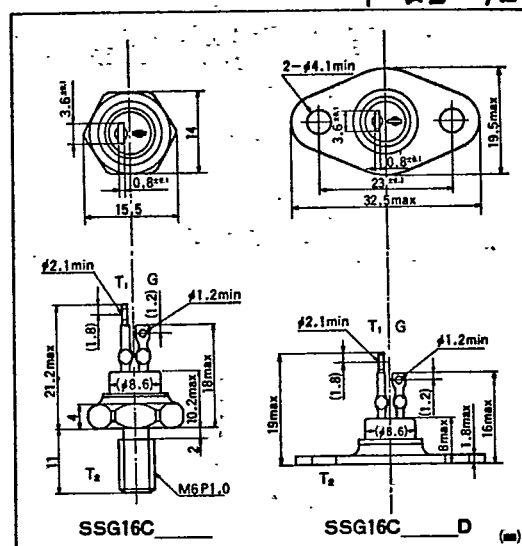
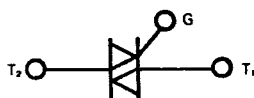


## TRIAC

## SSG16C

For general A.C. power control applications such as A.C. switches, light controls, speed controls and heater controls etc.

- General A.C. power use
- $I_{T(RMS)}=16A$
- High voltage up to 1200V
- High surge current of 160A
- Package types: stud and diamond



### ■ Maximum Ratings

| Item                              | Symbol           | Unit | SSG16C<br>20(D) | SSG16C<br>30(D) | SSG16C<br>40(D) | SSG16C<br>50(D) | SSG16C<br>60(D) | SSG16C<br>80(D) | SSG16C<br>100(D) | SSG16C<br>120(D) |
|-----------------------------------|------------------|------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|------------------|------------------|
| Repetitive Peak Off-State Voltage | V <sub>DSM</sub> | V    | 200             | 300             | 400             | 500             | 600             | 800             | 1000             | 1200             |

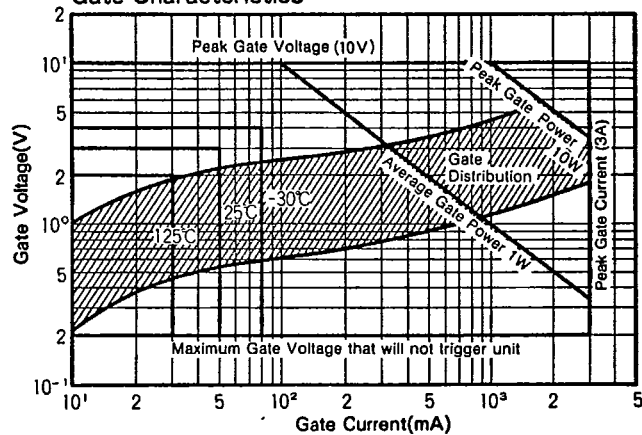
| Item                                      | Symbol       | Unit                       | Rating                            | Reference                                                                                            |
|-------------------------------------------|--------------|----------------------------|-----------------------------------|------------------------------------------------------------------------------------------------------|
| RMS On-State Current                      | $I_{T(RMS)}$ | A                          | 16                                | $T_c=96^{\circ}\text{C}$                                                                             |
| Surge On-State Current                    | $I_{TSM}$    | A                          | 140/160                           | One cycle 50/60Hz, peak, non-repetitive                                                              |
| $I^2t$ (for fusing)                       | $I^2t$       | $\text{A}^2\text{S}$       | 106                               | 1 cycle                                                                                              |
| Peak Gate Power Dissipation               | $P_{GM}$     | W                          | 10                                |                                                                                                      |
| Average Gate Power Dissipation            | $P_{G(AV)}$  | W                          | 1                                 |                                                                                                      |
| Peak Gate Current                         | $I_{GM}$     | A                          | 3                                 |                                                                                                      |
| Peak Gate Voltage                         | $V_{GM}$     | V                          | 10                                |                                                                                                      |
| Critical Rate of Rise of On-State Current | $di/dt$      | $\text{A}/\mu\text{s}$     | 50                                | $I_c=100\text{mA}$ $T_j=25^{\circ}\text{C}$ $V_D=\frac{1}{2}V_{DRM}$ $di_c/dt=1\text{A}/\mu\text{s}$ |
| Operating Junction Temperature            | $T_j$        | $^{\circ}\text{C}$         | $-30\sim+125$                     |                                                                                                      |
| Storage Temperature                       | $T_{stg}$    | $^{\circ}\text{C}$         | $-30\sim+125$                     |                                                                                                      |
| Mounting Torque                           |              | $\text{kgf}\cdot\text{cm}$ | 15                                | Recommended $12\text{kgf}\cdot\text{cm}$                                                             |
| Mass                                      |              | g                          | $\frac{11.0}{(D\text{ type})8.3}$ | Excluding nut & washer. 2.6g. and wrapping material 0.1g                                             |

## ■ Electrical Characteristics

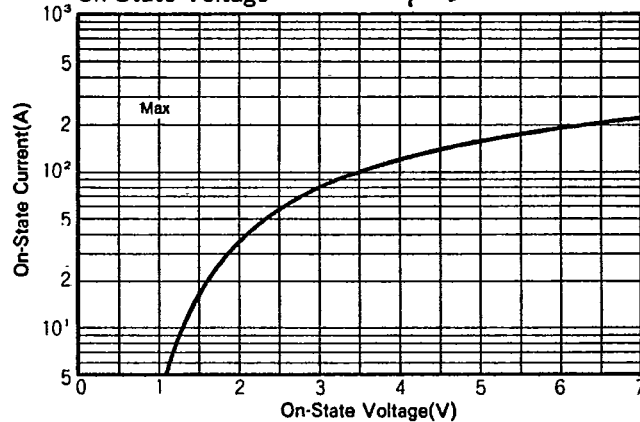
| Electrical Characteristics                                      |   | Symbol               | Unit         | Rating | Reference                                                                        |
|-----------------------------------------------------------------|---|----------------------|--------------|--------|----------------------------------------------------------------------------------|
| Repetitive Peak Off-State Current, max.                         |   | $I_{DRM}$            | mA           | 3      | at $V_{DRM}$ , Single phase, half wave                                           |
| Peak On-State Voltage, max.                                     |   | $V_{TM}$             | V            | 1.7    | $I_T=25A$ $T_J=25^\circ C$ Inst. measurement                                     |
| Gate Trigger Current, max.                                      | 1 | $I_{GT1}^+$          | mA           | 50     | $T_J=25^\circ C$ $I_T=1A$ $V_D=6V$                                               |
|                                                                 | 2 | $I_{GT1}^-$          | mA           | 50     | $T_J=25^\circ C$ $I_T=1A$ $V_D=6V$                                               |
|                                                                 | 3 | $I_{GT3}^+$          | mA           | —      |                                                                                  |
|                                                                 | 4 | $I_{GT3}^-$          | mA           | 50     | $T_J=25^\circ C$ $I_T=1A$ $V_D=6V$                                               |
| Gate Trigger Voltage, max.                                      | 1 | $V_{GT1}^+$          | V            | 3      | $T_J=25^\circ C$ $I_T=1A$ $V_D=6V$                                               |
|                                                                 | 2 | $V_{GT1}^-$          | V            | 3      | $T_J=25^\circ C$ $I_T=1A$ $V_D=6V$                                               |
|                                                                 | 3 | $V_{GT3}^+$          | V            | —      |                                                                                  |
|                                                                 | 4 | $V_{GT3}^-$          | V            | 3      | $T_J=25^\circ C$ $I_T=1A$ $V_D=6V$                                               |
| Non-Trigger Gate Voltage, min.                                  |   | $V_{GD}$             | V            | 0.2    | $T_J=125^\circ C$ $V_D=\frac{1}{2}V_{DRM}$                                       |
| Turn On Time, max.                                              |   | tgt                  | $\mu s$      | 10     | $I_T=16A$ $I_C=100mA$ $V_D=\frac{1}{2}V_{DRM}$ $T_J=25^\circ C$ $di/dt=1A/\mu s$ |
| Critical Rate of Rise of Off-State Voltage, min.                |   | dv/dt                | V/ $\mu s$   | 50     | $T_J=125^\circ C$ , $V_D=\frac{2}{3}V_{DRM}$ Exponential wave.                   |
| Critical Rate of Rise of Off-State Voltage at Commutation, min. |   | (dv/dt) <sub>c</sub> | V/ $\mu s$   | 6      | $T_J=125^\circ C$ , (di/dt) <sub>c</sub> = 8 A/ms, $V_D=\frac{2}{3}V_{DRM}$      |
| Holding Current, typ.                                           |   | $I_H$                | mA           | 30     | $T_J=25^\circ C$                                                                 |
| Thermal Impedance, max.                                         |   | R <sub>th</sub>      | $^\circ C/W$ | 1.2    | Junction to case                                                                 |

T-25-15

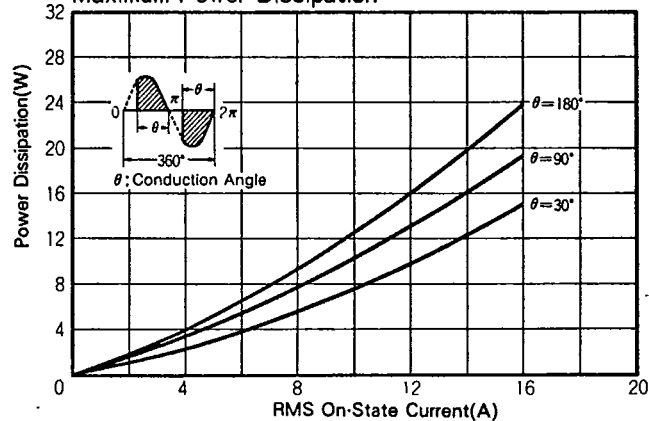
Gate Characteristics



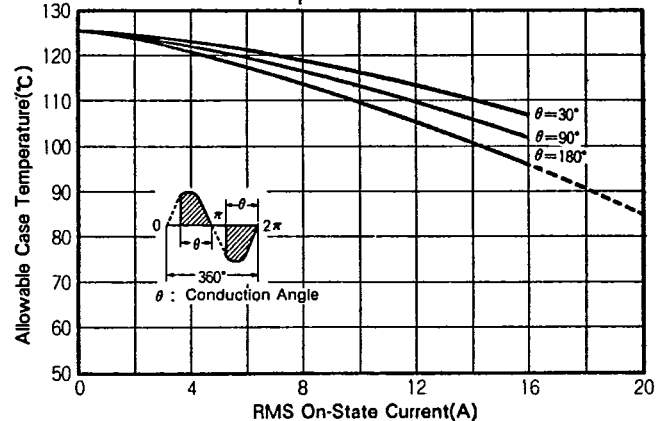
On-State Voltage



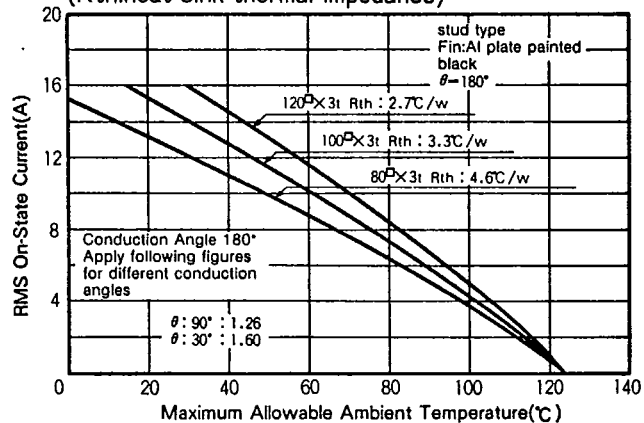
RMS On-State Current vs. Maximum Power Dissipation



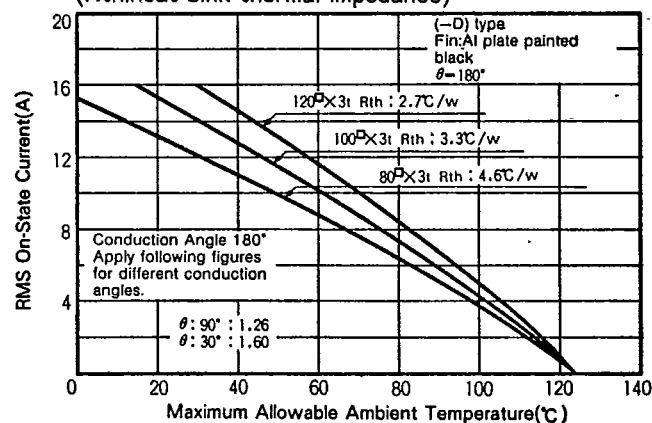
RMS On-State Current vs. Allowable Case Temperature



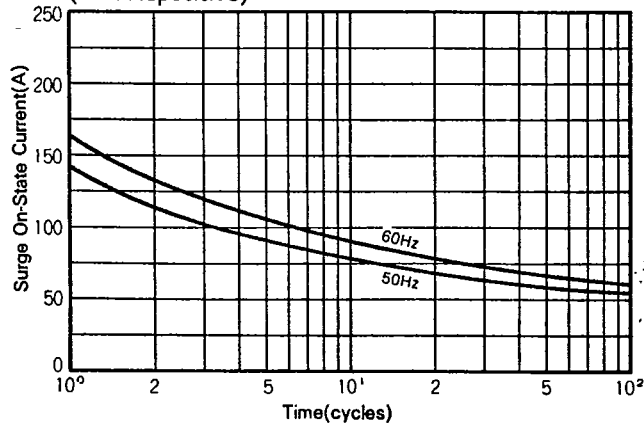
Ambient Temp. vs. RMS On-State Current (Rth: heat sink thermal impedance)



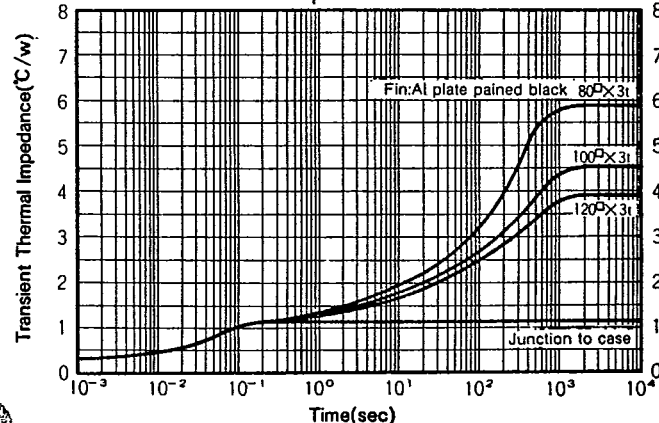
Ambient Temp. vs. RMS On-State Current (Rth: heat sink thermal impedance)



Surge On-State Current Rating (Non-Repetitive)



Transient Thermal Impedance



# DIMENSIONS

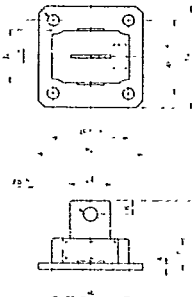
IT IS FOR YOUR REFERENCE.  
PLEASE SEE INDIVIDUAL CATALOG OR SPECIFICATIONS FOR FURTHER DETAILS.



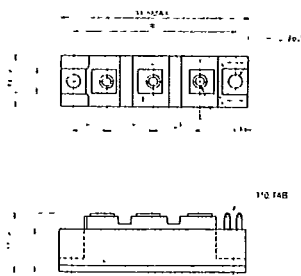
**SanRex®****DIMENSIONS****DIMENSIONS**

(m/m)

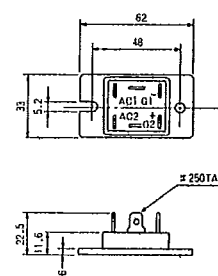
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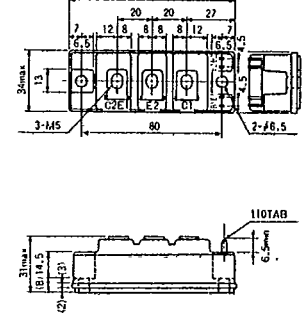
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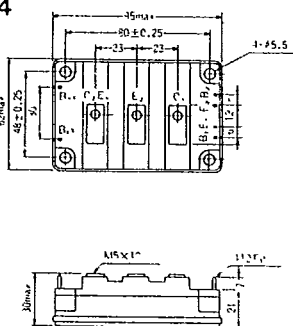
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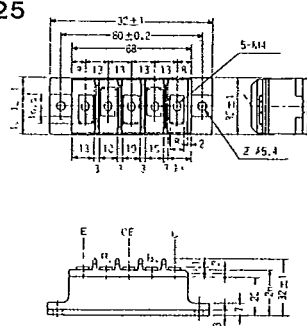
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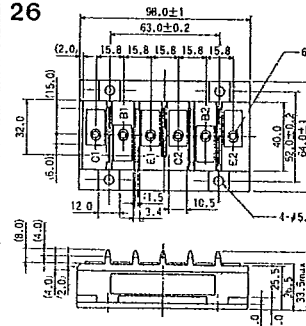
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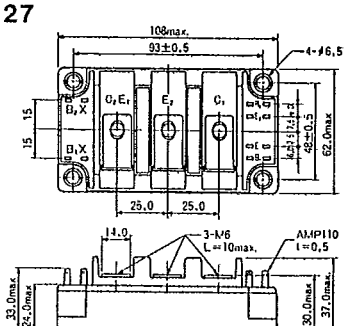
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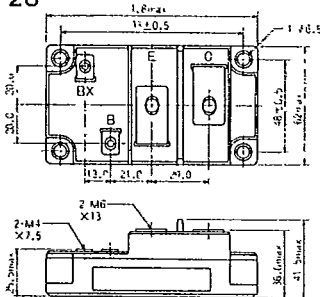
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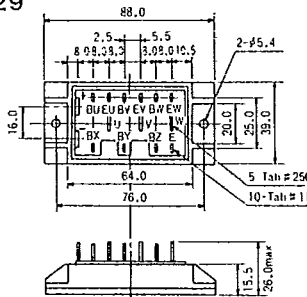
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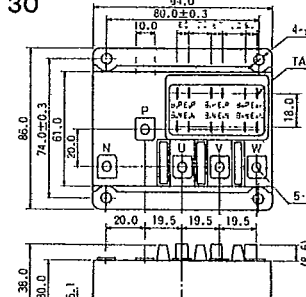
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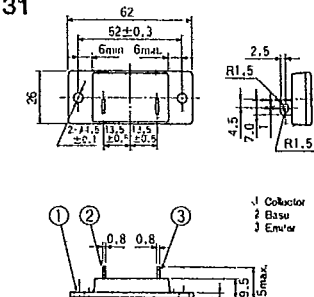
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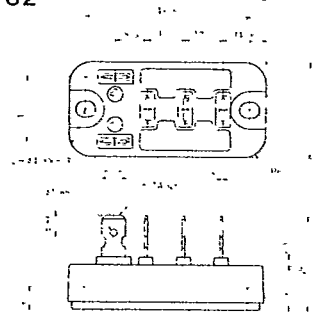
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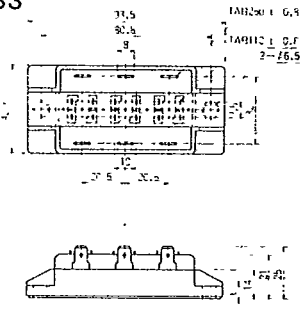
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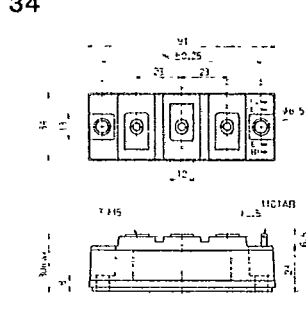
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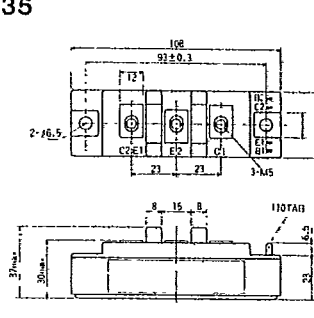
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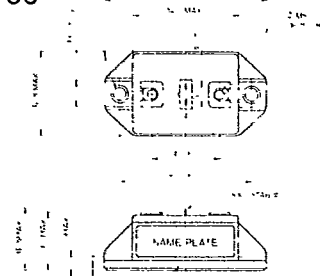
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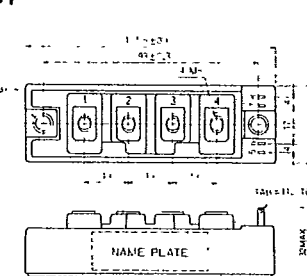
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