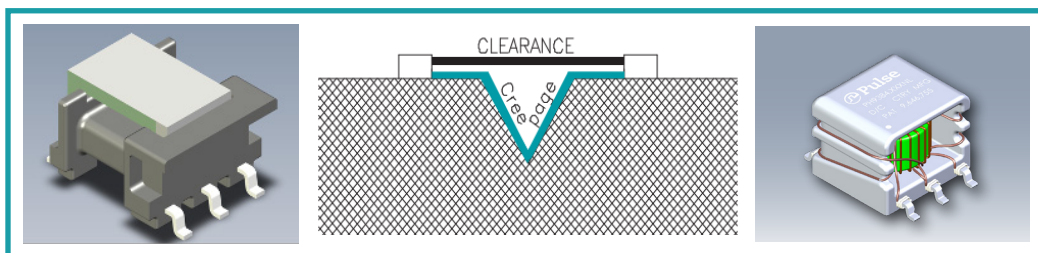


HIGH ISOLATION TRANSFORMER PLATFORM OVERVIEW

FOR ISOLATED POWER APPLICATIONS











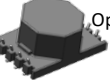




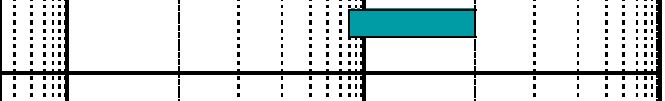





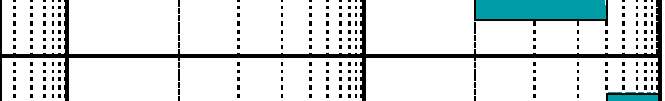


Pulse high isolation transformers use innovative mechanical design and enhanced wire insulation to maximize electrical isolation. While all transformers provide electrical isolation (the elimination of a conductive path) and functional insulation (the physical barrier that guarantees this electrical isolation), further requirements are introduced for safety standard compliance:

- 1) Safety Insulation** – A higher level for insulation than required for purely functional operation that accounts for the micro-environment of the transformer and other influencing stresses. Basic and Reinforced insulation compliance imposes requirements for withstand voltage measurement, wire insulation selection and physical separation of non- insulated conductive materials.
- 2) Working Voltage** – The highest voltage differential across the insulation barrier during normal operation. This is a safety standard input parameter. Along with the inputs of insulation material type and level of air pollution, separation requirements for non-insulated conducted elements are defined.
- 3) Creepage and Clearance Distance** – Clearance is the shortest distance through air, creepage is shortage distance along the surface of insulation between non-insulated conductive elements within the transformer. The safety standard defines minimum separation distances for both. The creepage/clearance/withstand voltage capabilities of the Pulse isolation transformer platforms are summarized in the following chart.
- 4) Withstand Voltage** – The test voltage that is applied without insulation breakdown or flash over across the insulation barrier. This is the measure of electrical isolation capability, the requirement increasing for higher levels of safety insulation and working voltage. Withstand voltage is commonly referred to as dielectric strength or hi-pot.



HIGH ISOLATION TRANSFORMER PLATFORM OVERVIEW

FOR ISOLATED POWER APPLICATIONS

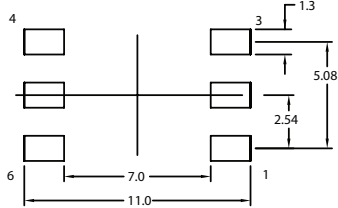
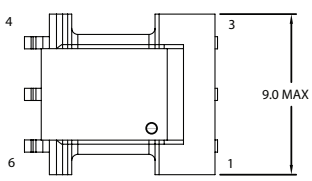
Isolation Transformer Platform	Dimensions LxWxH (mm Max)	Creepage & Clearance Distance (mm Min)	Safety Insulation	Isolation Voltage (Vrms)	Working Voltage (Vrms)	Power Level		
						1W	10W	100W
 UI5 1	11x8.5x6.3	6.0 4.5	Basic	3000	600			
			Reinforced	3000	300			
 UI5 2	17 x 11 x 8.5	9.1 7.0	Basic	3000	850			
			Reinforced	4000	600			
 Sidecar 1	12.5x9.2x7.6	11 9.5	Basic	4000	1000			
			Reinforced	4000	470			
 Sidecar 2	17 x 16 x 7.5	13 13	Basic	3000	1300			
			Reinforced	4000	650			
 Encapsulated Toroid	15.3x12x9.7	8.0 8.0	Basic	3000	800			
			Reinforced	5000	400			
 Open Frame Toroid	29 x 20 x 12.5	24 24	Basic	3000	1500			
			Reinforced	5000	1250			
 EP7R	13x10x12.5	8.3 8.3	Basic	4000	830			
			Reinforced	5000	415			
 EP13R	17.5x13.5x16.5	8.0 8.0	Basic	4000	800			
			Reinforced	5000	400			
 EFD15R	21.85x16.5x11	9.6 4.8	Basic	4000	880			
			Reinforced	6000	480			
 EP17R	24.6x19x18.5	18 9.0	Basic	4000	1000			
			Reinforced	6000	900			
 EFD20R	30.8x21.8x13.5	11 8.0	Basic	4000	1000			
			Reinforced	6000	500			
 EFD30R	40.6x31.8x16.2	16.6 5.2	Basic	4000	952			
			Reinforced	6000	800			

The IEC61558-1 safety standard is referenced for the corresponding working voltage for basic and reinforced insulation compliance, based on insulation material group III and pollution degree 2 and the selected wire insulation. Please contact Pulse Electronics for your next isolation transformer need for a safety compliant solution based on one of these platforms.

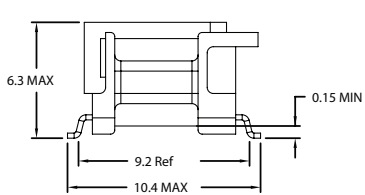
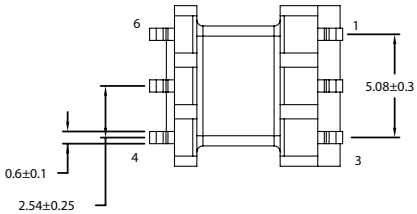
HIGH ISOLATION TRANSFORMER PLATFORM OVERVIEW

Mechanicals

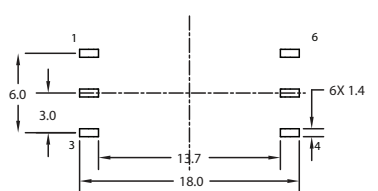
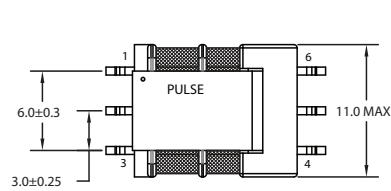
UI5 1



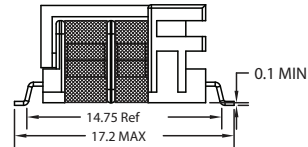
SUGGESTED LAND PATTERN



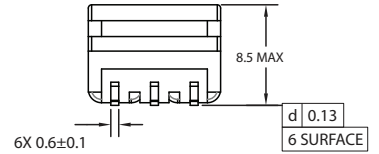
UI5 2



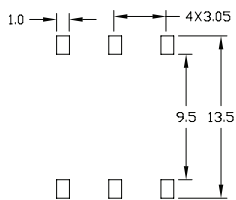
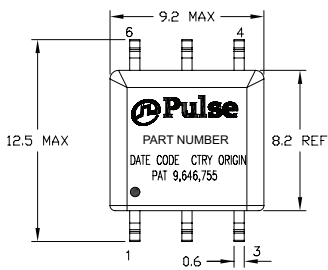
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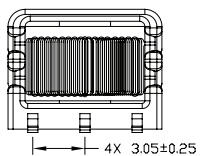
FINAL OUTLINE



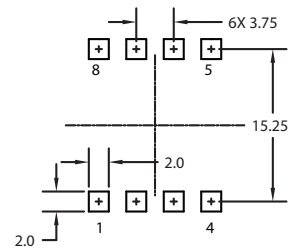
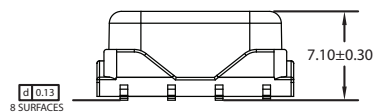
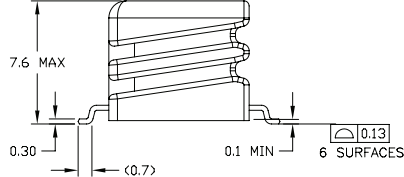
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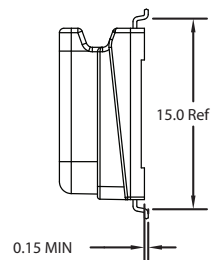
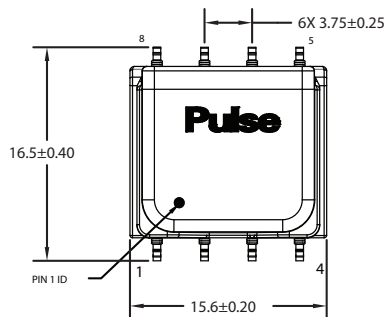
SUGGESTED LAND PATTERN



FINAL OUTLINE



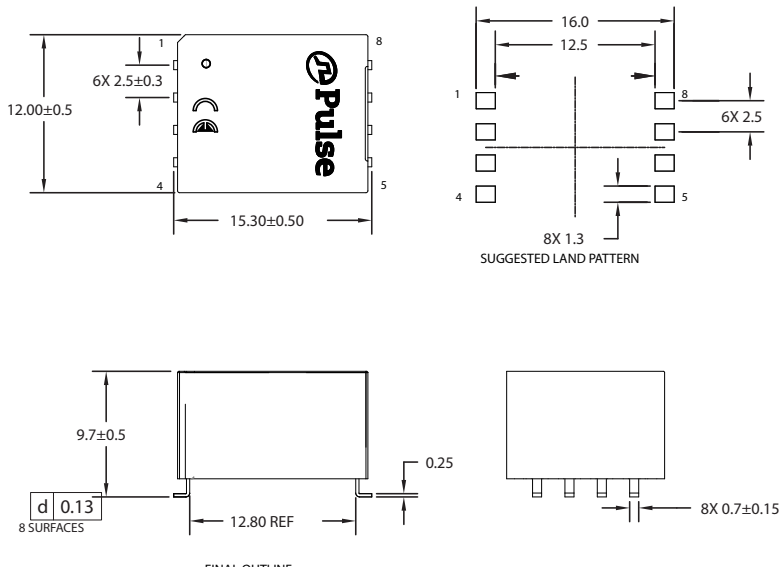
SUGGESTED LAND PATTERN



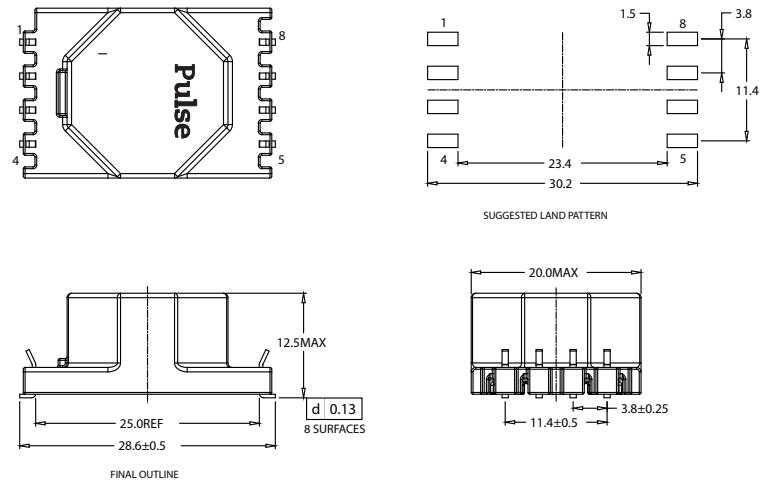
HIGH ISOLATION TRANSFORMER PLATFORM OVERVIEW

FOR ISOLATED POWER APPLICATIONS

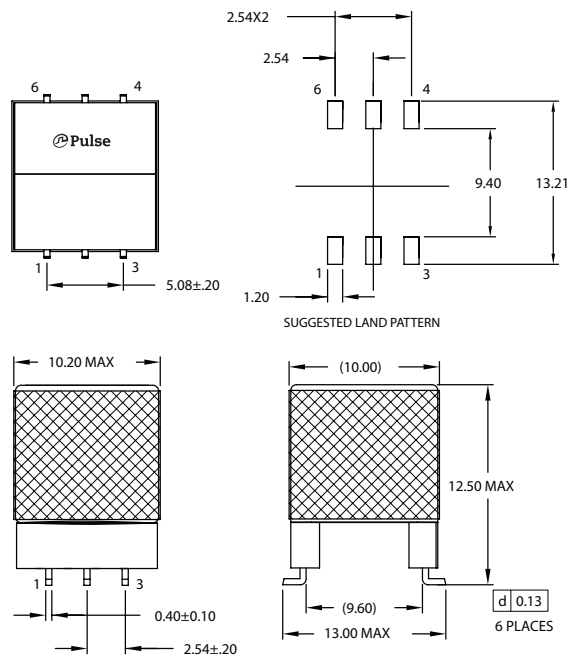
Encapsulated Toroid



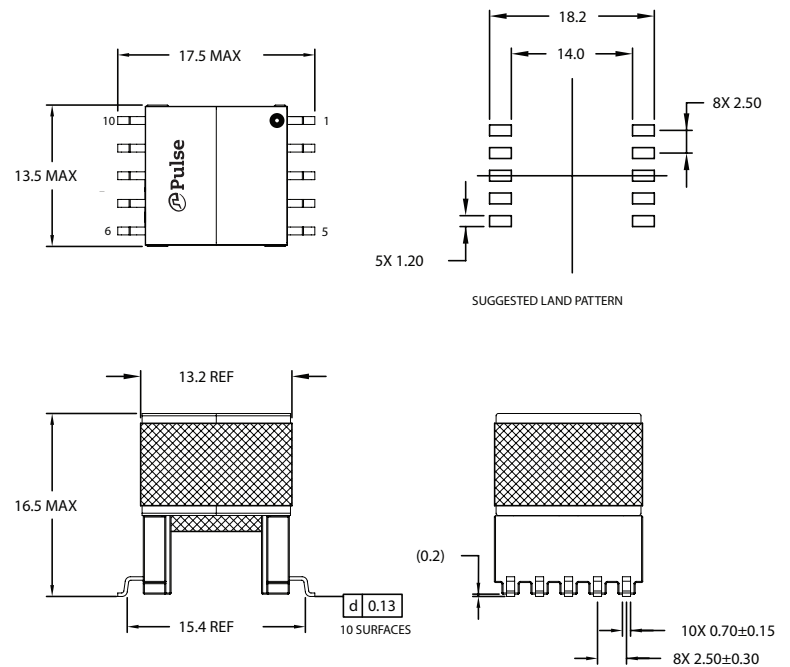
Open Frame Toroid



EP7R



EP13R

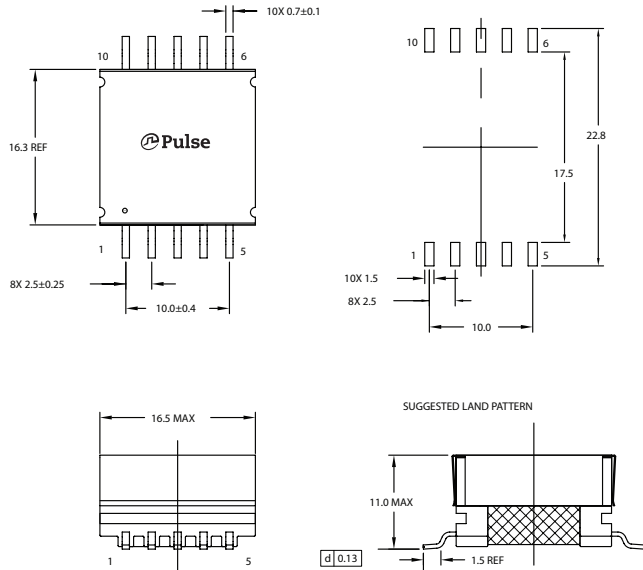


HIGH ISOLATION TRANSFORMER PLATFORM OVERVIEW

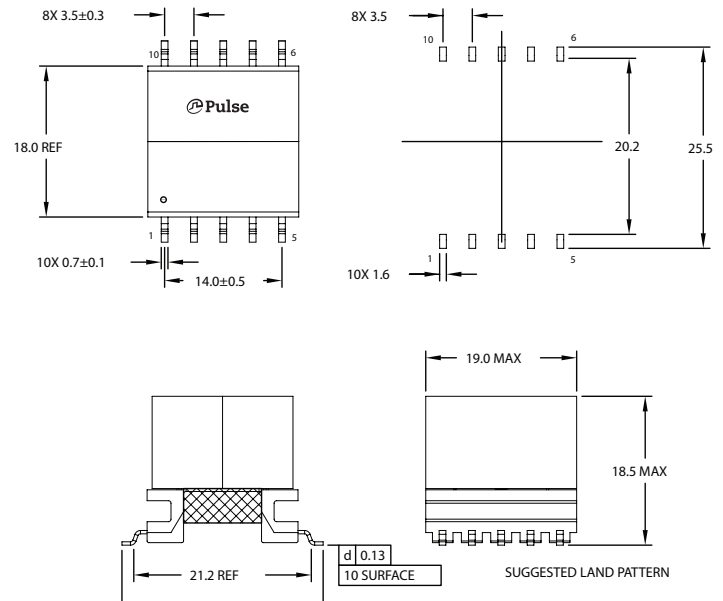
FOR ISOLATED POWER APPLICATIONS

Mechanicals

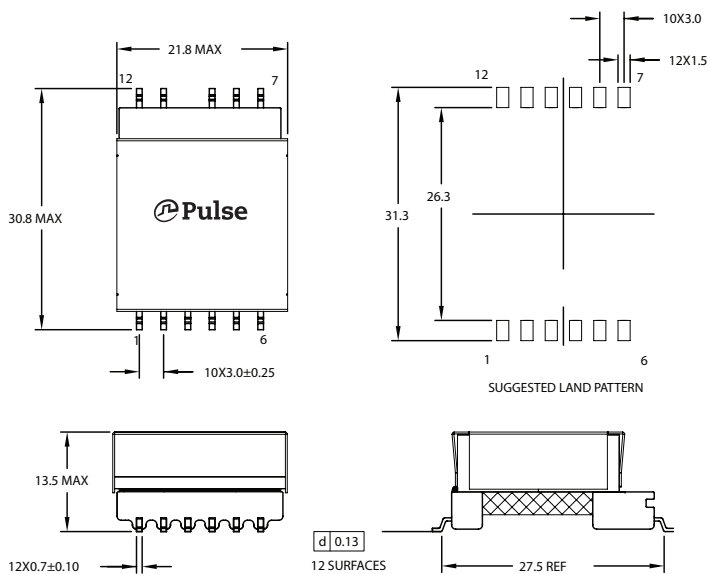
EFD15R



EP17+R



EFD20R



EFD30R

