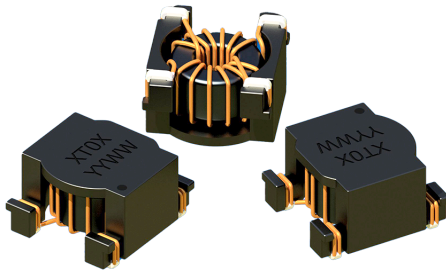


XT Series

Low-Profile SMT Gate and Signal Transformers



- ET products: Up to 12.80 V- μ s
- Isolation voltage: Up to 2350 V_{DC}
- Frequency range: 100 kHz to 5 MHz
- Low leakage inductance with tight magnetic coupling
- Suitable for SiC and GaN switching
- The XT04 is designed to work with KIT_1EDB_AUX_SiC isolated gate driver IC



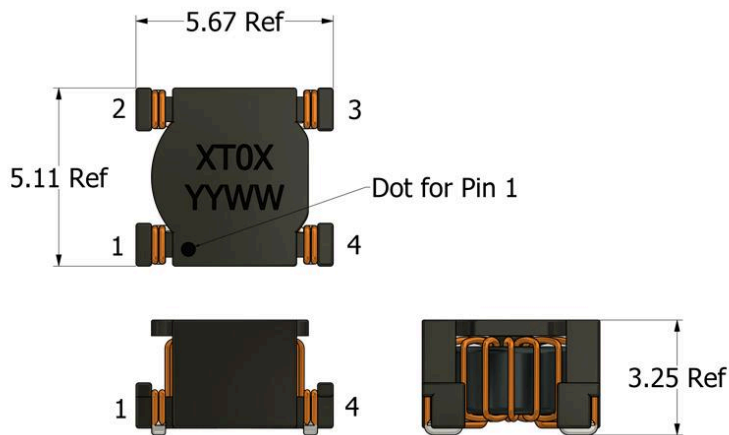
APPLICATIONS

- Isolated gate drivers
- DC/DC & AC/DC converters
- Renewable energy systems
- Motor drivers and inverters
- Feedback & signal isolation

ELECTRICAL SPECIFICATIONS @ 25°C

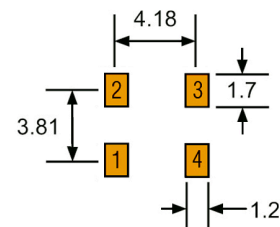
Part Number	Turns Ratio (TR)	Drive Inductance ¹ (μ H, Min)	DCR (Drive : Gate) (m Ω , Max)	Leakage Ind (Drive) ² (nH, Max)	ET Product ³ (V- μ s, Max)	SRF (1-2) ⁴ (MHz, Typ)	Interwinding Capacitance ⁵ C _{ww} (pF, Typ)
XT01	1 : 1	100	320 : 320	150	10.00	15.5	5.92
XT02	1 : 1	140	350 : 350	150	12.80	10.5	13.60
XT03	1 : 1	31	120 : 120	600	3.75	18.2	1.03
XT04	1 : 1	86	140 : 140	100	6.25	12.3	3.42

MECHANICAL DRAWING

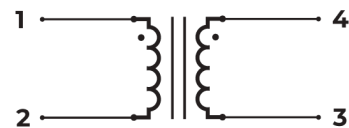


Note: All dimensions are in mm

RECOMMENDED PCB LAYOUT



SCHEMATIC



GENERAL DATA

Operating Temperature ⁶ (Class B)	-40°C to +130°C	Isolation Voltage (Drive-Gate) ⁸ (XT03, XT04)	2350 V _{DC}
Storage Temperature ⁷	-20°C to +60°C	Isolation Voltage (Drive-Gate) ⁸ (XT01)	2250 V _{DC}
Frequency Range	100 kHz to 5 MHz	Isolation Voltage (Drive-Gate) ⁸ (XT02)	120 V _{DC}
Material Group	UL CTI 3	Environmental & Safety	REACH 253, RoHS
Flammability Standard	UL 94 V-0		

Specifications subject to change without prior notice.

XT Series

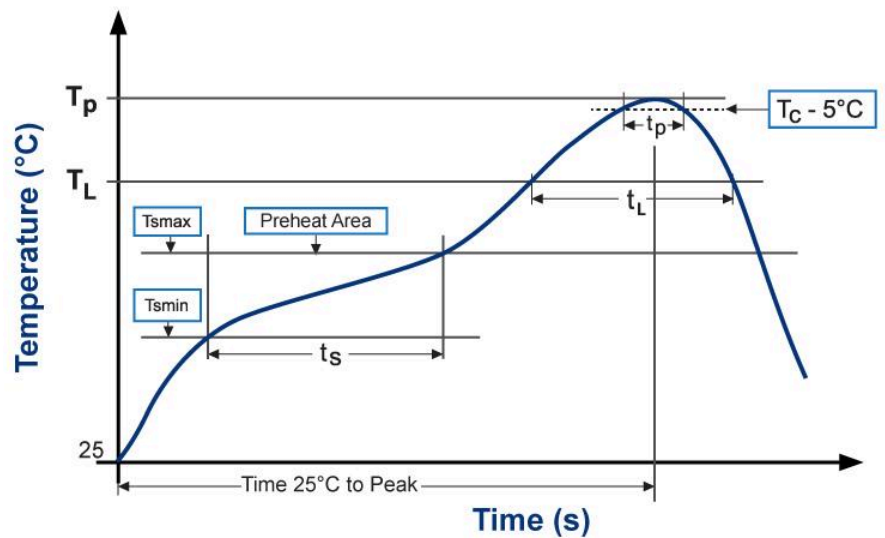
Low-Profile SMT Gate and Signal Transformers



- Drive Inductance:** Tested at 100kHz, 0.1 V_{RMS}
- Leakage Inductance:** Tested at 100kHz, 0.1 V_{RMS}
- ET Product:** The maximum ET is based upon a flux density of 2200 Gauss at 25°C.
 $ET = E_p/2f$,
 where, E_p = Drive Voltage (V), f = Frequency (Hz)
- SRF values** are for reference only.
- Interwinding Capacitance:** Drive to Gate
- Operating Temp.:** The combination of ambient temperature and temperature rise.
- Storage Temp.:** Applies to parts removed from original packaging.
- Hi-Pot Rating:** Tested @ 1mA.
- Suitable for **bipolar** applications only.

REFLOW SOLDERING PROFILE (Lead-Free)

Preheat/Soak:	
Temperature Min (T_{SMIN})	150 °C
Temperature Max (T_{SMAX})	200 °C
Time (t_s) from T_{SMIN} to T_{SMAX}	60 - 120 sec
Ramp-Up Rate (T_L to T_p)	3 °C/sec max
Liquidous Temperature (T_L)	217°C
Time (t_L) maintained above T_L	60 - 150 sec
Peak Package Body Temp (T_p)	250°C
Time (t_p) within 5°C of the specified classification temperature (T_c)	< 30 sec
Ramp-Down Rate (T_p to T_L)	6 °C/sec max
Time 25°C to peak temperature	8 min max



PACKAGING		COMPONENT LIBRARY	
Reel Diameter	13 inches	AutoCAD 3D Model	SPICE Parameters
Reel Width	16 mm	LTSpice	PSpice
Pieces/Reel	1400	Altium	Cadence
		EagleCAD	
PCB Washing	See ICE Washability Information .		
Application Note	See Applying Gate Drive Transformers in Push-Pull Topology		
Series Page	See https://www.icecomponents.com/product/xt-series/		

For questions or additional information, [contact ICE Components](#).

Specifications subject to change without prior notice.