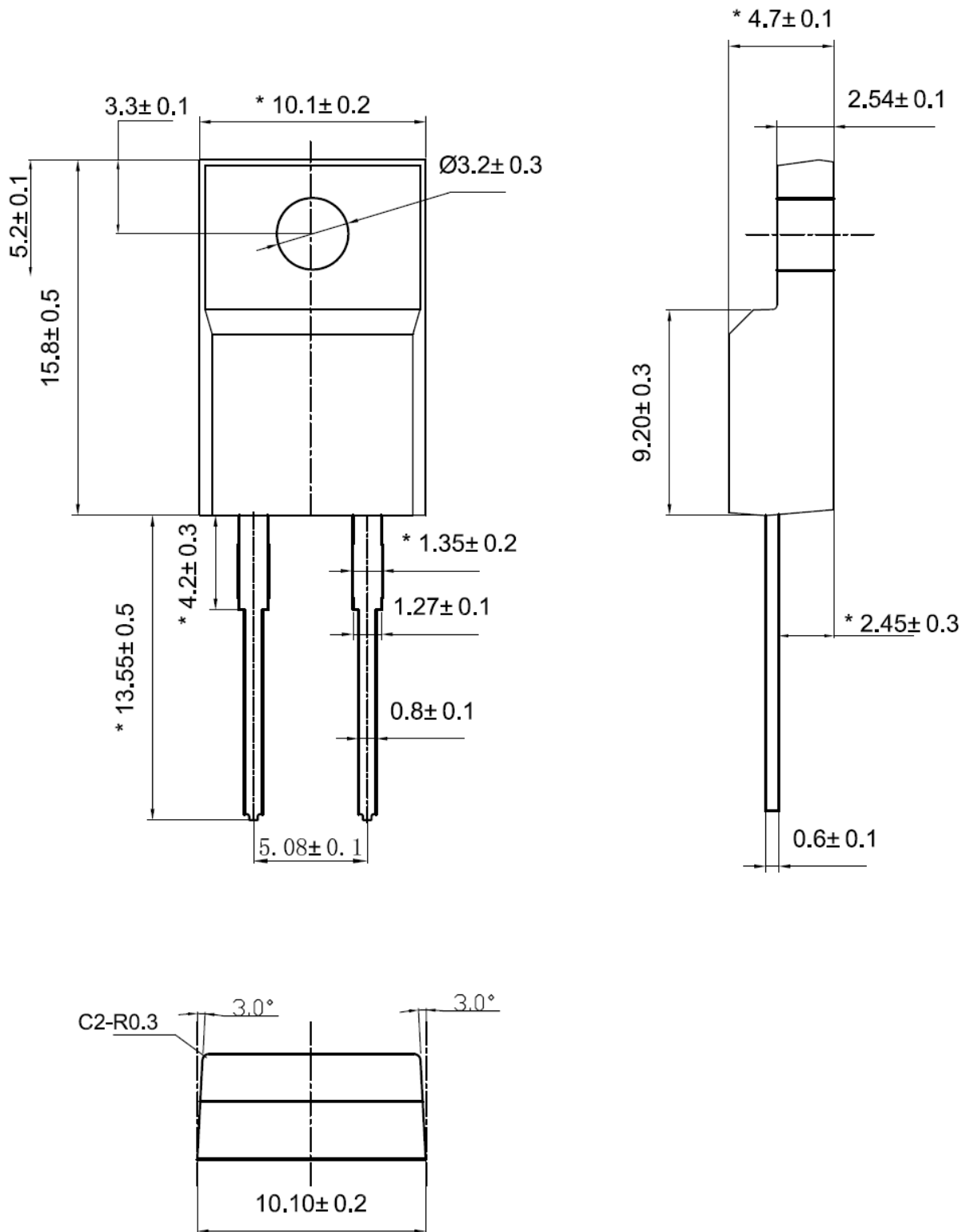
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## 1. Package Outline (TO220-AC)

UNIT:mm

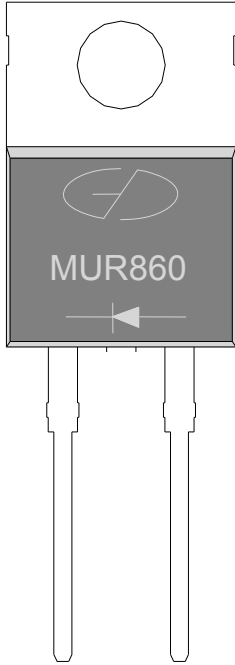


Package Outline (ITO220-AC)



Lead Frame Material : Copper    Plating: Pure Tin Plating

## 2. MARKING



1. Part Name : MUR860(TO220-AC)  
MUR860F(ITO220-AC)
2. Logo Mark: 
3. Polarity: 



### 3. Features& Mechanical Characteristics

#### Features

- Plastic package has underwriters Laboratory Flammability Classification 94V-0
- Dual rectifier construction, positive center tap
- Metal of silicon rectifier, majority carrier conduction
- Low forward voltage, high efficiency
- Guarding for over voltage protection
- For use in low voltage, high frequency inverters,
- Free wheeling, and polarity protection applications

#### Mechanical Characteristics

- Case: Epoxy, Molded
- Weight: 1.9grams (approximately)
- Finish: All External Surfaces Corrosion Resistant and Terminal Leads are Readily Solderable
- Lead Temperature for Soldering Purposes: 260°C Max.for10 sec
- Shipped 50 units per plastic tube

### 4. Maximum Ratings and Electrical Characteristics

| MAXIMUM RATINGS and ELECTRICAL CHARACTERISTICS(TC=25°C unless otherwise moted)              |                 |                     |        |              |          |
|---------------------------------------------------------------------------------------------|-----------------|---------------------|--------|--------------|----------|
| PARAMETER                                                                                   | TEST CONDITIONS |                     | SYMBOL | MUR860(F)    | UNIT     |
| Maximum repetitive peak reverse voltage                                                     |                 |                     | VRRM   | 600          | V        |
| Working peak reverse voltage                                                                |                 |                     | VRWM   | 600          | V        |
| Maximum DC blocking voltage                                                                 |                 |                     | VDC    | 600          | V        |
| Maximum average forward rectified current at Tc=105°C total device per diode                |                 |                     | IF(AV) | 8            | A        |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load per diode |                 |                     | IFSM   | 125          | A        |
| Operating junction temperature range                                                        |                 |                     | TJ     | —55 to+150   | °C       |
| Isolation voltage (ITO220 only) from terminal to heatsink t = 1 sec                         |                 |                     | VAC    | 1500         | V        |
| Storage temperature range                                                                   |                 |                     | TSTG   | —55 to+150   | °C       |
| Maximum instantaneous forward voltage per leg                                               | IF=8A<br>IF=8A  | TC=25°C<br>TC=125°C | VF     | 1.55<br>1.45 | V        |
| Maximum reverse current per leg at working peak Reverse voltage                             |                 | TJ=25°C<br>TJ=100°C | IR     | 50<br>500    | uA<br>uA |
| Maximum Reverse Recover Time (If=0.5Amp, IR=1.0Amp,Irec=0.25Amp)                            | Trr             |                     | Trr    | 50           | ns       |

#### Thermal Characteristics Ta=25°C unless otherwise noted

| Symbol | Parameter                                       | Max (TO220AC) | Max (ITO220AC) | Unit  |
|--------|-------------------------------------------------|---------------|----------------|-------|
| RθJC   | Thermal Resistance, Junction to Case per Leg    | 2.0           | 4.0            | °C /W |
| RθJA   | Thermal Resistance, Junction to Ambient per Leg | 62.5          | 62.5           | °C /W |

#### Note:

1. Screw mounting with 4-40 screw, where washer diameteris≤4.9mm(0.19 " )
2. Pulse test:300us pulse width,1% duty cycle



## 5. Rating and Characteristic Curves

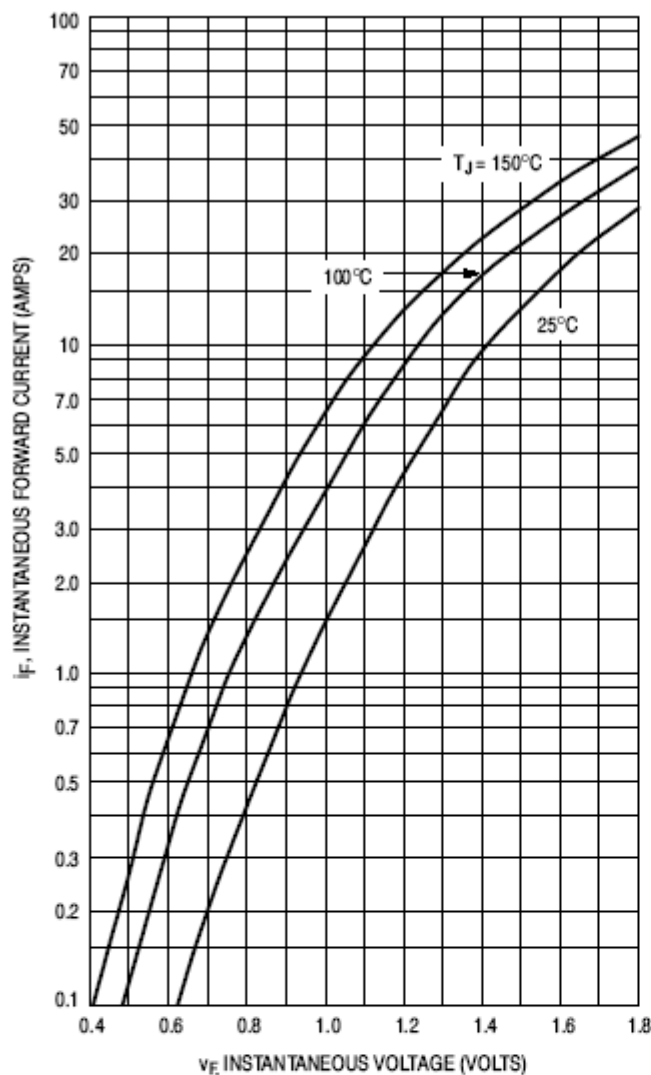


Figure 11. Typical Forward Voltage

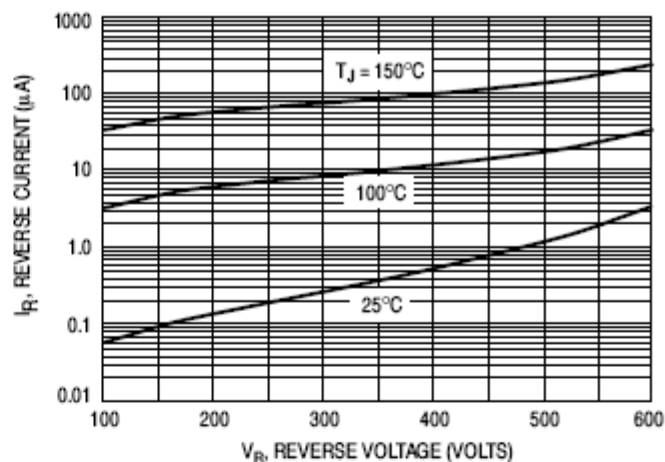


Figure 12. Typical Reverse Current\*

\* The curves shown are typical for the highest voltage device in the grouping. Typical reverse current for lower voltage selections can be estimated from these same curves if  $V_R$  is sufficiently below rated  $V_R$ .

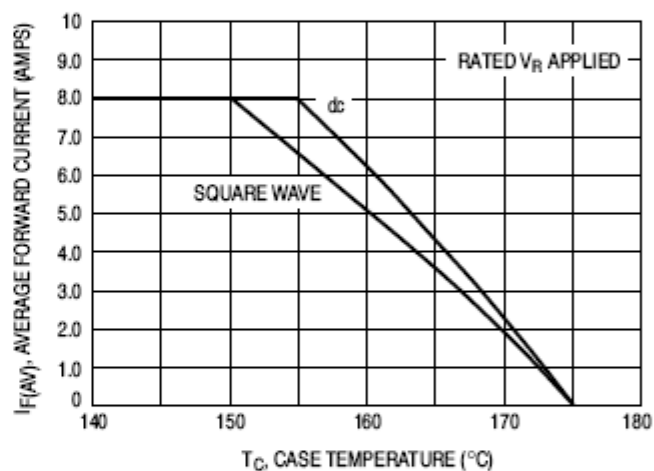


Figure 13. Current Derating, Case

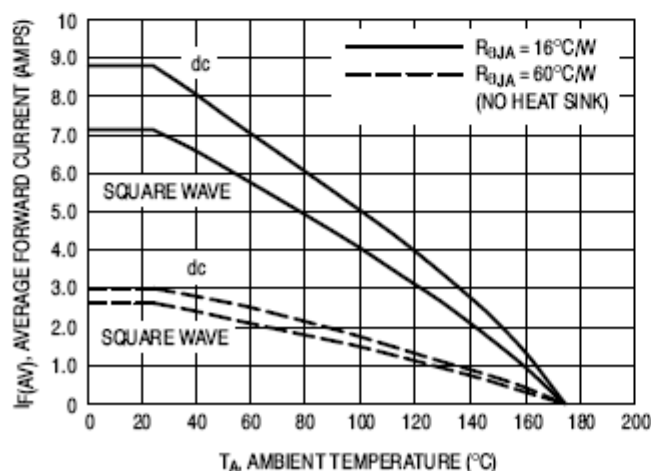


Figure 14. Current Derating, Ambient

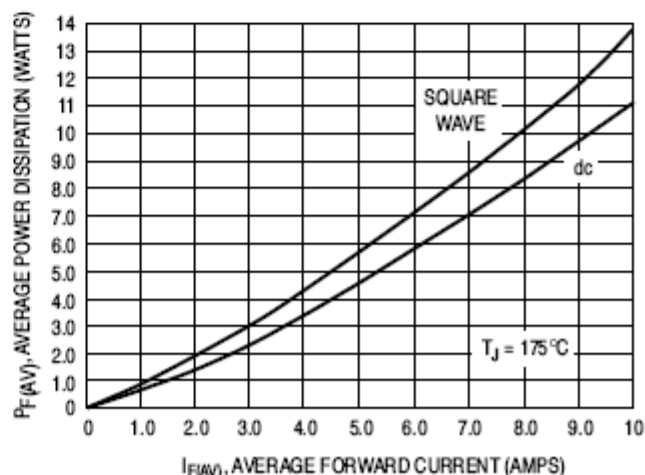


Figure 15. Power Dissipation

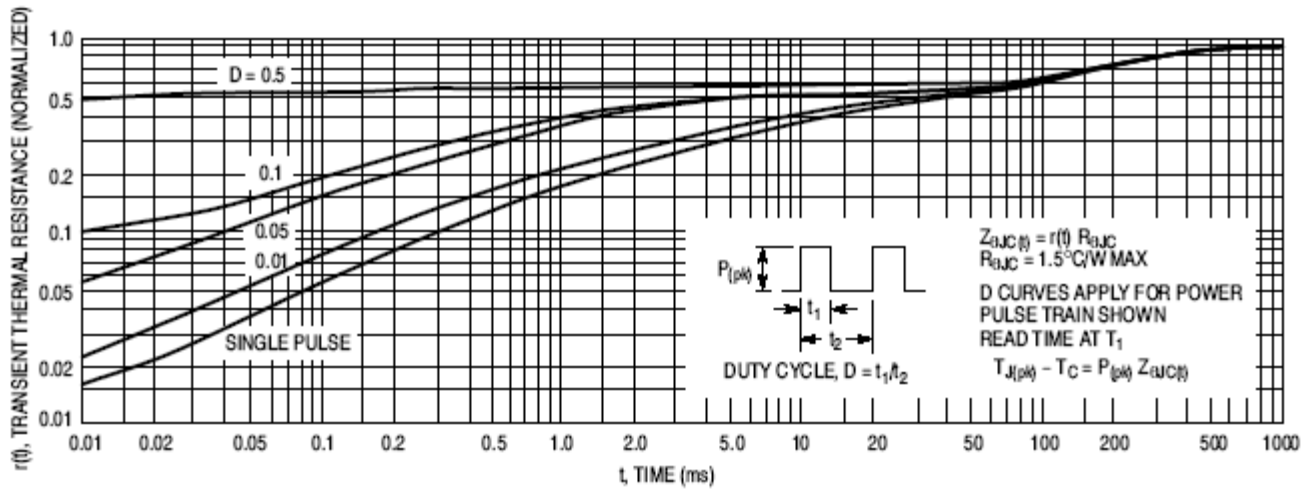


Figure 16. Thermal Response

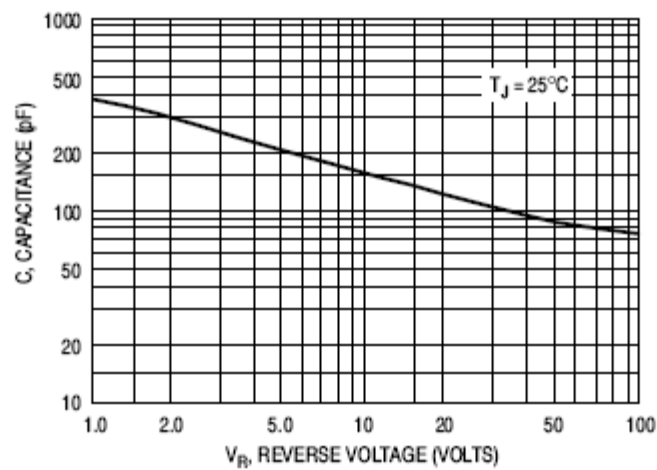
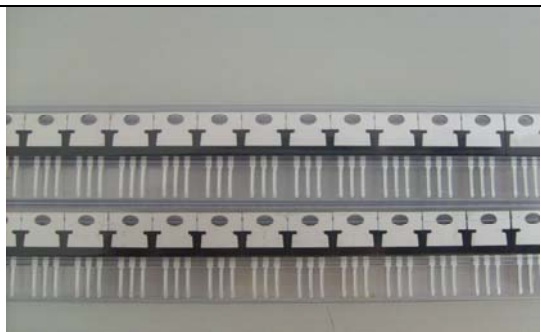
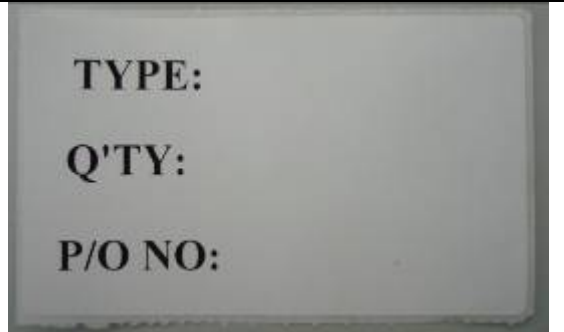


Figure 17. Typical Capacitance

## 6. Packing Specification

|                                                                                    |                                                                                    |
|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
|   |  |
| 1 ) Tube : 50units                                                                 | 2 ) Inner Box: 20 tube(1000units)                                                  |
|  |                                                                                    |
| 3 ) Outer Box: 10 inner box (10,000units)                                          |                                                                                    |

## 7. DESCRIPTION of BOX LABEL

|                                                                                     |                                                                                      |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
|  |  |
| 1 ) Inner Box Label                                                                 | 2 ) Inner Box Label                                                                  |
|  |  |
| 3 ) Outer Box Label                                                                 | 4 ) Outer Box Label                                                                  |