

# MURJ1660CT

Rev.E Mar.-2016

## / Descriptions

TO-220S

Ultrafast Recovery Diode in a TO-220S Plastic Package.

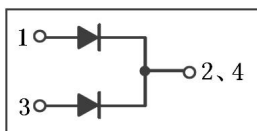
## / Features

Silicon epitaxial process to produce ultrafast recovery diode with low reverse leakage current and high reliability.

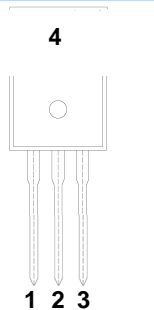
## / Applications

For high frequency, high voltage, high current rectifier diode, freewheeling diode.

## / Equivalent Circuit



## / Pinning



PIN1 Anode

PIN 2 Cathode

PIN 3 Anode

PIN 4 NC

## / h<sub>FE</sub> Classifications & Marking

See Marking Instructions

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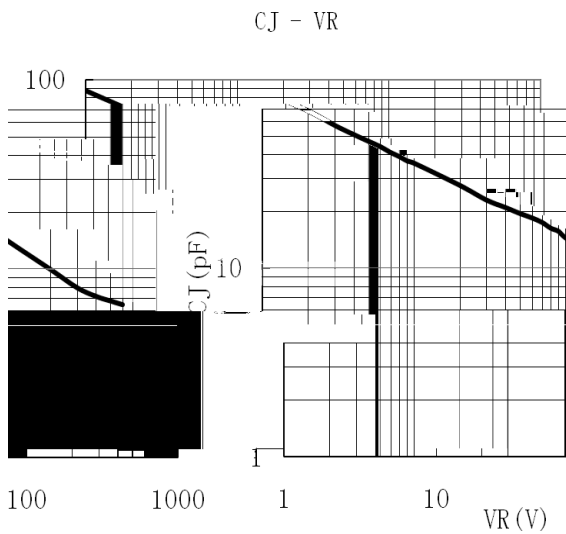
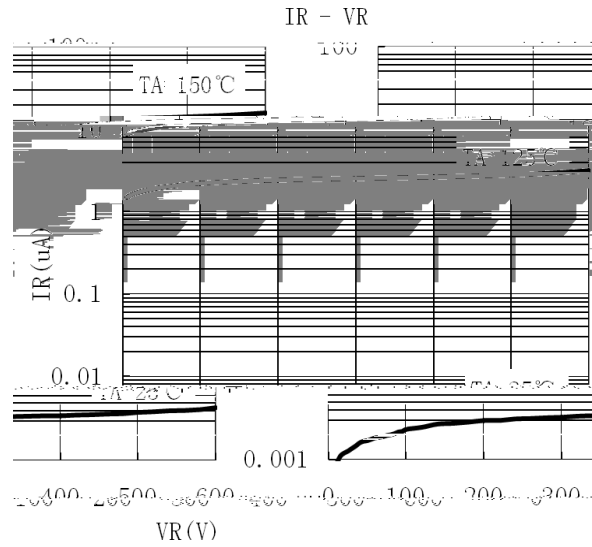
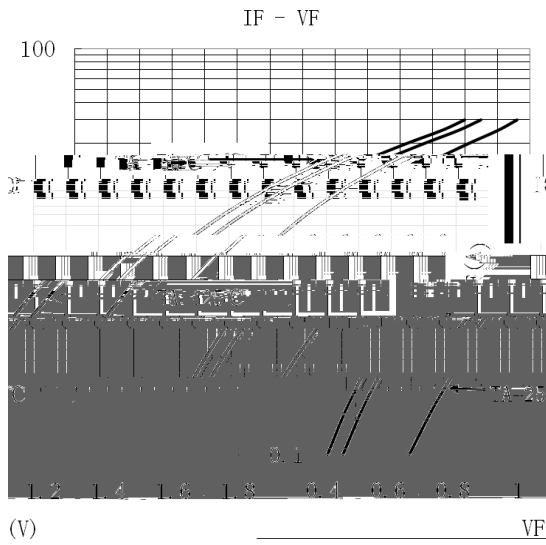
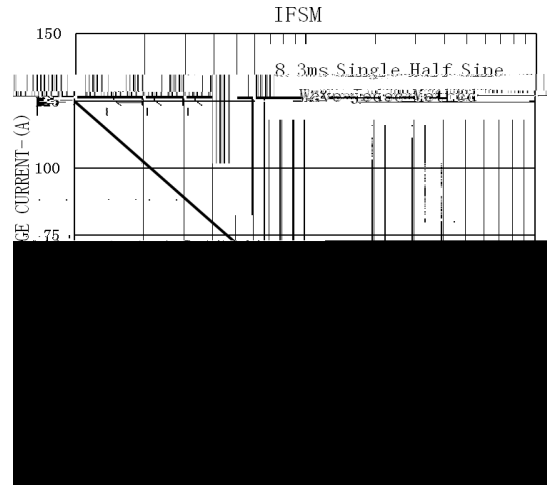
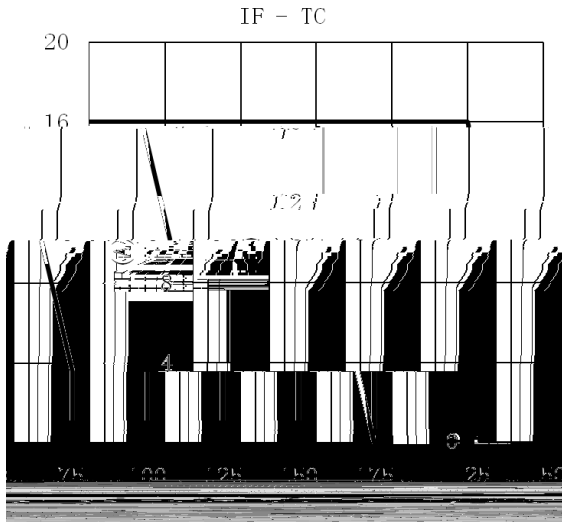
| Parameter                           | Symbol        | Rating  | Unit |
|-------------------------------------|---------------|---------|------|
| Peak Repetitive Reverse Voltage     | $V_{RRM}$     | 600     | V    |
| RMS Voltage                         | $V_{RMS}$     | 420     | V    |
| DC Blocking Voltage                 | $V_{DC}$      | 600     | V    |
| Average Forward Current             | $I_F$         | 2x8     | A    |
| Non Repetitive Peak Surge Current   | $I_{FSM}$     | 125     | A    |
| Thermal Resistance Junction to Case | $R_{Jc}$      | 3.0     | /W   |
| Storage Temperature Range           | $T_j T_{stg}$ | -55 150 |      |

| Parameter                     | Symbol   | Test Conditions                         | Min | Typ  | Max | Unit    |
|-------------------------------|----------|---|-----|------|-----|---------|
| Forward Voltage               | $V_F$    | $I_F=8A(T_C=25^\circ C)$                |     |      | 1.8 | V       |
|                               |          | $I_F=8A(T_C=150^\circ C)$               |     | 1.05 | 1.3 | V       |
|                               |          | $I_F=16A(T_C=125^\circ C)$              |     |      | 2.0 | V       |
|                               |          | $I_F=16A(T_C=150^\circ C)$              |     | 1.28 | 1.6 | V       |
| Instantaneous Reverse Current | $I_R$    | $V_R=600V(T_a=25^\circ C)$              |     |      | 5   | $\mu A$ |
|                               |          | $V_R=600V(T_a=150^\circ C)$             |     | 16   | 100 | $\mu A$ |
| Reverse Recovery Time         | $t_{rr}$ | $I_F=0.5A$ $I_R=1.0A$<br>$I_{RR}=0.25A$ |     |      | 50  | ns      |

/Notes

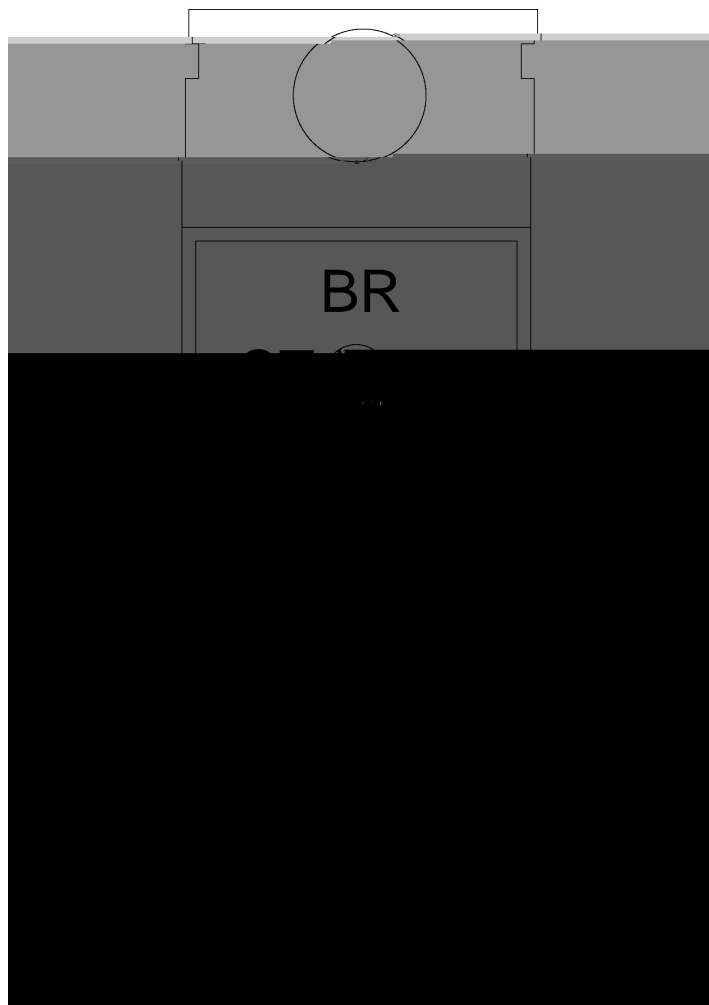
1.

/ Electrical Characteristic Curve





/ Marking Instructions



BR

MURJ1660

CT:

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Note:

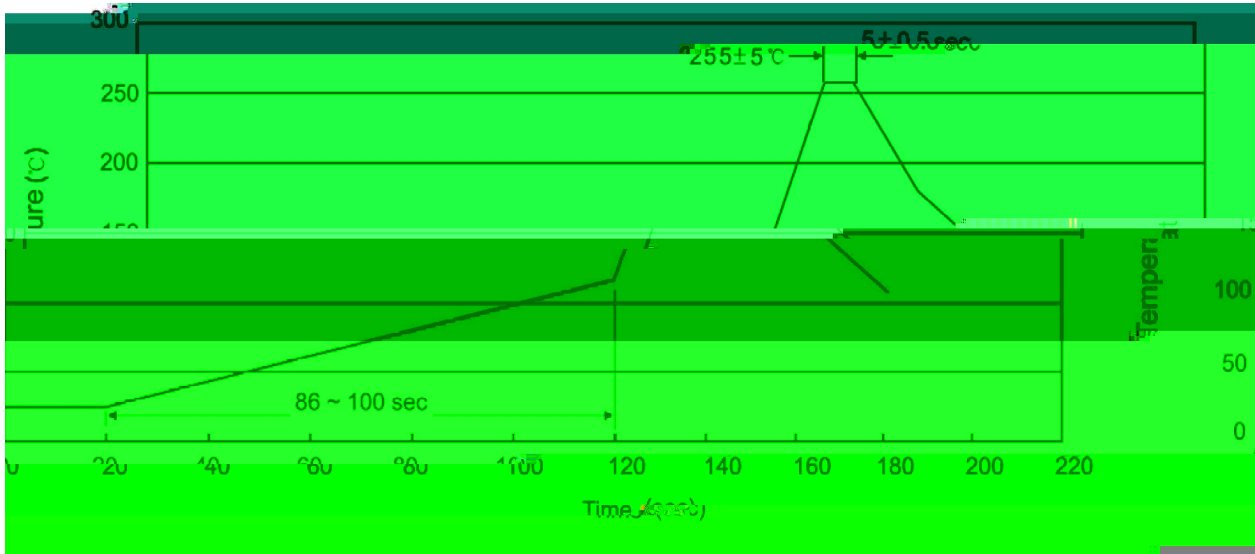
BR:                   Company Code

MURJ1660           Product Type.

CT:                   Internal Structure

\*\*\*\*:                 Lot No. Code, code change with Lot No.

( ) / Temperature Profile for Dip Soldering(Pb-Free)



Note:

- |   |       |     |           |        |  |
|---|-------|-----|-----------|--------|--|
| 1 | 25    | 150 | 60        | 90sec; | 1.Preheating:25~150 , Time:60~90sec.     |
| 2 | 255±5 |     | 5±0.5sec; |        | 2.Peak Temp.:255±5 , Duration:5± 0.5sec. |
| 3 |       | 2   | 10        | /sec.  | 3. Cooling Speed: 2~10 /sec.             |

/ Resistance to Soldering Heat Test Conditions

270±5                      10± 1 sec.                      Temp.:270±5                      Time:10±1 sec

/ Packaging SPEC.

/ TUBE

| Package Type | Units      |                 |                 |                       |                 | Dimension (unit mm <sup>3</sup> ) |            |             |
|--------------|------------|-----------------|-----------------|-----------------------|-----------------|-----------------------------------|------------|-------------|
|              | Units/Tube | Tubes/Inner Box | Units/Inner Box | Inner Boxes/Outer Box | Units/Outer Box | Tube                              | Inner Box  | Outer Box   |
| TO-220S      | 50         | 20              | 1000            | 5                     | 5000            | 532×31.4×5.5                      | 555×164×50 | 575×290×180 |

/ Notices