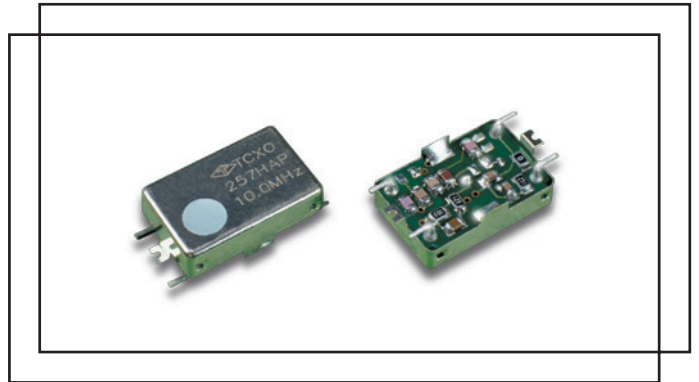


## Type TA smd TCXO (1.20 ~ 30.0)MHz

- # low current
- # metal smd case
- # low ageing



### Electrical specification

<b>Case style</b>	gull wing smd: (21.3 x11.60)mm, height 5.3mm	
<b>Frequency range</b>	<b>clipped sine wave output</b> (9.60 ~ 30.0)MHz  <b>TTL, CMOS output</b> (1.20 ~ 30.0)MHz	
<b>Stability</b>	±(0.5 ~ 5.0)ppm, temperature range dependent	
<b>Supply voltage V<sub>cc</sub></b>	+3.0Vd.c., +5.0Vd.c.	
<b>Supply current max.</b>	<b>clipped sine wave output</b>  (9.60 ~ 20)MHz                      2.0mA (20 ~ 30)MHz                        2.5mA  <b>TTL, CMOS output</b>  (1.20 ~ 20)MHz                      20mA (20 ~ 30)MHz                        25mA	
<b>Phase noise</b>	f <sub>0</sub> +100Hz                            -110dBc/Hz f <sub>0</sub> +1kHz                                -135dBc/Hz f <sub>0</sub> +100kHz                            -145dBc/Hz	
<b>Operating temperature</b>	(-40 +85)°C	
<b>Storage temperature</b>	(-55 +125)°C	
<b>Output</b>	0.8Vp/p, clipped sine wave 10k//10pF, TTL, CMOS	
<b>Symmetry *</b>	(45 ~ 55)%, (40 ~ 60)%	
<b>Trim range</b>	fixed frequency or voltage trim	
<b>Ageing</b>	±1.0ppm first year max.	

\* measured, with an output load of 15pF, between (10 ~ 90)% V<sub>cc</sub>

### Environmental test conditions

<b>Mechanical shock</b>	1500g, half sine wave, 0.5ms, 3 directions	MIL STD 883D 2002.3, condition A
<b>Thermal shock</b>	(-55 ~ +125)°C, 20 cycles	MIL STD 883D 1011.9, condition B
<b>Vibration</b>	(10 ~ 2000)Hz, 1.25mm, sine wave, 20g, each of three planes, duration 4 hours	MIL STD 883D 2005.2, condition B
<b>Solderability</b>	+245°C ±5°C, 5 seconds ±0.5 seconds	MIL STD 883D 2003.7
<b>Fine leak</b>	Mass spectrometer leak rate less than 2 <sup>10-8</sup> atm.cc/sec. helium	MIL STD 883D 1014.9, condition A
<b>Gross leak</b>	Leak test in de-ionised water, vacuum 70cm/Hg	
<b>Humidity</b>	85% relative humidity, +85°C, 500 hours	JIS-C 7022 B-5, condition C

## Type TA smd TCXO

### Ordering information

**Example .... type TA TCXO, 10.00MHz, +3.3Vd.c., ±10ppm trim, ±4ppm(-20 +70)°C, clipped sine wave o/p**

**TFC PART NUMBER .... TA 10.00M E H F E S**

'TA' .... type number: TA = TCXO type TA

'10.00M' .... frequency: 10.00M = 10.00MHz, frequency range from (1.25 ~ 40.0)MHz

'E' .... supply voltage: E = +3.3Vd.c., T = +5Vd.c.

'H' .... trim range, pin #7: H = ±10.0ppm voltage trim, control voltage (+1.65 ±1.5)Vd.c.

'F' .... frequency stability: F = ±4.0ppm

'E' .... temperature range: E = (-20 +70)°C

'S' .... output: S = clipped sine wave output 10kΩ//10pF, symmetry (40 ~ 60)%

**Supply voltage ....** E = +3.3Vd.c., T = +5Vd.c.

**Trim range, pin #7,  $V_t$  (+2.5 ±2.0)Vd.c. ....** A: ±5.0ppm, B: ±8ppm, C: ±10ppm, D: ±12ppm, E: ±15ppm

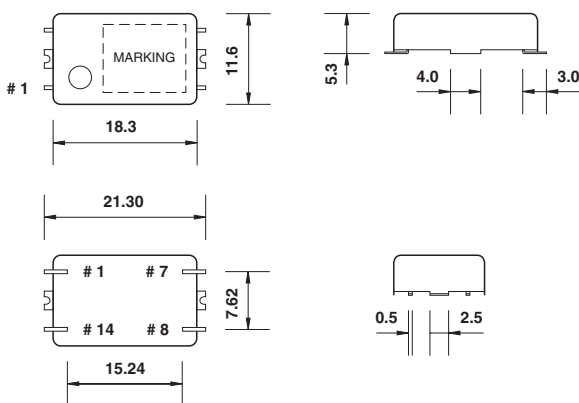
**Trim range, pin #7,  $V_t$  (+1.65 ±1.5)Vd.c. ....** F: ±5.0ppm, G: ±8ppm, H: ±10ppm, I: ±12ppm, J: ±15ppm  
T: fixed frequency TCXO, no voltage trim

**Frequency stability ....** A: ±0.5ppm, B: ±1.0ppm, P: ±1.5ppm, C: ±2.0ppm  
D: ±2.5ppm, E: ±3.0ppm, F: ±4.0ppm, G: ±5.0ppm

**Temperature range ....** C: (-10 +60)°C, E: (-20 +70)°C, I: (0 +70)°C  
U: (-40 +85)°C, W: (0 +55)°C, H = (-30 +75)°C

**Output logic and symmetry ....** S: clipped sine wave, 0.8Vp/p, 10kΩ//10pF  
B: TTL/10LSTTL (40 ~ 60)%, J: CMOS, 15pF (45 ~ 55)%

### Dimensions(mm)



Pads viewed from bottom

#### Pad connections

# 1  $V_t$   
# 7 ground  
# 8 output  
# 14 Vcc