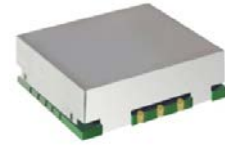


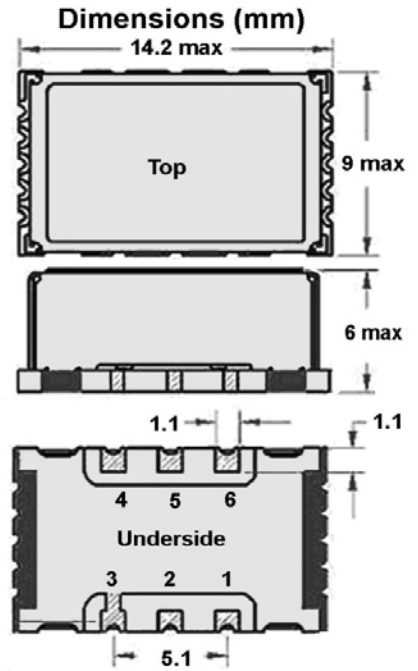
**ACT SMPT-6 Stratum III HCMOS TCXO**



- Stability:  $\pm 0.14, \pm 0.28$ ppm
- Accuracy:  $\pm 0.5$ ppm
- Operating Current: 2 ~ 4 mA max

**Characteristics**

|                                                 |                                                            |              |      |
|-------------------------------------------------|------------------------------------------------------------|--------------|------|
| Frequency Range (MHz)                           | 10 ~ 40                                                    |              |      |
| Supply voltage $\pm 5\%$ Vcc (V <sub>DC</sub> ) | 3.3                                                        |              |      |
| Operating temperature Top (°C)                  | Table 1                                                    |              |      |
| Operating Current (mA max)                      | 2 ~ 4                                                      |              |      |
| Stability v T op (ppm)                          | Table 1                                                    |              |      |
| Stability v Vcc (ppm)                           | $\pm 0.1$ max (5%)                                         |              |      |
| Stability v Load (ppm)                          | $\pm 0.1$ max (10%)                                        |              |      |
| Stability v Vibration (ppm)                     | $\pm 1.0$ max (Sine 10~50Hz, 0.75mm, 1.5hr XY&Z)           |              |      |
| Stability v Shock (ppm)                         | $\pm 1.0$ max (100g <sup>1/2</sup> sine x3 x6 directions)  |              |      |
| Aging @25°C (ppm)                               | $\pm 0.5$ /yr, $\pm 2.5$ /10 yr                            |              |      |
| Tolerance @ 25°C (ppm)                          | $\pm 0.5$ at shipment                                      |              |      |
| Load $\pm 10\%$                                 | HCMOS 15pF                                                 |              |      |
| Output voltage (V)                              | V <sub>OL</sub> : 10%Vcc max, V <sub>OH</sub> : 90%Vcc min |              |      |
| Duty Cycle (%)                                  | 45/55                                                      |              |      |
| Phase Noise (dBc/Hz)                            | <b>12.8MHz</b>                                             | <b>20MHz</b> |      |
| Typical plots: Page 2                           | <b>10Hz</b>                                                | -90          | -80  |
|                                                 | <b>100Hz</b>                                               | -115         | -110 |
|                                                 | <b>1kHz</b>                                                | -135         | -130 |
|                                                 | <b>10kHz</b>                                               | -150         | -150 |
|                                                 | <b>100kHz</b>                                              | -150         | -150 |



|       |                        |       |                 |
|-------|------------------------|-------|-----------------|
| Pad 1 | Function NC            | Pad 4 | Function Output |
| Pad 2 | Function Output Enable | Pad 5 | Function NC     |
| Pad 3 | Function Ground        | Pad 6 | Function Vcc    |

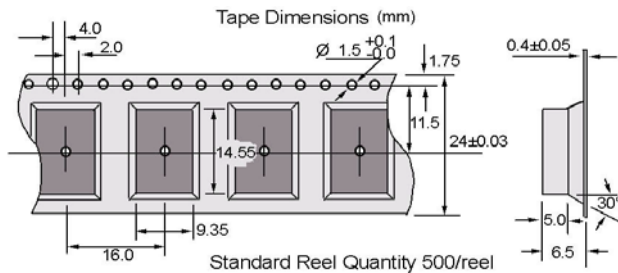
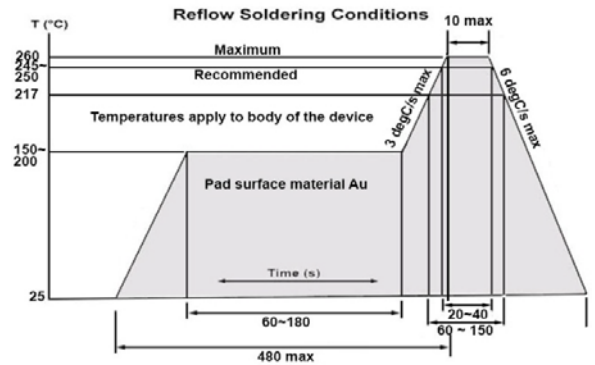
**Rating**

|         |                                              |
|---------|----------------------------------------------|
| Storage | -55~+125°C, 10~90%RH, 70~100kPa Air pressure |
|---------|----------------------------------------------|

**Notes:**

- ESD sensitive, take appropriate precautions.
- Stratum III
- Enquire if the frequency required has been developed.

| Temp'     | $\pm 0.14$ | $\pm 0.28$ |
|-----------|------------|------------|
| -10 +60°C | ✓          | ✓          |
| -20 +70°C | ✓          | ✓          |
| -40 +85°C |            | ✓          |



Please note that all parameters can not necessarily be specified in the same device.  
 To specify: Please refer to part numbering system appended to the end of this data  
**ISO9001 Registered**

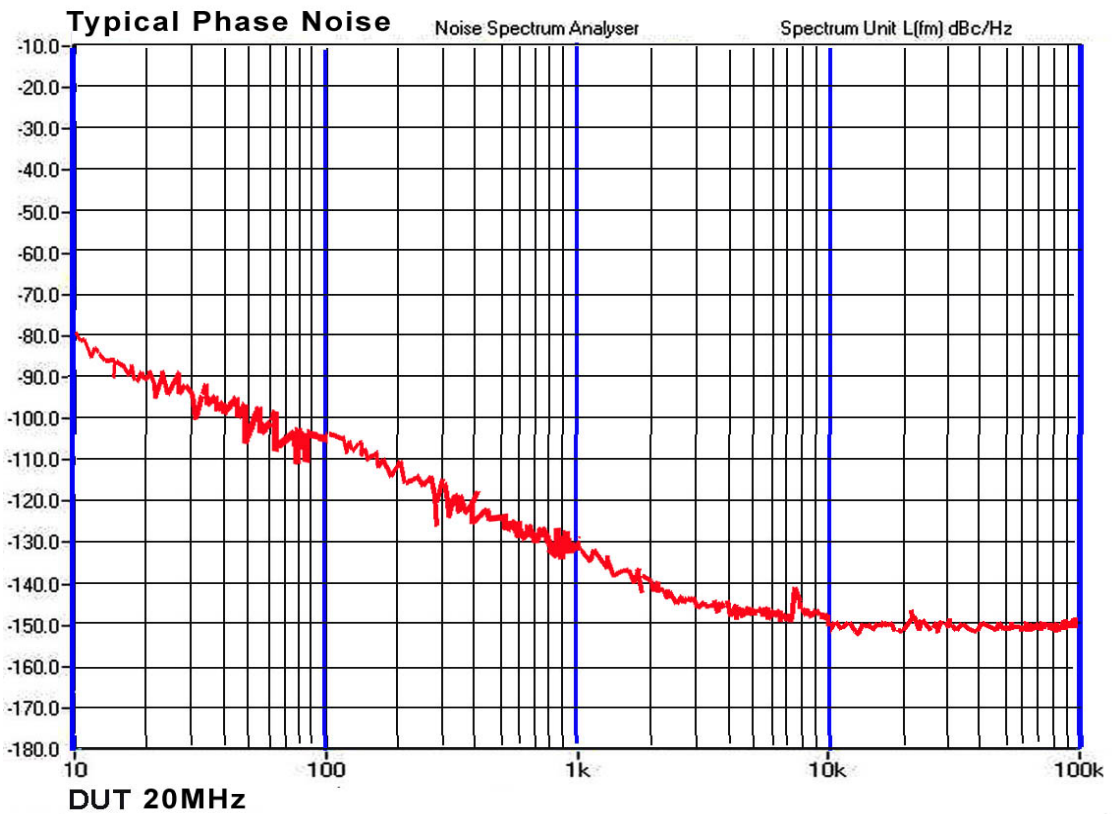
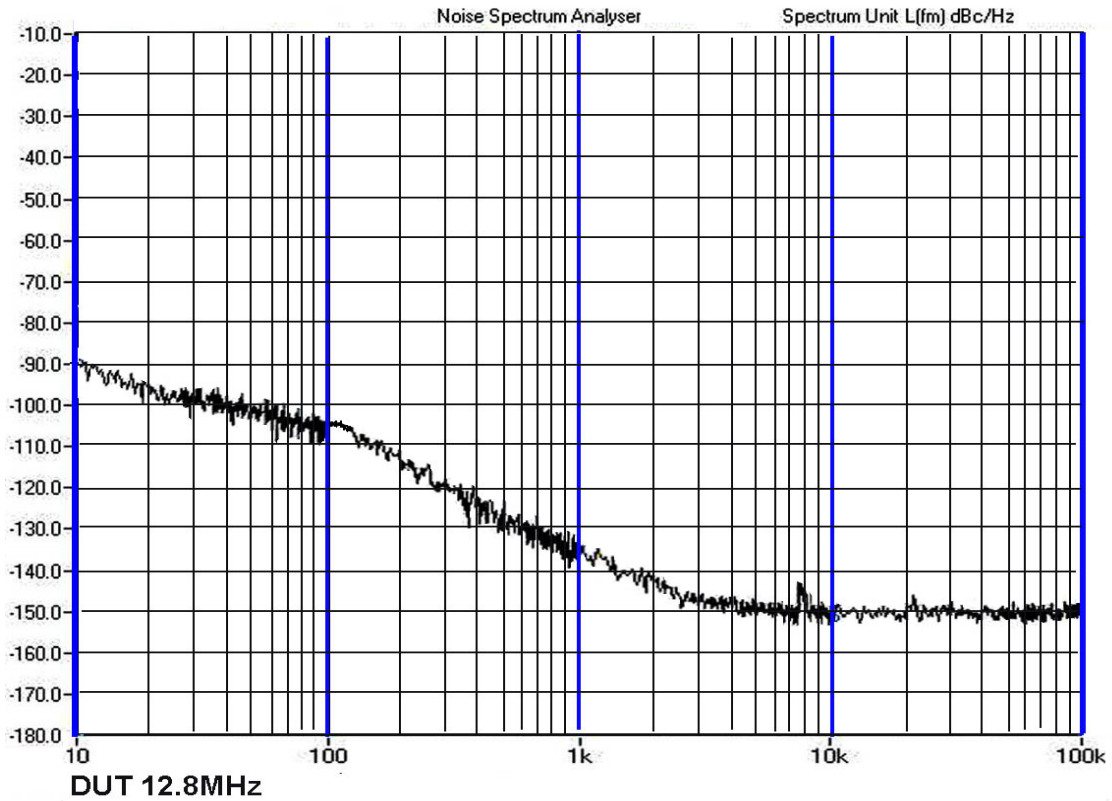
For quotations or further information please contact us at:  
 3 The Business Centre, Molly Millars Lane, Wokingham, Berkshire, RG41 2EY  
 Issue No. 4 T3 Date:

SMPT-6



Tel: 0044(0)118 979 1238  
Fax: 0044(0)118 979 1283  
email: [info@act-crystals.com](mailto:info@act-crystals.com)

ACT SMPT-6 Stratum III HCMOS TCXO



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Issue No. 4 T3 Date:

08/10/2013

**ACT SMPT-6 Stratum III HCMOS TCXO**

**TCXO PART NUMBERING**

|        |          |           |                     |            |      |       |      |     |  |         |     |      |
|--------|----------|-----------|---------------------|------------|------|-------|------|-----|--|---------|-----|------|
| T90    | 2700     | X         | B                   | F          | N    | E     | X    | X   |  | H       | B   | -PF  |
| SMPT-6 | 27.00MHz | ±0.14 ppm | 3.3 V <sub>DC</sub> | -10 +60 °C | None | HCMOS | None | Pos |  | 45/55 % | 500 | RoHS |

|        |     |
|--------|-----|
| SMPT-6 | T90 |
|--------|-----|

| Stability<br>V T <sub>OP</sub><br>±ppm |   |
|----------------------------------------|---|
| 0.1                                    | X |
| 0.3                                    | W |
|                                        |   |
|                                        |   |
|                                        |   |
|                                        |   |
|                                        |   |
|                                        |   |
|                                        |   |
|                                        |   |

| T <sub>OP</sub> °C |   |
|--------------------|---|
| -10 +60            | F |
| -20 +70            | B |
| -40 +85            | I |
|                    |   |
|                    |   |
|                    |   |
|                    |   |
|                    |   |
|                    |   |

| Polarity |   |
|----------|---|
| None     | X |
|          |   |
|          |   |
|          |   |

Commodity Code  
854370 90 80

  Standard

| V <sub>CC</sub> | V <sub>DC</sub> |
|-----------------|-----------------|
| 3.3             | B               |
|                 |                 |
|                 |                 |
|                 |                 |
|                 |                 |
|                 |                 |
|                 |                 |
|                 |                 |
|                 |                 |

| Frequency tuning |   |
|------------------|---|
| None             | N |
|                  |   |
|                  |   |
|                  |   |

| Duty Cycle<br>% / % |   |
|---------------------|---|
| 45/55               | H |
|                     |   |
|                     |   |

| Output |   |
|--------|---|
| HCMOS  | E |
|        |   |
|        |   |
|        |   |
|        |   |
|        |   |

| Tape & Reel |   |
|-------------|---|
| 500         | B |
| Loose       | L |
|             |   |
|             |   |

| Mechanical Tuning ±ppm |   |
|------------------------|---|
| None                   | X |
|                        |   |
|                        |   |
|                        |   |

**Frequency:**  
 Please enquire if the frequency/stability combination has been developed.  
 For part numbering use the first 4 characters of the frequency in Hz i.e. 27MHz = 27000000Hz so the code used in the part number is 2700. If the frequency is 100MHz or higher then the first 5 characters are used.  
 It is important to suffix the part number

**Example**  
 T90 - 2700XBFNEXXHB-PF 27.00MHz

| Table 1   |       |       |
|-----------|-------|-------|
| Temp'     | ±0.14 | ±0.28 |
| -10 +60°C | ✓     | ✓     |
| -20 +70°C | ✓     | ✓     |
| -40 +85°C |       | ✓     |