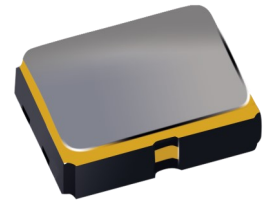


MINIATURE LOW COST SMD-TCXO

SERIES "TXO"

FEATURES

- + High reliability for low cost
- + Cheapest available SMD-TCXO
- + Available in 1.8, 2.6, 2.8, 3.0 and 3.3 VDC (1.7-3.5 VDC)
- + New standard for low cost SMD-TCXOs
- + Qualified for automotive applications
- + Extended temperature range to -40/+85°C available

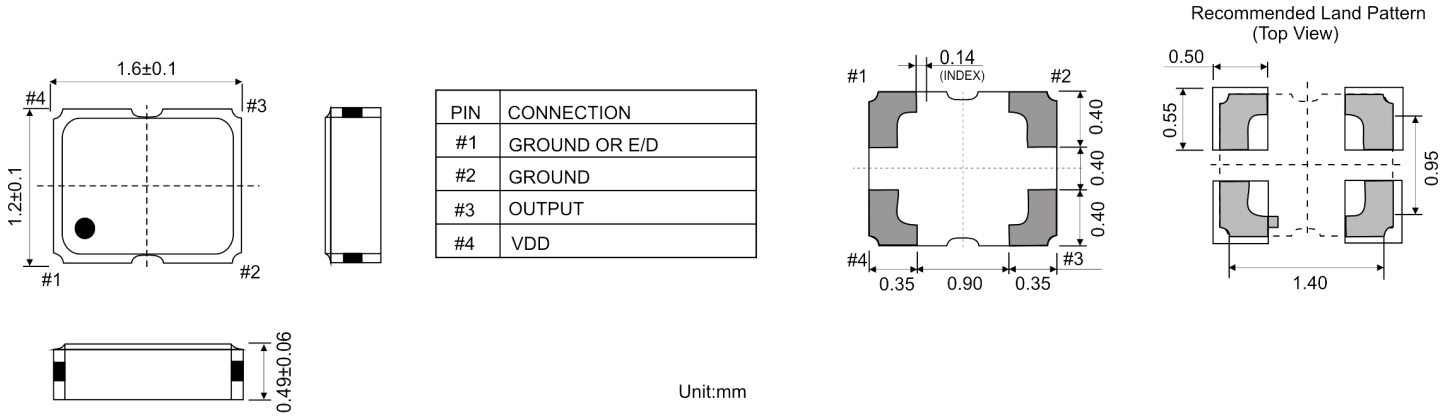


PB FREE / ROHS-2 2011/65/EU COMPLIANT

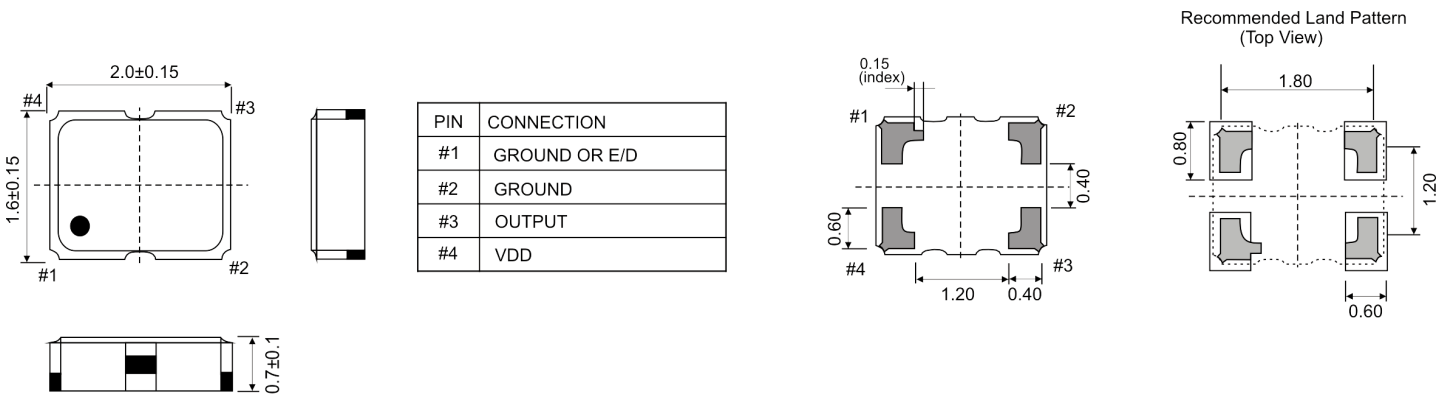
GENERAL DATA

PARAMETERS		PRODUCT FEATURES AND CONDITIONS
SMD-OSCILLATOR SERIES		TXO
PACKAGE	TXO1612	1.6 x 1.2 x 0.5 mm ³
	TXO2016	2.0 x 1.6 x 0.7 mm ³
	TXO2520	2.5 x 2.0 x 0.8 mm ³
	TXO3225	3.2 x 2.5 x 0.9 mm ³
FREQUENCY RANGE	TXO1612	16.0 ~ 60.0 MHz
	TXO2016	12.288 ~ 52.0 MHz
	TXO2520	9.6 ~ 52.0 MHz
	TXO3225	9.6 ~ 52.0 MHz
OPERATING TEMPERATURE RANGE		0/+70°C ~ -40/+85°C
STORAGE TEMPERATURE RANGE		-55/+125°C
STANDARD FREQUENCY		19.2 / 20 / 25 / 26 / 30 / 32 / 38.4 / 40 / 52 MHz
SUPPLY VOLTAGE (VDD)		+1.8V / +2.6V / +2.8V / +3.0V / +3.3V
CURRENT CONSUMPTION		+1.5mA max.(f<26 MHz)/+2.0mA max.(26<f<52 MHz)/+2.5mA max.(f<60 MHz)
STAND-BY CURRENT		+3.0 µA max. if Enable/Disable function is required
OUTPUT LEVEL		0.8 Vp-p min. (f<52 MHz) [Clipped Sinewave / DC-coupled]
OUTPUT LOAD		10kΩ // 10pF
FREQUENCY STABILITY	INITIAL TOLERANCE	± 1.5 ppm max. (after 2 reflows)
	VS. TEMPERATURE	±0.5ppm, ±1.0ppm, ± 2.0 ppm, ± 2.5ppm max. /-30~+85°C ±0.5ppm, ±1.0ppm, ± 2.0 ppm, ± 2.5 ppm max. / -40~+85°C Other parameters are available on request
	VS. SUPPLY VOLTAGE	± 0.2 ppm max. (VDD±5%)
	VS. LOAD VARIATION	± 0.2 ppm max. (10kΩ // 10pF±10%)
	VS. AGING	±1.0 ppm max. / year (ref. +25°C)
Start-up Time		2.0 ms max.
PIN 1		Standard version without enable/disable function Optionally deliverable with enable/disable function (see ordering code)
Phase Noise		[f ≤ 26MHz] [26<f≤40MHz] [40MHz<f≤52MHz]
Offset 100Hz		-115dBc/Hz 110dBc/Hz 105dBc/Hz
Offset 1kHz		-135dBc/Hz 135dBc/Hz 130dBc/Hz
Offset 10kHz		-150dBc/Hz 150dBc/Hz 145dBc/Hz
Offset 100kHz		-155dBc/Hz 155dBc/Hz 150dBc/Hz
DELIVERY FORM		Tape and Reel / 2.000 pcs. per reel, other quantities are available on request
OTHER PARAMETERS ARE AVAILABLE ON REQUEST / CREATE HERE YOUR SPECIFICATION		

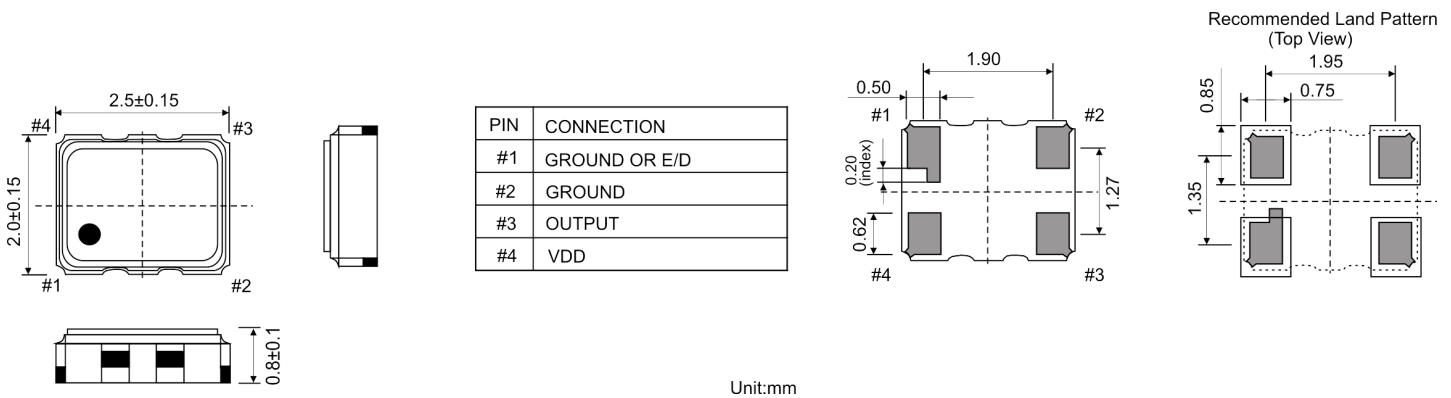
OUTLINE DRAWING OF TX01612



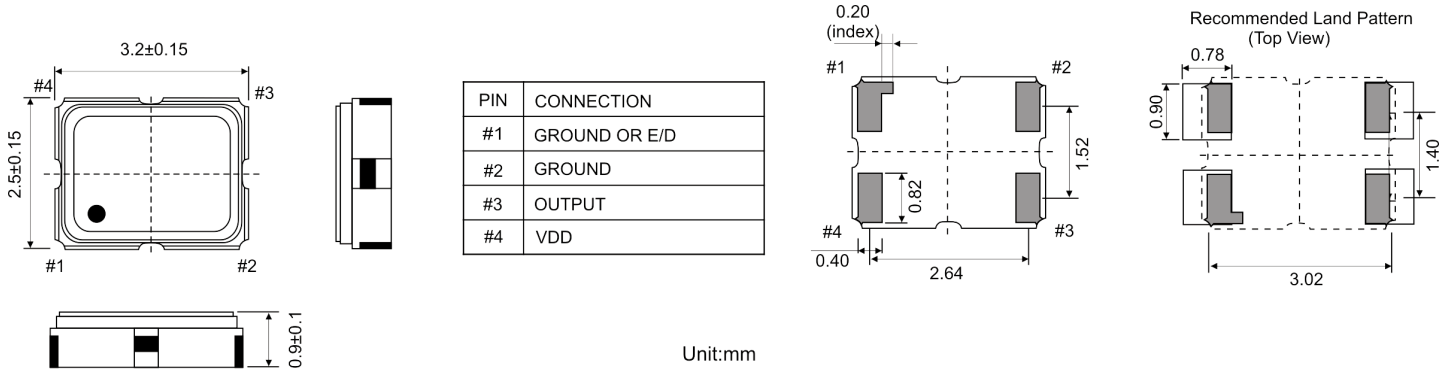
OUTLINE DRAWING OF TX02016



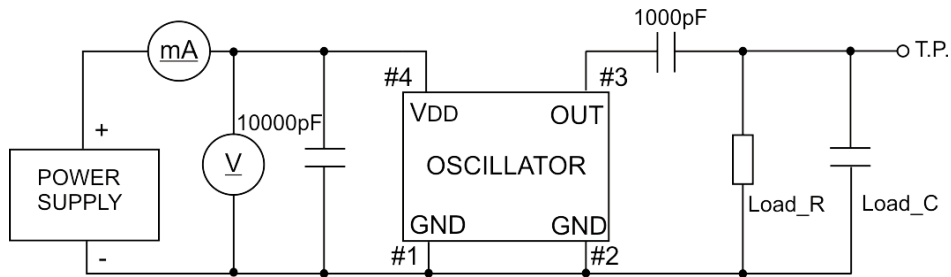
OUTLINE DRAWING OF TX02520



OUTLINE DRAWING OF TX03225

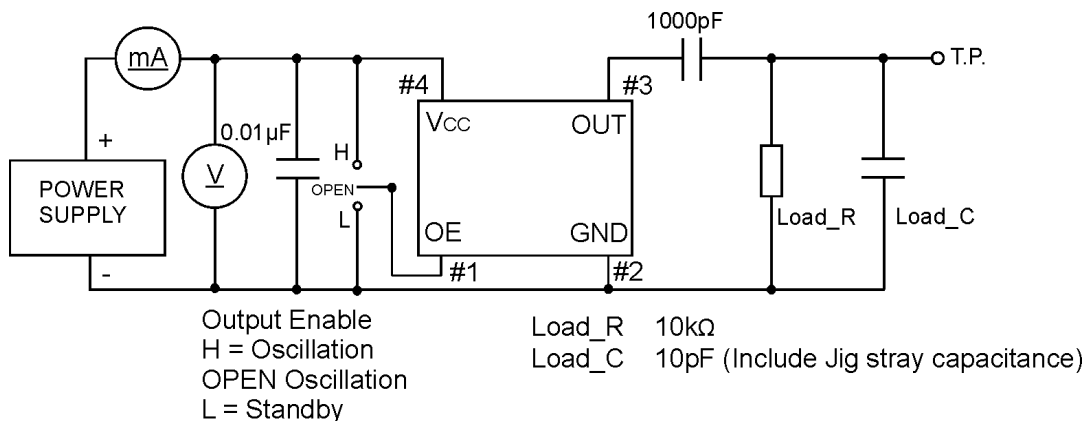


MEASUREMENT CIRCUIT WITHOUT E/D FUNCTION (GROUND)

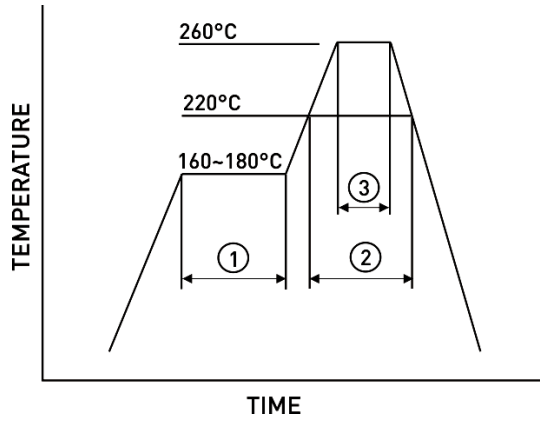


Load_R=10kΩ
 Load_C=10pF (Include Jig stray capacitance)

MEASUREMENT CIRCUIT WITH E/D FUNCTION

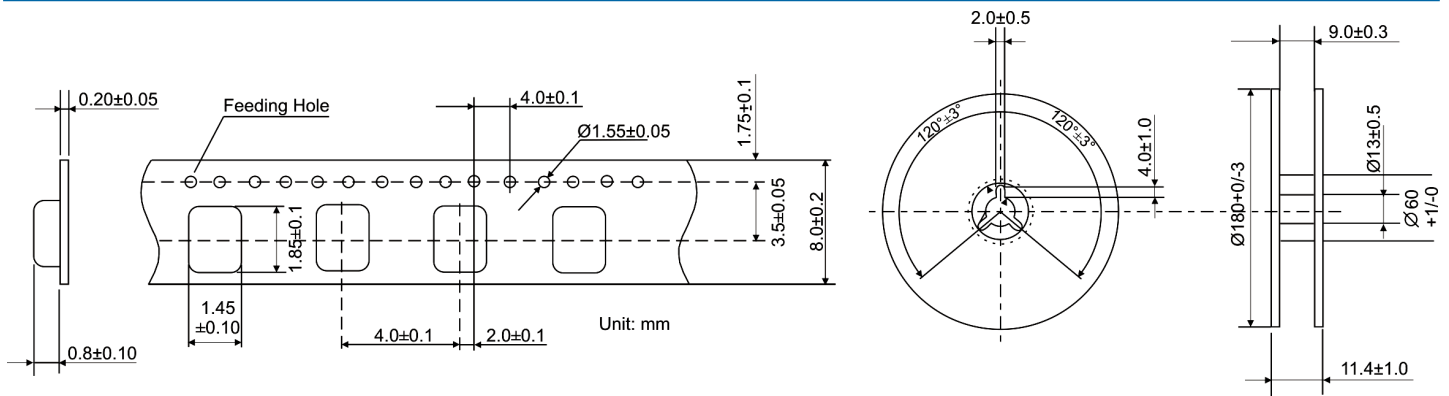


REFLOW SOLDER PROFILE

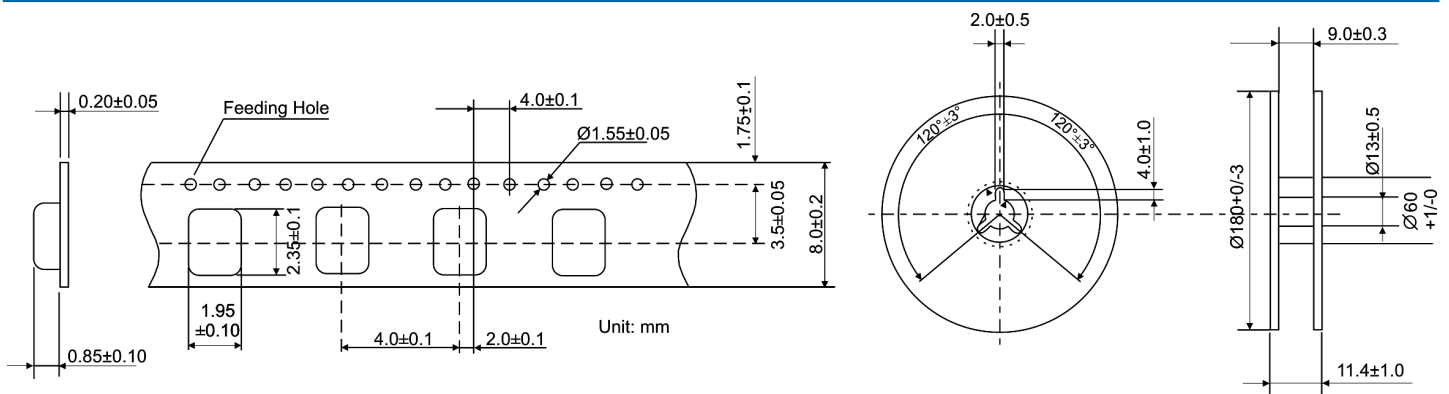


①	Preheat	160~180°C	120sec.
②	Primary heat	220°C	60sec.
③	Peak	260°C	10sec. max.

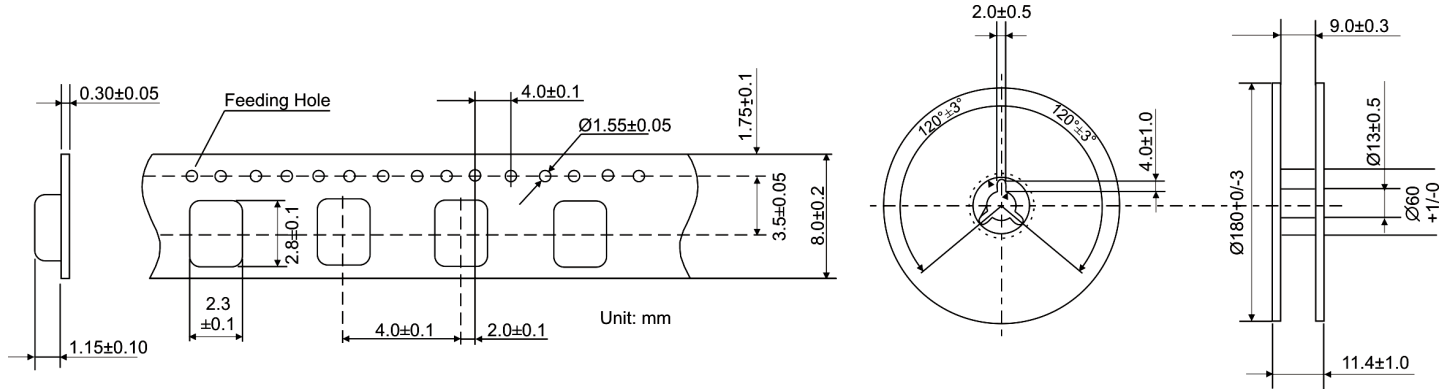
REEL SPECIFICATION OF TX01612



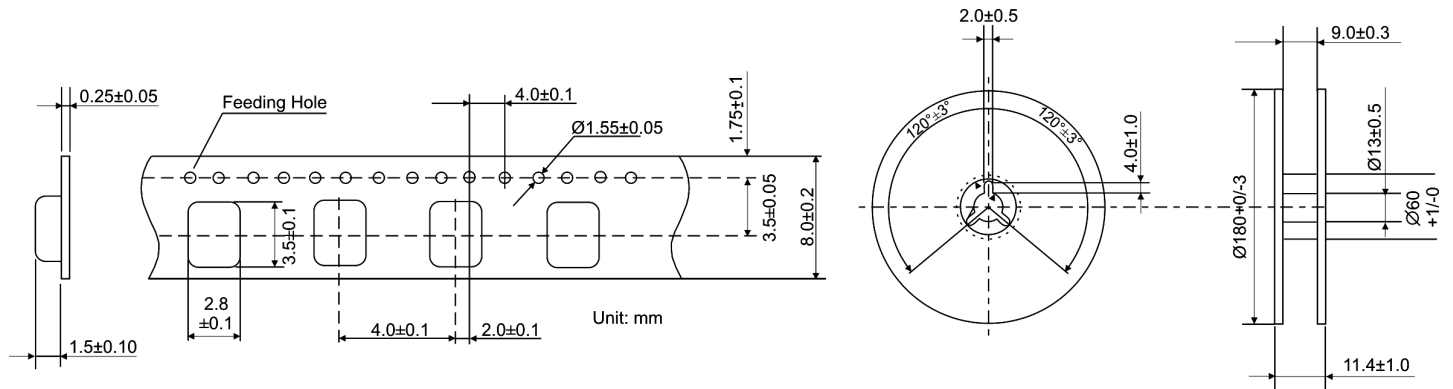
REEL SPECIFICATION OF TX02016



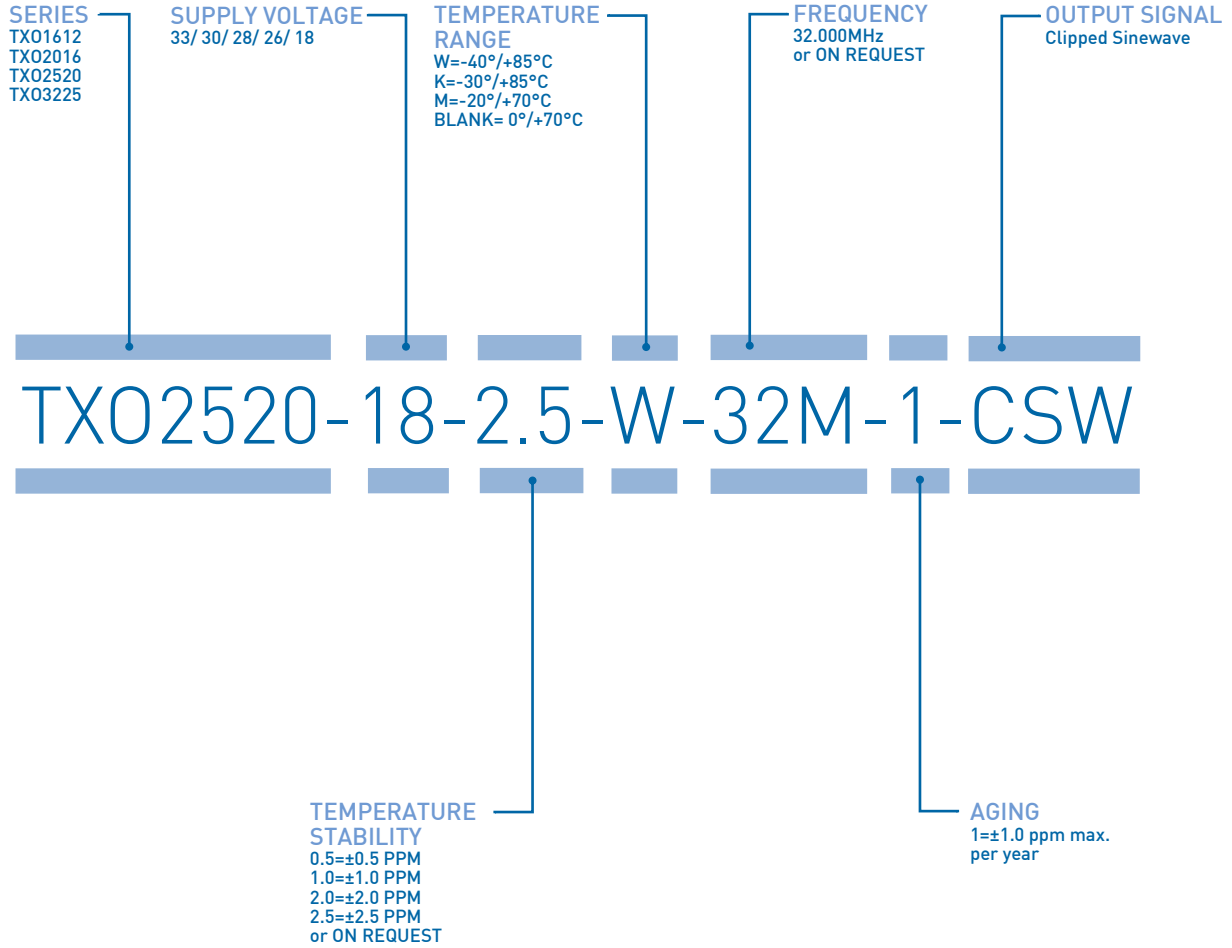
REEL SPECIFICATION OF TX02520



REEL SPECIFICATION OF TX03225

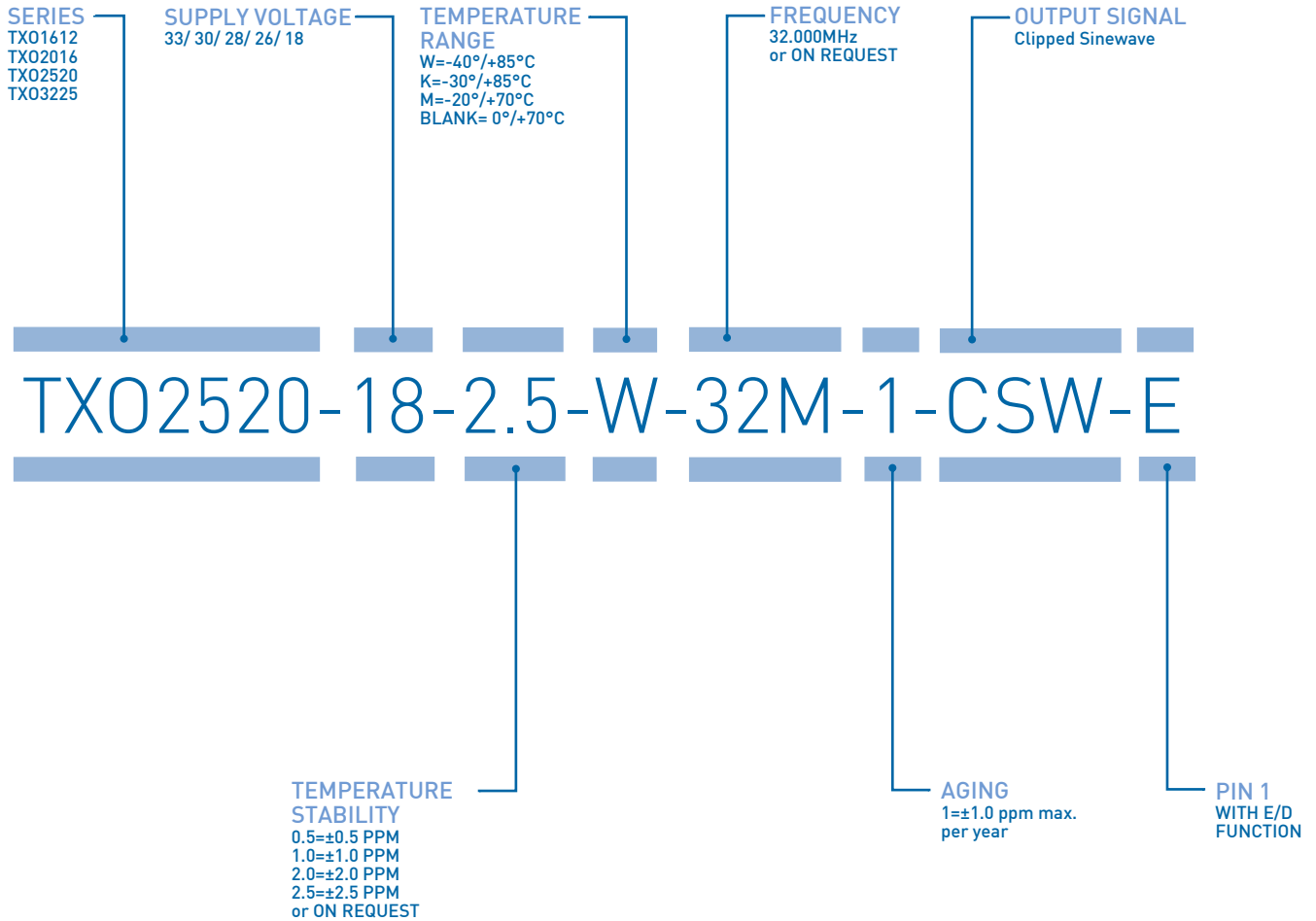


ORDERING INFORMATION WITHOUT E/D FUNCTION



EXAMPLE: TX02520-18-2.5-W-32M-1-CSW
 PLEASE INDICATE YOUR REQUIRED PARAMETERS

ORDERING INFORMATION WITH E/D FUNCTION



EXAMPLE: TX02520-18-2.5-W-32M-1-CSW-E
PLEASE INDICATE YOUR REQUIRED PARAMETERS

REVISION HISTORY^[1]

VERSION	RELEASE DATE	AMENDMENTS SUMMARY
01	June 2017	<ul style="list-style-type: none"> + Added stand-by current + Added Pin 1 options + Added measurement circuit without and with E/D function + Revised outline drawings + Revised ordering information + Added temperature stabilities

Note:

1. Based on Datasheet version from October 2016/SPEC 01/REV.00



PREMIUM QUALITY BY PETERMANN-TECHNIK



OUR COMPANY IS CERTIFIED ACCORDING TO ISO 9001:2015 IN OCTOBER 2016 BY THE DMSZ CERTIFIKATION GMBH.

THIS IS FOR YOU TO ENSURE THAT THE PRINCIPLES OF QUALITY MANAGEMENT ARE FULLY IMPLEMENTED IN OUR QUALITY MANAGEMENT SYSTEM AND QUALITY CONTROL METHODS ALSO DOMINATE OUR QUALITY STANDARDS.