

## isc Thyristors

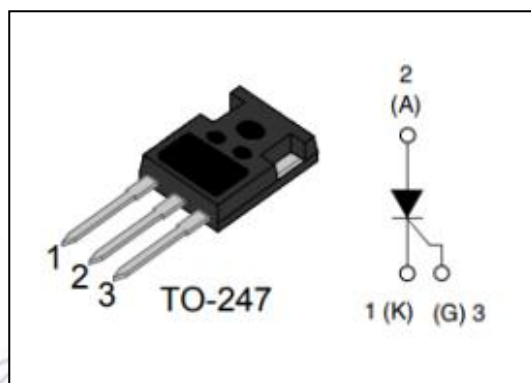
## 40TPS08A

### DESCRIPTION

- Long-term stability
- Thyristor for line frequency
- Planar passivated chip
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

### APPLICATIONS

- Be used with Vishay HPP input diodes, switches and output rectifiers which are available in identical package outlines.



### ABSOLUTE MAXIMUM RATINGS( $T_a=25^{\circ}\text{C}$ )

| SYMBOL              | PARAMETER   | MIN     | UNIT               |
|---------------------|---|---------|--------------------|
| $V_{\text{DRM}}$    | Repetitive peak off-state voltage                         | 1200    | V                  |
| $V_{\text{RRM}}$    | Repetitive peak reverse voltage                           | 1200    | V                  |
| $I_{\text{T(AV)}}$  | Average forward current @ $T_c=79^{\circ}\text{C}$        | 35      | A                  |
| $I_{\text{T(RMS)}}$ | RMS on-state current                                      | 55      | A                  |
| $I_{\text{TSM}}$    | Surge non-repetitive on-state current @ $t_p=10\text{ms}$ | 500     | A                  |
| $P_{\text{G(AV)}}$  | Average gate power dissipation                            | 1       | W                  |
| $T_j$               | Operating junction temperature                            | -40~125 | $^{\circ}\text{C}$ |
| $T_{\text{stg}}$    | Storage temperature                                       | -40~150 | $^{\circ}\text{C}$ |

### ELECTRICAL CHARACTERISTICS ( $T_c=25^{\circ}\text{C}$ unless otherwise specified)

| SYMBOL               | PARAMETER                         | CONDITIONS   |                           | MIN | MAX  | UNIT                 |
|----------------------|-----------------------------------|--|---------------------------|-----|------|----------------------|
| $I_{\text{RRM}}$     | Repetitive peak reverse current   | $V_{\text{RM}}=V_{\text{RRM}}$<br>$V_{\text{DM}}=V_{\text{DRM}}$ | $T_j=25^{\circ}\text{C}$  |     | 0.5  | mA                   |
| $I_{\text{DRM}}$     | Repetitive peak off-state current |  | $T_j=125^{\circ}\text{C}$ |     | 10   |                      |
| $V_{\text{TM}}$      | On-state voltage                  | $I_{\text{TM}}=110\text{A}$                                      |                           |     | 1.85 | V                    |
| $I_{\text{GT}}$      | Gate-trigger current              | $V_{\text{D}}=12\text{V}$ $R_{\text{L}}=33\Omega$                |                           |     | 150  | mA                   |
| $V_{\text{GT}}$      | Gate-trigger voltage              | $V_{\text{D}}=12\text{V}$ $R_{\text{L}}=33\Omega$                |                           |     | 2.5  | V                    |
| $R_{\text{th(j-c)}}$ | Thermal resistance                | Junction to case   |                           |     | 0.6  | $^{\circ}\text{C/W}$ |

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