

Rating and characteristics diode module(tentative)

Type Name : 6Ri125P-160

1. Maximum ratings

| Item | | Symbol | Condition | Ratings | Unit |
|-----------------------|-------------------------------------|-----------|--|-------------|-------------------------|
| Voltage | Repetitive peak reverse voltage | V_{RRM} | | 1600 | V |
| | Non-repetitive peak reverse voltage | V_{RSM} | | 1760 | V |
| Current | Average output current | I_o | 50/60Hz sine wave $T_c=103^{\circ}\text{C}$ | 125 | A |
| | Surge forward current | I_{FSM} | From rated load | 1200 | A |
| | I^2t | I^2t | From rated load | 6000 | A^2s |
| Temp. | Operation junction temperature | T_j | | -40 to +150 | $^{\circ}\text{C}$ |
| | Storage junction temperature | T_{stg} | | -40 to +125 | $^{\circ}\text{C}$ |
| Isolation voltage | | Viso | AC : 1min. | 3000 | V |
| Mounting screw torque | | | M5 screw | 2.0 ~ 2.5 | $\text{N}\cdot\text{m}$ |

2. Electrical characteristics

| Item | Symbol | Condition | min. | typ. | max. | Unit |
|-----------------|-----------|---|------|------|------|------|
| Forward voltage | V_{FM} | $T_j=25^{\circ}\text{C}$, $I_{FM}=125\text{A}$ | | | 1.35 | V |
| Reverse current | I_{RRM} | $T_j=150^{\circ}\text{C}$, $V_R=V_{RRM}$ | | | 10.0 | mA |

3. Thermal characteristics

| Item | Symbol | Condition | min. | typ. | max. | Unit | |
|---------------------------------------|---------------|-----------------------|----------------|------|------|-----------------------------|-----------------------------|
| Thermal resistance (junction to case) | $R_{th(j-c)}$ | 50/60Hz sine wave | Per total loss | | | 0.13 | $^{\circ}\text{C}/\text{W}$ |
| | | | Per 1 device | | | 0.73 | |
| Thermal resistance (case to fin) | $R_{th(c-f)}$ | with thermal compound | | | 0.08 | $^{\circ}\text{C}/\text{W}$ | |

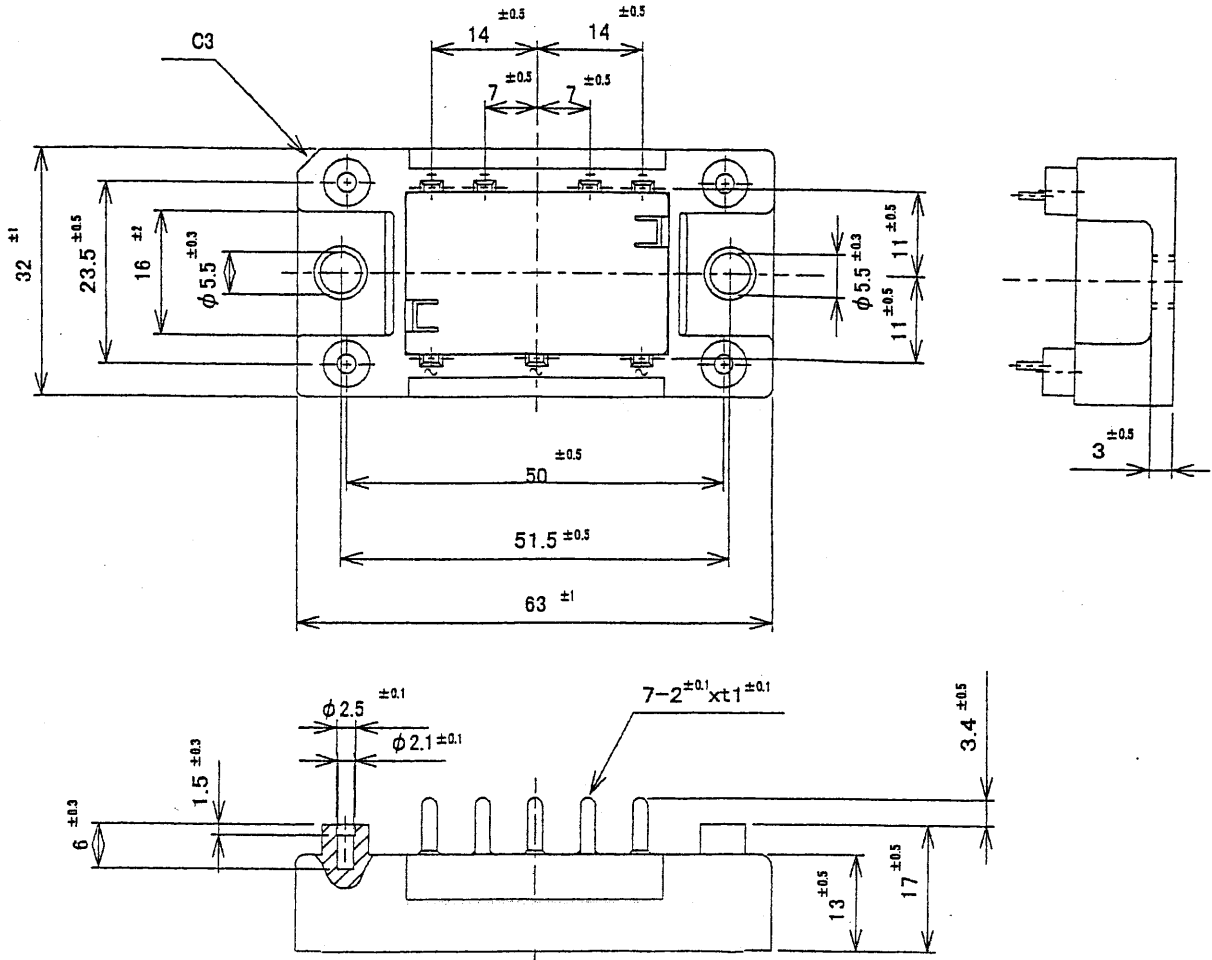
4. Outline drawing and equivalent circuit is shown in page 2/4.

5. Electrical characteristics curves are shown in page 3/4 and 4/4.

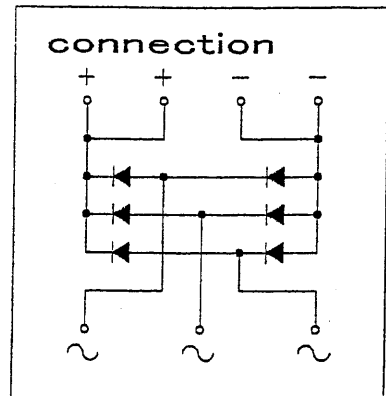
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| CHECKED | July -29-'03 | S. MATSUDA | | | | |
| REVISIONS | | | T. Miyasaka | | | |

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dimensin in mm



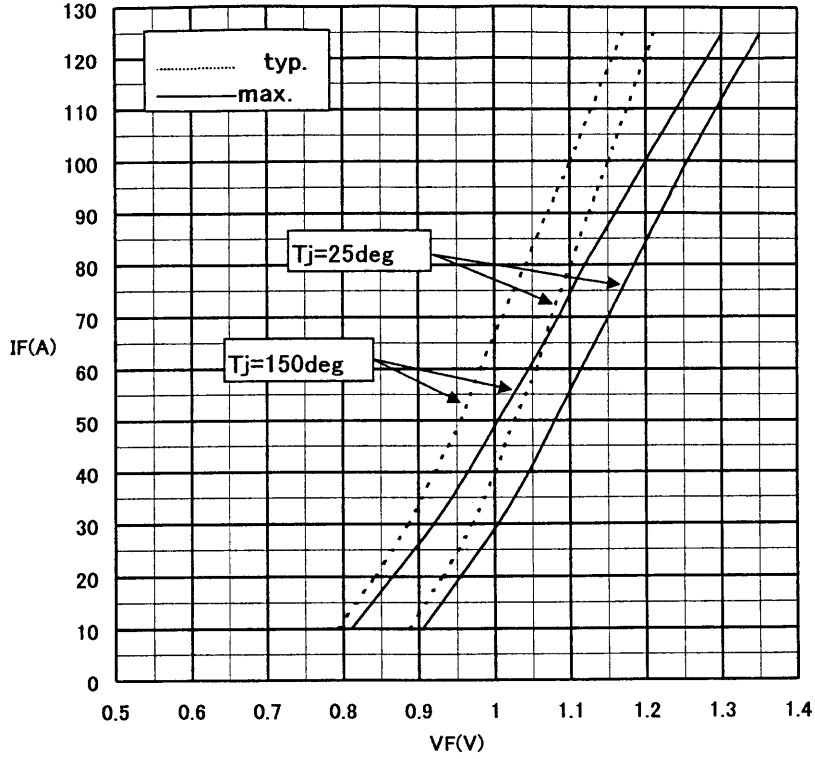
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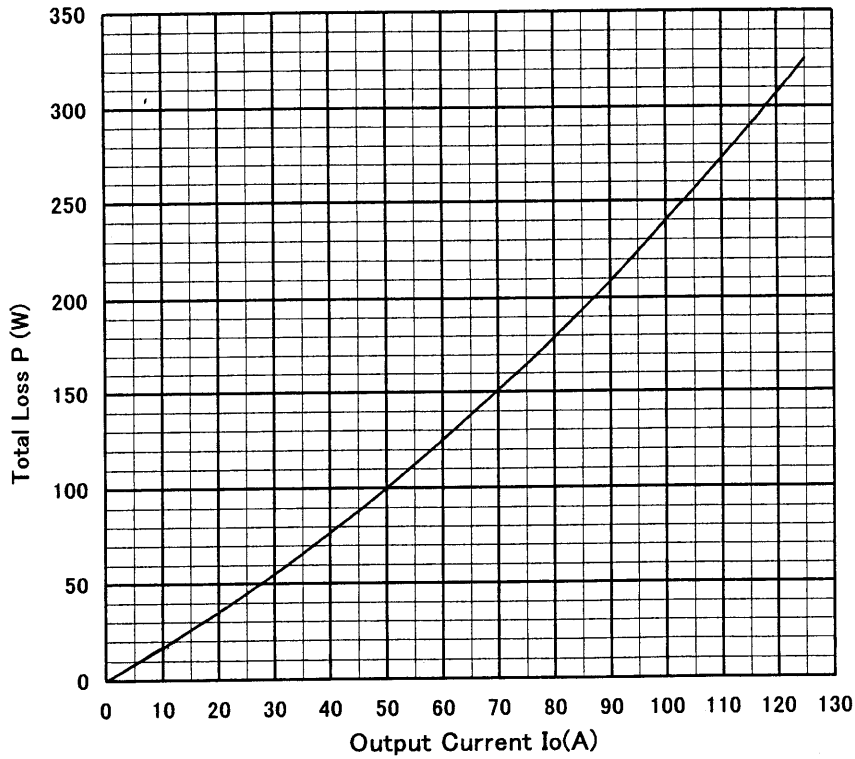
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Forward characteristics



Output Current vs Total Loss



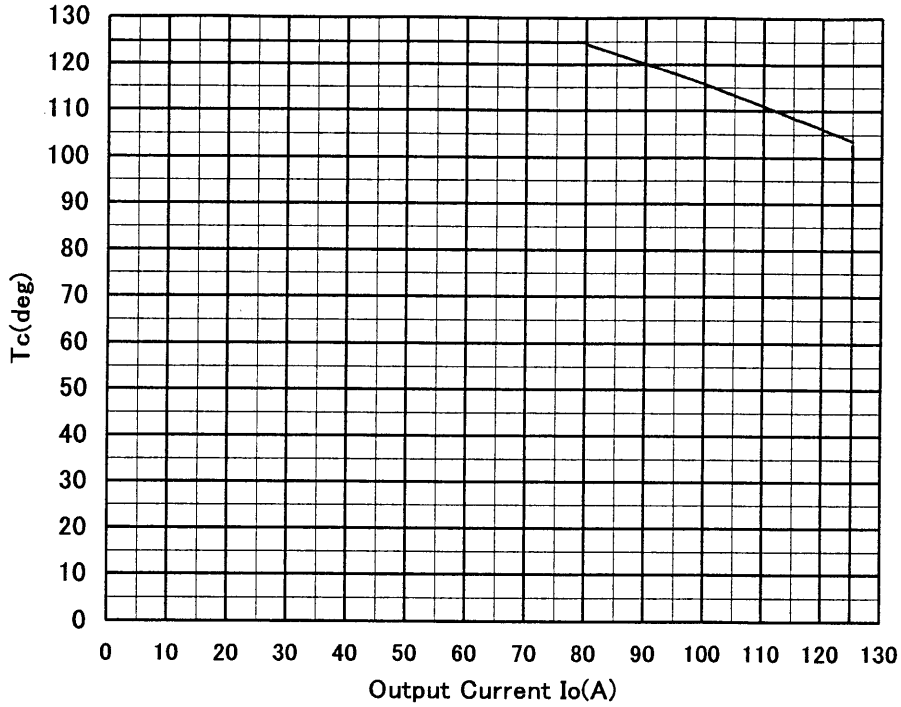
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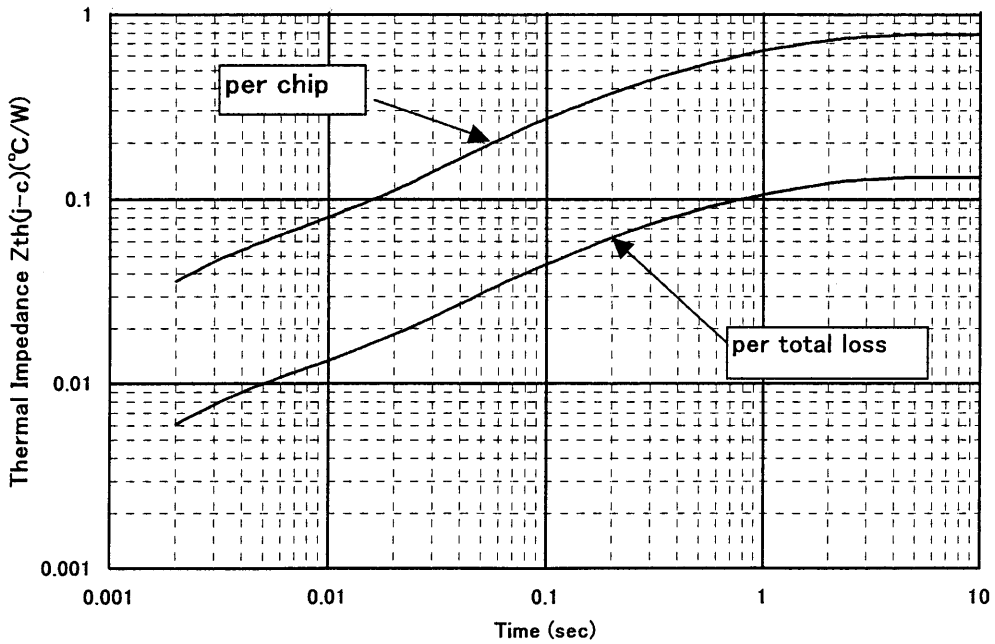
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Output Current vs. Tc



Transient Thermal Impedance (Junction to Case)



| | | | | | | | |
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