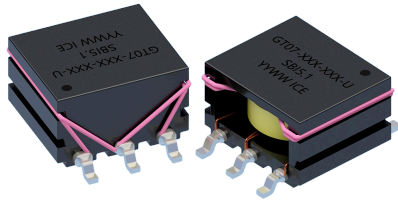


GT07 Series

High-Creepage SMT Gate Drive Transformers



- ET products: Up to 60 V- μ s
- Isolation voltages: 6250 V_{AC} & 3750 V_{AC}
- Creepage/Clearance: 9.2 mm / 8.0 mm
- Frequency range: 50 kHz to 1 MHz
- Designed to work with TI SN6500 series transformer drivers
- New models meet updated IEC standards (GT07-U)



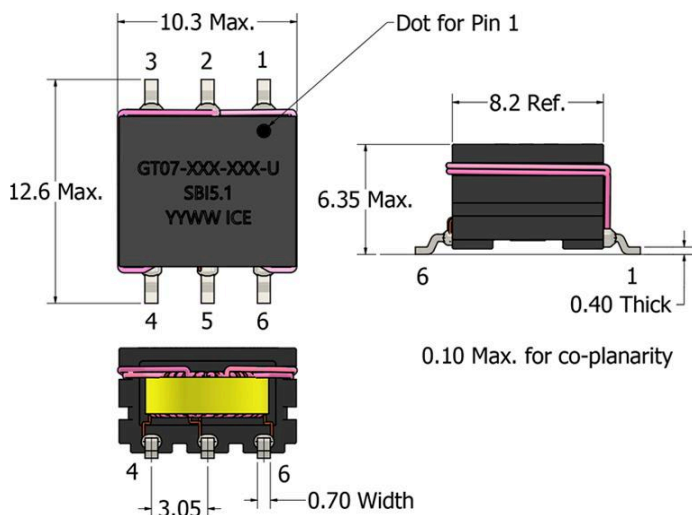
APPLICATIONS

- Isolated gate drivers
- AC/DC & DC/DC converters
- Push-pull transformer
- Feedback & signal isolation

ELECTRICAL SPECIFICATIONS @ 25°C

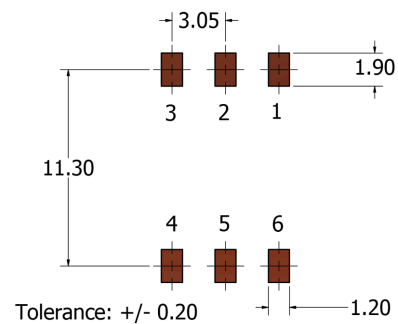
Part Number	Turns Ratio (TR)	Drive Inductance ¹ (μ H, Min)	DCR (Gate:Drive) (m Ω , Max)	Leakage Ind ¹ (Drive) (μ H, Max)	ET Product ² (V- μ s, Max)	SRF ³ (1-3) (MHz, Typ)	Interwinding Capacitances C _{ww} (pF, Typ)	Schematic
GT07-110-013	1 : 1	100	370 : 300	0.30	13	7.6	3.00	A
GT07-110-027	1 : 1.1	340	720 : 530	0.60	27	4.3	4.60	B
GT07-120-045	1 : 2.57	166	520 : 720	0.35	45	2.7	4.67	B
GT07-110-015-U	1 : 1	145	300 : 150	0.50	15	4.9	3.96	A
GT07-1X0-031-U	1 : 1.1	480	550 : 300	0.80	31	3.1	7.36	B
GT07-120-051-U	1 : 2.5	235	450 : 450	0.60	51	2.1	6.16	B
GT07-130-060-U	1 : 3.5	170	550 : 550	0.60	60	1.7	5.62	B

MECHANICAL DRAWING

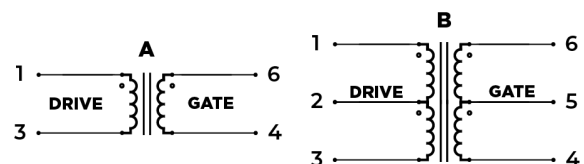


Note: All dimensions are in mm

RECOMMENDED PCB LAYOUT



SCHEMATIC



Specifications subject to change without prior notice.

GT07 Series

High-Creepage SMT Gate Drive Transformers



GENERAL DATA

Operating Temperature ⁴	-40°C to +130°C	Isolation Voltage (Drive-Gate) ⁶ (GT07)	6250 V _{AC}
Storage Temperature ⁵	-20°C to +60°C	Isolation Voltage (Drive-Gate) ⁶ (GT07-120-045)	3750 V _{AC}
Frequency Range	50 kHz to 1 MHz	Isolation Voltage (Drive-Gate) ⁶ (GT07-U)	3750 V _{AC}

- Drive and Leakage Inductance:** Tested at 100kHz, 0.1 V_{RMS}
- ET Product:** The maximum ET is based upon a flux density of 2500 Gauss for GT07-U (or 2800 Gauss for GT07) at 25°C. Derate the E-T product rating by 20% for operation at 100°C.
- SRF** values are for reference only.
- Operating Temp.:** The combination of ambient temperature and temperature rise.
- Storage Temp.:** Applies to parts removed from original packaging.
- Hi-Pot Rating:** Tested @ 60Hz, 1mA.
- Suitable for bipolar applications only.

$$ET = E_p / 2f,$$

where, E_p = Drive Voltage (V), f = Frequency (Hz)

COMPLIANCE

Creepage Distance	9.2 mm	Insulation System	SBI5.1(Class F) *
Clearance Distance	8.0 mm	Environmental & Safety	REACH, RoHS
Material Group	CTI IIIa (175V ≤ CTI < 400V)	Flammability Rating	UL-94 V-0

Standard		Condition
Designed to comply with **	IEC 61558-1	For a working voltage up to 920 V_{RMS} for Basic Insulation and 460 V_{RMS} for Reinforced Insulation ; with Creepage 9.2 mm & Clearance of 8.0 mm, Overvoltage Category II, Pollution Degree 2, and Material Group IIIa.
	IEC 62368-1	For a working voltage up to 920 V_{RMS} (1.80 kV_{PEAK}) for Basic Insulation and 460 V_{RMS} (1.52 kV_{PEAK}) for Reinforced Insulation ; with Creepage 9.2 mm & Clearance of 8.0 mm, Overvoltage Category II, Pollution Degree 2, and Material Group IIIa.

NOTE:

- * Applicable only to GT07-U models.
- ** GT07 models do not comply with IEC 61558-1 or IEC 62368-1. Compliance with these standards applies only to GT07-U models. Operations above 750 V_{PEAK} may require partial discharge testing. [Contact ICE](#) for more information.

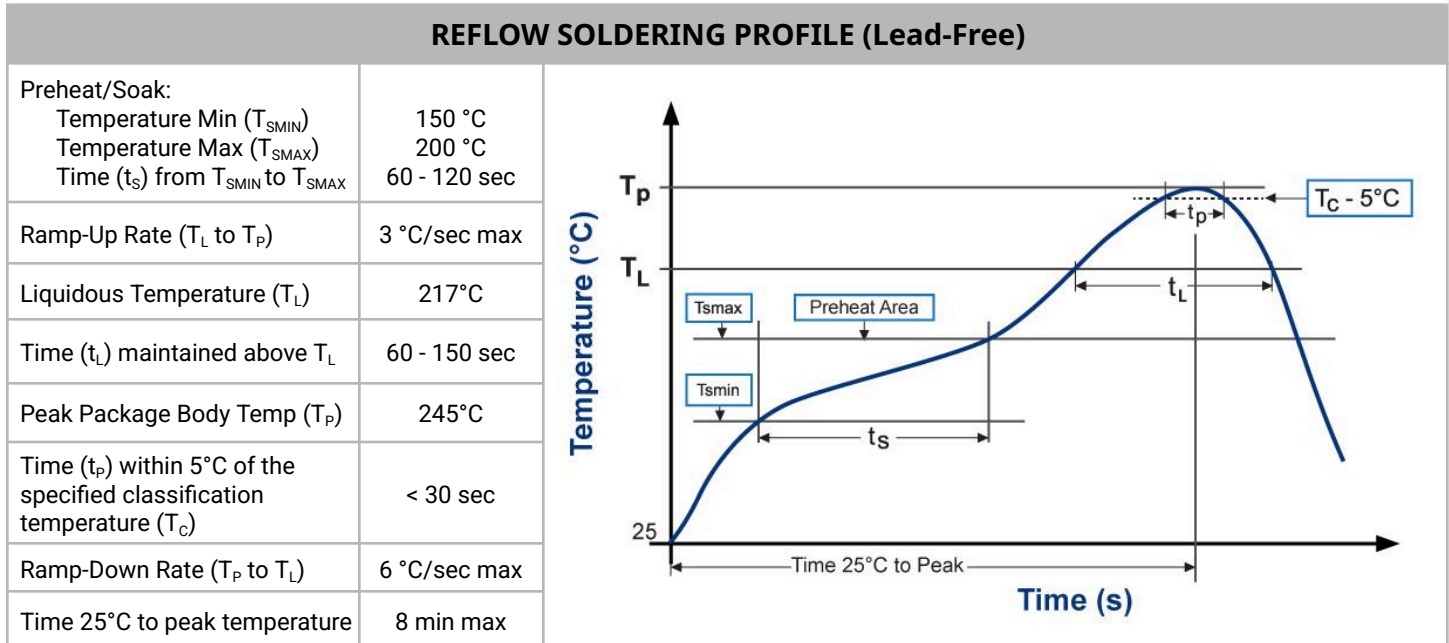
RELIABILITY TESTING

<p style="text-align: center;">ICE Reliability Standard:</p> <p>Dry Heat Test, Low Temp Test, Damp Heat Test, High Temp Operational Life, Thermal Shock, Solderability, and Resistance to Soldering Heat</p>	Passed All Tests
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Specifications subject to change without prior notice.

GT07 Series

High-Creepage SMT Gate Drive Transformers



PACKAGING	
Reel Diameter	13 inches
Reel Width	24 mm
Pieces/Reel	500
Reel/Box	8
Pieces/Box	4000

COMPONENT LIBRARY	
AutoCAD 3D Model	SPICE Parameters
LTSpice	PSpice
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/gt07-series/

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