

STR 80000 Series

T-58-29

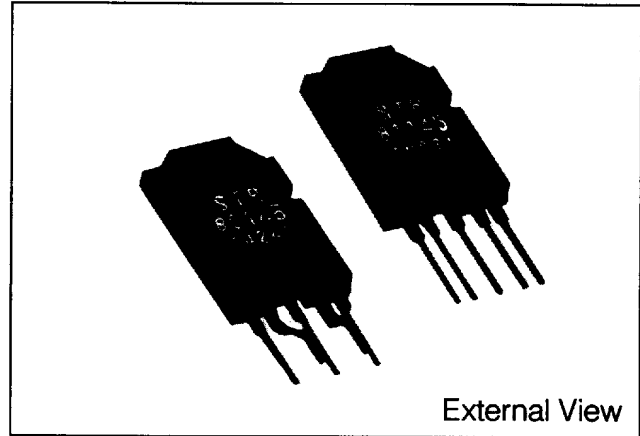
Hybrid Auto-Switch Module—Doubler

Features

- For automatic switch-over from voltage-doubler to bridge rectification and from bridge rectification to voltage doubler
- With a planar triac incorporated
- Fixed switch-over voltage
- Plastic package (transfer mold)

Applications

- PC and other OA equipment
- Test equipment
- TV monitors
- Telecommunication equipment



Absolute Maximum Ratings (Ta = 25°C)

| Description | Symbol | Unit | Conditions | Ratings | |
|-----------------------------------|---------------------|------|--|-----------------------------|-------------------------|
| | | | | STR80145A | STR81145A, STR81159A |
| Peak Repetitive Off-state Voltage | V _{DRM} | V | T _j = -10 ~ +125 °C | 500 | |
| Static On-state Current | I _{T(RMS)} | A | T _j = 125°C Conduction Angle = 360° | 5.0 | 10.0 |
| Surge On-state Current | I _{TMS} | A | T _j = 125°C 50Hz, Full Sine Wave Peak Value, Non-repetitive | 50 | 100 |
| Operating Temperature* | T _{op} | °C | | -10 ~ +100(T _c) | |
| Storage Temperature | T _{stg} | °C | | -30 ~ +125 | |
| Junction Temperature | T _j | °C | | +125 | |

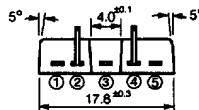
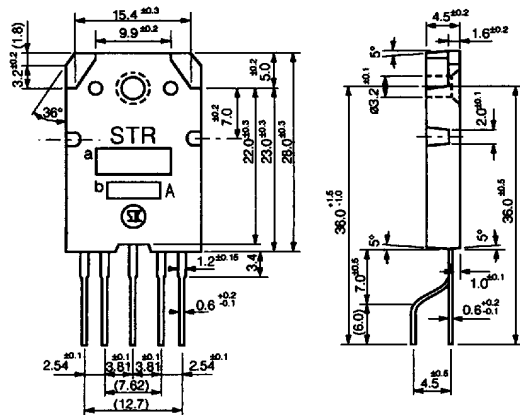
*Temperature of Frame

Electrical Characteristics (Ta = 25°C)

| Description | Symbol | Unit | Conditions | Ratings | |
|--|------------------|-------|---|-------------------------|-----------|
| | | | | STR80145A, STR81145A | STR81159A |
| Starting Voltage of Voltage-Doubler | V _s | V(AC) | Test Circuit 2 | 80 Max | |
| Fixed Switchover Voltage | 1 | VC1 | Test Circuit 1 | 196 ± 5 | 215 ± 5 |
| | 2 | VC2 | Test Circuit 2 | 145 | 159 |
| Temperature Coefficient of Switch-over Voltage | K _t | mV/°C | Test Circuit 1 T _c = -20 ~ +100 °C | -30 Typ | |
| Off-state Current | I _{DRM} | μA | V _D = V _{DRM} , R _{GK} = ∞ | 100 Max | |
| On-state Voltage | V _{TM} | V | I _{TM} = 5A | 1.8 Max | |
| Thermal Resistance | θ _{j-c} | °C/W | Between Junction and Frame | 1.8 | |

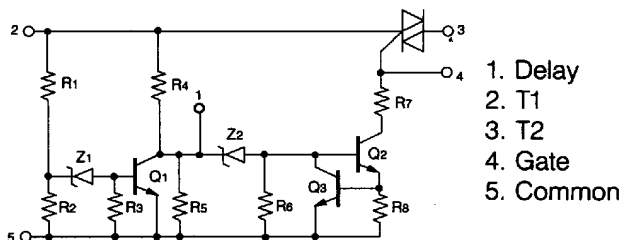
**VC2 is just a reference value.

■ Outline Drawings. Dimensions and Pin Connections

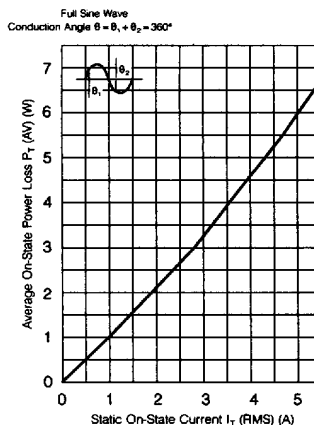


- 1. Delay
- 2. T1
- 3. T2
- 4. Gate
- 5. Common

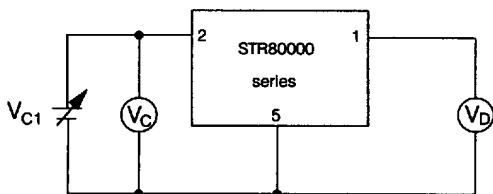
■ Equivalent Circuit



■ PT(AV)-IT(RMS) Characteristics



■ Fixed Output Voltage Test Circuit (Test Circuit 1)



Fixed switch over voltage 1 is defined as voltage which gets V_D being 3V.

■ Application Circuit Example

