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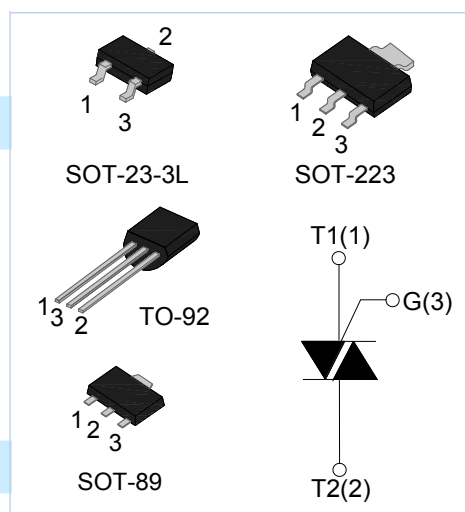
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EK 97A6/A8

www.ekwin.net


Standard SCR
97A6 Serial
Main Features:

| IT(RMS) | VDRM/VRRM | VTM |
|---------|-------------|-------|
| 0.8A | 600and700 V | ≤1.5V |

Description:


97A6/8 SCR family are high performance glass passivated PNP devices. These parts are suitable for general purpose applications where gate high sensitivity is required. Application on 4Q such as phase control and statics witching.

Absolute Ratings(limiting values) :

| Symbol | Parameter | Value | Unit | |
|----------------------------|--|--------------------------------|------------|------|
| IT(RMS) | RMS on-state current (360°conduction angle) | TO-92 (TC=50°C) | 0.8 | A |
| | | SOT-23-3L/ SOT-223/ (TC=75°C) | | |
| | | SOT-89-2L(TC=60°C) | | |
| ITSM | Non repetitive surge peak on-state current (Tj initial = 25°C) | tp= 16.7 ms | 10 | A |
| | | tp = 20 ms | 9 | |
| VDRM VRRM | Repetitive peak off-state voltage Tj = 125°C | 97A6 97A8 | 600 700 | V |
| Tstg Tj | Storage and operating junction temperature range | - 40 to + 150 - 40 to + 125 | °C °C | |
| Ti | Maximum lead temperature for soldering during 10 s at 4.5 mm from case | 260 | °C | |
| I²t | I²t value tp = 10 ms | 0.32 | A²s | |
| di/dt | Critical rate of rise of on-state current Gate supply : IG= 50mA diG/dt = 0.1A/µs | Repetitive F = 50 Hz | 10 | A/µs |
| | | Non Repetitive | 50 | |

Electrical Characteristics :

| Symbol | Test Condition | Quadrant | MIN | Type | MAX | Unit |
|--|--|-------------|-----|------|-----|------|
| I_{GT} | V _D =12V (DC) I _{GT} =0.1A | I-II-III | - | - | 5 | mA |
| | | IV | - | - | 10 | mA |
| V_{GT} | | I-II-III-IV | - | 0.7 | 1.3 | V |
| t_{gt} | I _{TM} =1.0A, V _D =V _{DRM} (max) , I _G =25mA, dI _G /dt=5A/μs | I-II-III | - | 2 | 2 | μs |
| I_L | V _D =12V (DC) I _{GT} =0.1A | I-II-III | - | - | 10 | mA |
| | | IV | - | - | 25 | |
| I_H | I _T = 100mA gate open | | - | 7 | 25 | mA |
| V_T | I _{TM} = 0.85A | | - | 1.4 | 1.5 | V |
| I_{DRM} I_{RDM} | V _{DRM} Rated V _{RDM} Rated | | - | - | 100 | uA |
| dVd/dt | Linear slope up to V _D =67%V _{DRM} gate open | | 30 | - | - | V/μs |
| dVcom/dt | V _D =RATED V _{DRM} T _{case} =50 gate open I _{TM} = 0.85A | | 3 | - | - | V/μs |

FIG.1: Maximum power dissipation versus RMS on-state current

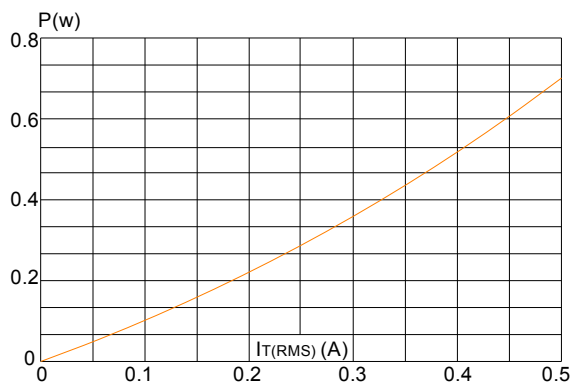


FIG.2: RMS on-state current versus case temperature

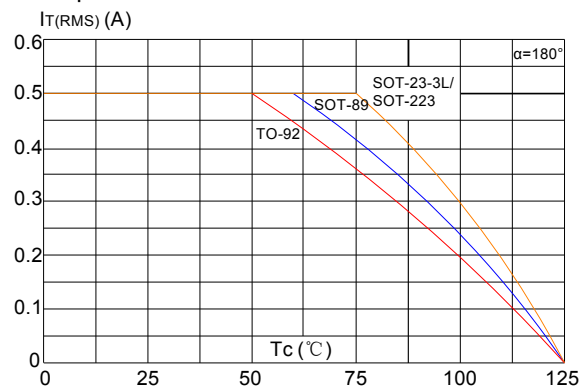


FIG.3: Surge peak on-state current versus number of cycles

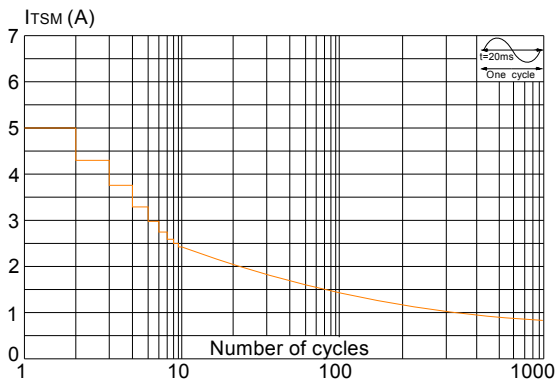


FIG.5: Non-repetitive surge peak on-state current for a sinusoidal pulse with width $t_p < 20\text{ms}$ ($di/dt < 10\text{A}/\mu\text{s}$)

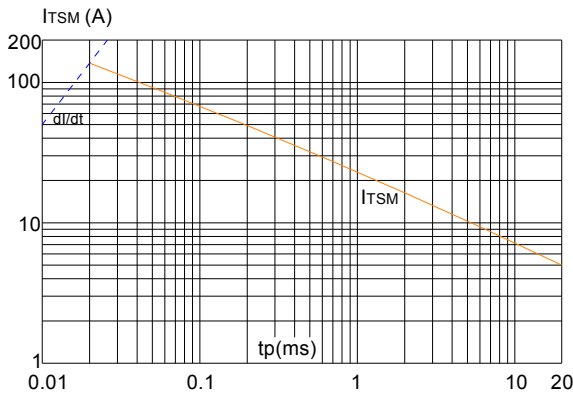


FIG.4: On-state characteristics (maximum values)

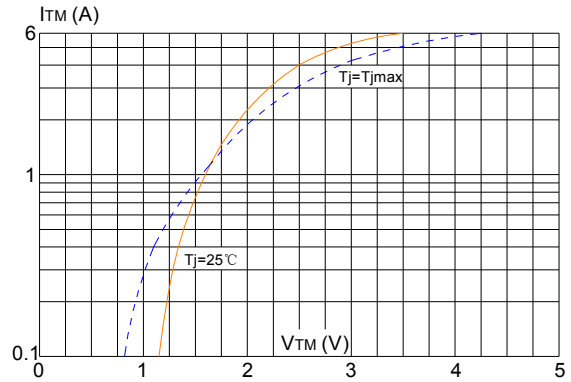
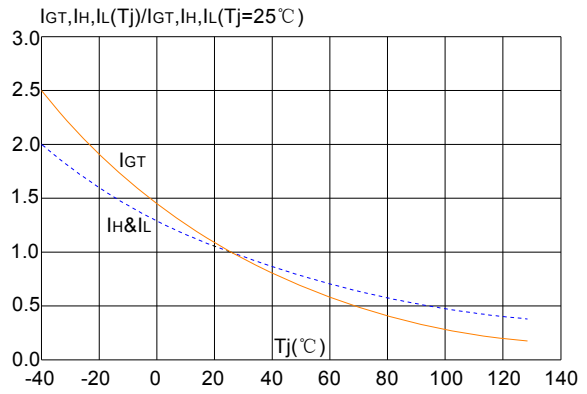
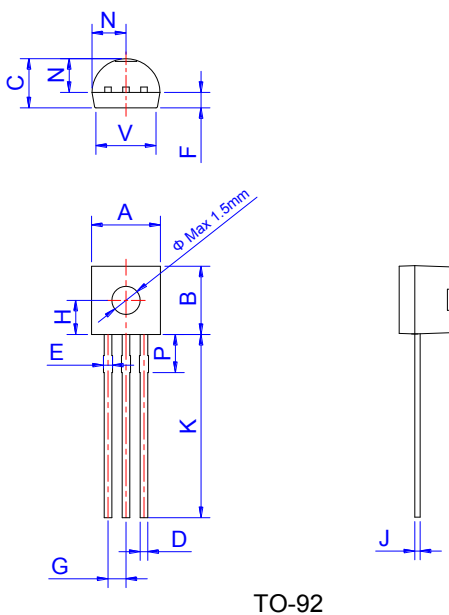


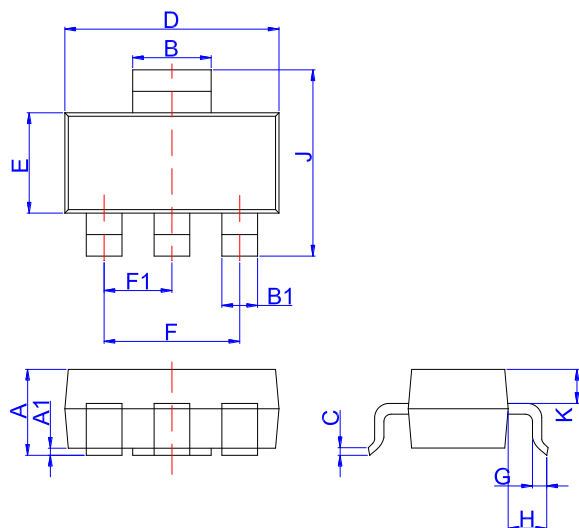
FIG.6: Relative variations of gate trigger current, holding current and latching current versus junction temperature



Package Mechanical Data :

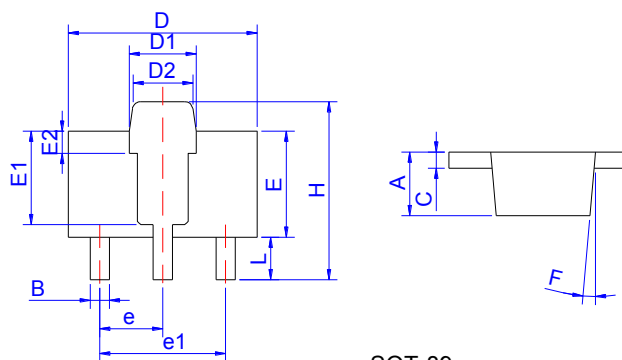
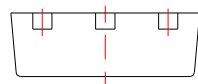


| Ref. | Dimensions | | | | | |
|------|-------------|------|-------|--------|-------|-------|
| | Millimeters | | | Inches | | |
| | Min. | Typ. | Max. | Min. | Typ. | Max. |
| A | 4.45 | | 5.20 | 0.175 | | 0.205 |
| B | 4.32 | | 5.33 | 0.170 | | 0.210 |
| C | 3.18 | | 4.19 | 0.125 | | 0.165 |
| D | 0.407 | | 0.533 | 0.016 | | 0.021 |
| E | 0.60 | | 0.80 | 0.024 | | 0.031 |
| F | - | 1.1 | - | - | 0.043 | - |
| G | - | 1.27 | - | - | 0.050 | - |
| H | - | 2.30 | - | - | 0.091 | - |
| J | 0.36 | | 0.50 | 0.014 | | 0.020 |
| K | 12.70 | | 15.0 | 0.500 | | 0.591 |
| N | 2.04 | | 2.66 | 0.080 | | 0.105 |
| P | 1.86 | | 2.06 | 0.073 | | 0.081 |
| V | - | | 4.3 | - | | 0.169 |



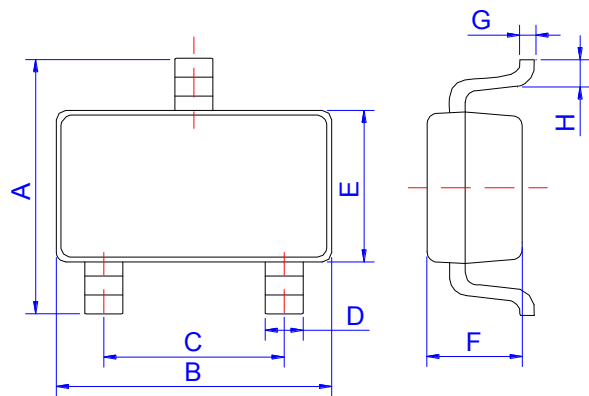
SOT-223

| Ref. | Dimensions | | | | | |
|------|-------------|------|------|--------|-------|-------|
| | Millimeters | | | Inches | | |
| | Min. | Typ. | Max. | Min. | Typ. | Max. |
| A | 1.5 | 1.6 | 1.8 | 0.059 | 0.063 | 0.071 |
| A1 | 0 | 0.06 | 0.10 | 0 | 0.002 | 0.004 |
| B | 2.9 | 3.0 | 3.1 | 0.114 | 0.118 | 0.122 |
| B1 | 0.6 | 0.7 | 0.8 | 0.024 | 0.028 | 0.031 |
| C | 0.22 | 0.26 | 0.32 | 0.009 | 0.010 | 0.013 |
| D | 6.3 | 6.5 | 6.7 | 0.248 | 0.256 | 0.264 |
| E | 3.3 | 3.5 | 3.7 | 0.130 | 0.138 | 0.146 |
| F | | 4.6 | | | 0.181 | |
| F1 | | 2.3 | | | 0.091 | |
| G | 0.7 | 0.9 | 1.1 | 0.028 | 0.035 | 0.043 |
| H | 1.5 | 1.75 | 2.0 | 0.059 | 0.069 | 0.079 |
| J | 6.7 | 7.0 | 7.3 | 0.264 | 0.276 | 0.287 |
| K | 0.8 | 0.9 | 1.0 | 0.031 | 0.035 | 0.039 |



SOT-89

| Ref. | Dimensions | | | | | |
|------|-------------|------|------|--------|--------|-------|
| | Millimeters | | | Inches | | |
| | Min. | Typ. | Max. | Min. | Typ. | Max. |
| A | 1.40 | | 1.60 | 0.055 | | 0.063 |
| B | 0.40 | | 0.52 | 0.016 | | 0.020 |
| C | 0.35 | | 0.41 | 0.014 | | 0.016 |
| D | 4.40 | | 4.60 | 0.173 | | 0.181 |
| D1 | 1.50 | | 1.70 | 0.059 | | 0.067 |
| D2 | 1.30 | | 1.50 | 0.051 | | 0.059 |
| E | 2.40 | | 2.60 | 0.094 | | 0.102 |
| E1 | | 2.20 | | | 0.087 | |
| E2 | | 0.52 | | | 0.020 | |
| e | | 1.50 | | | 0.059 | |
| e1 | | 3.00 | | | 0.118 | |
| F | | 5° | | | 0.197° | |
| H | 4.05 | | 4.25 | 0.159 | | 0.167 |
| L | 0.89 | | 1.20 | 0.035 | | 0.047 |



SOT-23-3L

| Ref. | Dimensions | | | | | |
|------|-------------|------|------|--------|-------|-------|
| | Millimeters | | | Inches | | |
| | Min. | Typ. | Max. | Min. | Typ. | Max. |
| A | 2.65 | | 2.95 | 0.104 | | 0.116 |
| B | | 2.92 | | | 0.115 | |
| C | | 1.90 | | | 0.075 | |
| D | 0.34 | | 0.36 | 0.013 | | 0.014 |
| E | | 1.60 | | | 0.063 | |
| F | | 1.17 | | | 0.046 | |
| G | | 0.15 | | | 0.006 | |
| H | 0.25 | | 0.55 | 0.010 | | 0.022 |

Ordering Information:

