Trans-inductor Voltage Regulator (TLVR) Coupled Inductor



ATL-1Z120612S

Request Samples | Check Inventory

12.0 x 6.2 x 12.0 mm
RoHS/RoHS II Compliant
MSL Level = 1

Features

- Ferrite Core
- High Saturation current, up to 125A
- Minimized DC losses due to extremely low DCR
- Inductance up to 170nH
- Low interwinding capacitance
- Compact size for dense designs

Applications

- Servers and data centers
- Networking and telecommunication systems
- Industrial automation and control
- Voltage Regulator Module (VRM) for FPGAs, ASICs and microprocessors
- Point-of-Load (PoL) and Multiphase DC-DC converters

Electrical Specifications

Part Number	OCL@ 0ADC ±15%	Leakage Inductance Max	Interwinding Capacitance	DC Resistance ±10%		Isat1	Isat2	Irms
Units	nH	nH	pF	mΩ		A		A
ATL-1Z120612S	1-4/2-3	1-4	1-4/2-3	1-4	2-3	1-4		1-4
ATL-1Z120612SR10LT	100.0	25	10	0.125	0.450	125	105	70
ATL-1Z120612SR12LT	120.0					100	90	
ATL-1Z120612SR15LT	150.0					80	70	
ATL-1Z120612SR17LT	170.0					70	55	

Test Conditions:

Open Circuit Inductance (OCL)@0ADC: 100KHz, 1.0Vrms
Isat1: DC current at which the inductance drops 20% from its nominal value at 25°C.
Isat2: DC current at which the inductance drops 20% from its nominal value at 100°C.
Irms: DC current that causes the temperature rise (ΔT, approximate 40 ˚C) from 25°C ambient.

Max Operating Voltage: 80V
Core to windings breakdown Voltage: 200V
Operating Temperature: -40˚C ~ +125˚C (including self-temperature rise)
Storage Condition: -40˚C ~ +125˚C (on board), -10˚C ~ +40˚C (with packaging) and R.H. 60 max.
ATL-1Z120612S Series is RoHS Compliant and Pb free.

ABRACON

5101 Hidden Creek Ln Spicewood TX 78669
Phone: 512-371-6159 | Fax: 512-351-8858
For terms and conditions of sales, please visit:
www.abracon.com

REVISION: IR 09-21-23

ABRACON IS ISO9001-2015 CERTIFIED

Downloaded from Arrow.com.

Trans-inductor Voltage Regulator (TLVR) Coupled Inductor

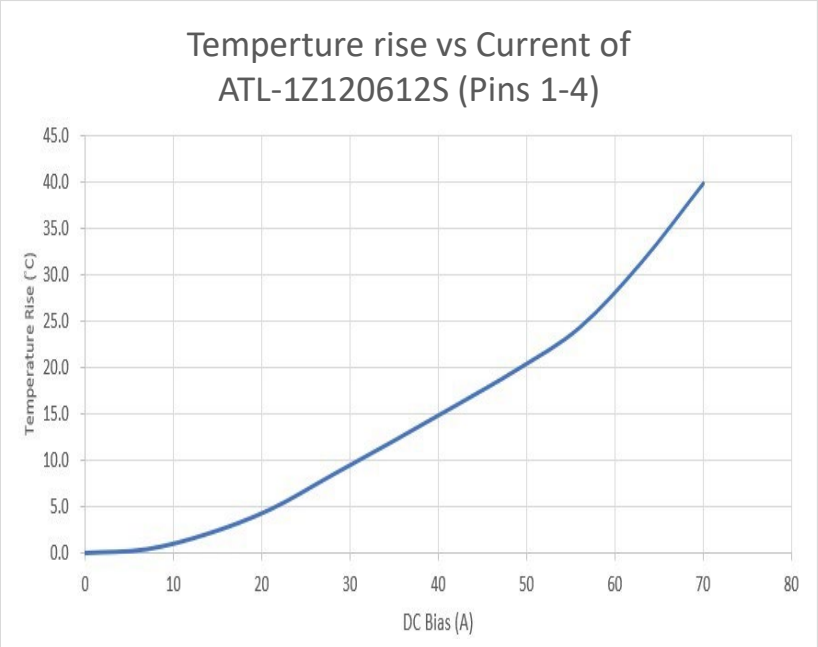


ATL-1Z120612S

Request Samples Check Inventory

12.0 x 6.2 x 12.0 mm
RoHS/RoHS II Compliant
MSL Level = 1

Electrical Specifications (Cont'd)



ABRACON

5101 Hidden Creek Ln Spicewood TX 78669
Phone: 512-371-6159 | Fax: 512-351-8858
For terms and conditions of sales, please visit:
www.abracon.com

ABRACON IS ISO9001-2015 CERTIFIED

Downloaded from Arrow.com.

Trans-inductor Voltage Regulator (TLVR) Coupled Inductor



ATL-1Z120612S

Request Samples | Check Inventory

12.0 x 6.2 x 12.0 mm
RoHS/RoHS II Compliant
MSL Level = 1

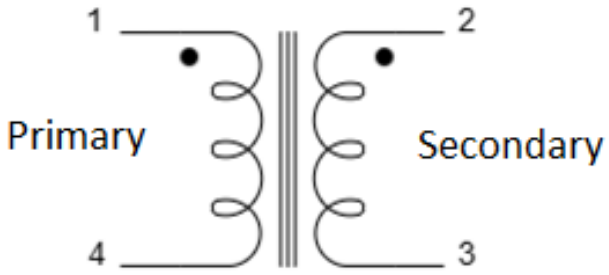
Part Identification

ATL - 1 Z 1 2 0 6 1 2 S R 1 0 L T

Dimensions	LLxWWxHH in mm
Material	Z: Ferrite
Phases	1: Single Phase
Packaging	T: Tape & Reel Blank: Bulk
Tolerance	L: ±15%
Inductance*	R10 = 100nH
Rating	S: Standard

*Only part numbers listed in the Electrical Specs table are available. For custom builds, please contact Abracon.

Schematic



ABRACON

5101 Hidden Creek Ln Spicewood TX 78669
Phone: 512-371-6159 | Fax: 512-351-8858
For terms and conditions of sales, please visit:
www.abracon.com

REVISION: IR 09-21-23

ABRACON IS ISO9001-2015 CERTIFIED

Downloaded from Arrow.com.

Trans-inductor Voltage Regulator (TLVR) Coupled Inductor

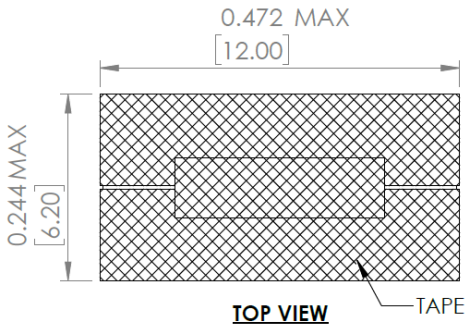


ATL-1Z120612S

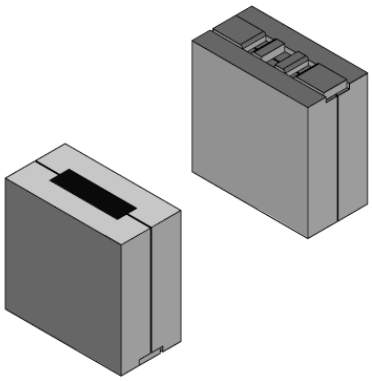
Request Samples | Check Inventory

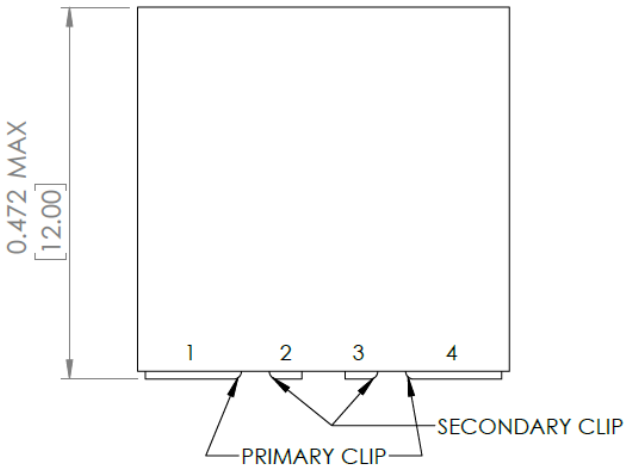
12.0 x 6.2 x 12.0 mm
RoHS/RoHS II Compliant
MSL Level = 1

Mechanical Specifications

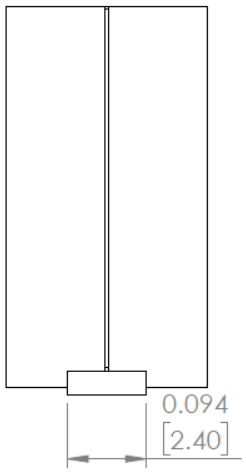


TOP VIEW

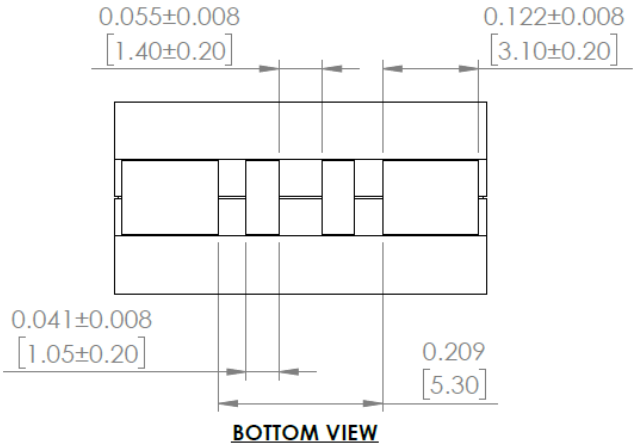




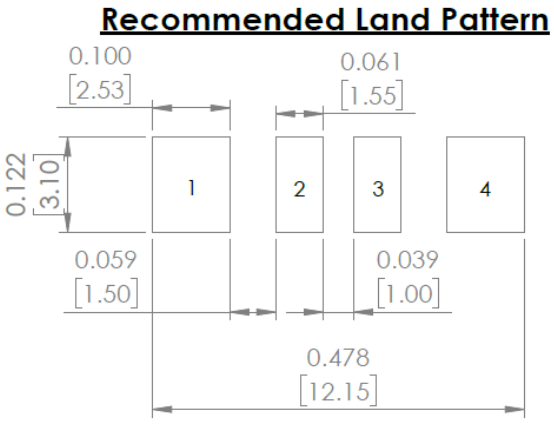
FRONT VIEW



SIDE VIEW



BOTTOM VIEW



Dimensions: Inches[mm]

ABRACON

5101 Hidden Creek Ln Spicewood TX 78669
Phone: 512-371-6159 | Fax: 512-351-8858
For terms and conditions of sales, please visit:
www.abracon.com

REVISION: IR 09-21-23

ABRACON IS ISO9001-2015 CERTIFIED

Downloaded from Arrow.com.

Trans-inductor Voltage Regulator (TLVR) Coupled Inductor

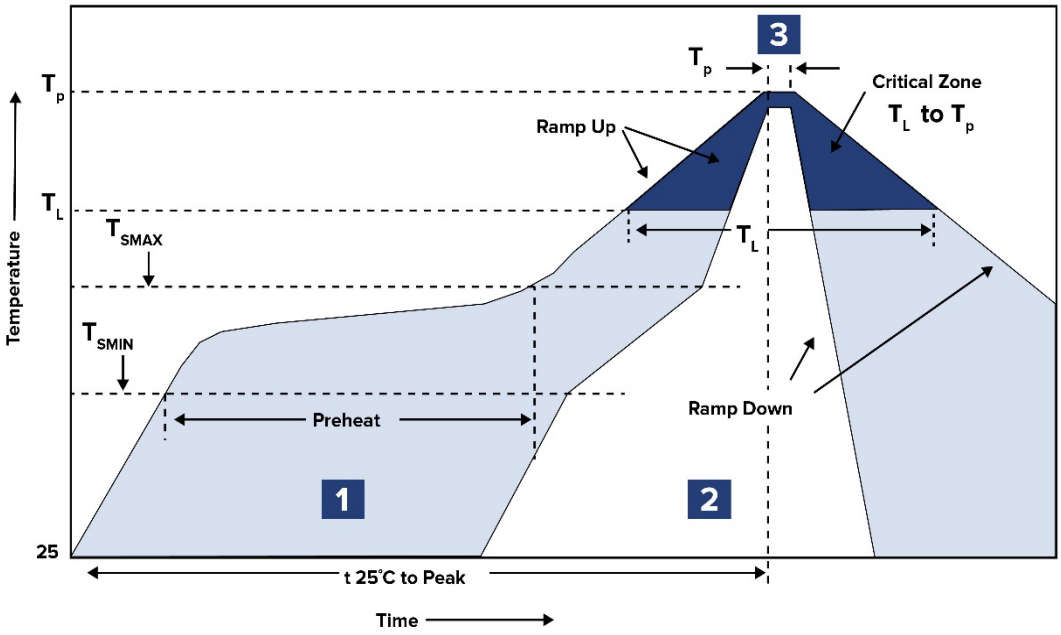


ATL-1Z120612S

Request Samples | Check Inventory

12.0 x 6.2 x 12.0 mm
RoHS/RoHS II Compliant
MSL Level = 1

Reflow Profile



Zone	Description	Temperature	Times
1	Preheat	T_{SMIN} ~ T_{SMAX} 150°C ~ 200°C	60 ~ 120 sec.
2	Reflow	T_L 217°C	60 ~ 150 sec.
3	Peak Temperature	Tc 260°C	5 sec. max

Max. ramp up rate: 3°C/sec.
Max. ramp down rate: 6°C/sec.
Time from 25°C to peak Temperature: 8mins max.
Ref. Solder paste: Sn/3.0Ag/0.5Cu

ABRACON

5101 Hidden Creek Ln Spicewood TX 78669
Phone: 512-371-6159 | Fax: 512-351-8858
For terms and conditions of sales, please visit:
www.abracon.com

REVISION: IR 09-21-23

ABRACON IS ISO9001-2015 CERTIFIED

Downloaded from Arrow.com.

Trans-inductor Voltage Regulator (TLVR) Coupled Inductor



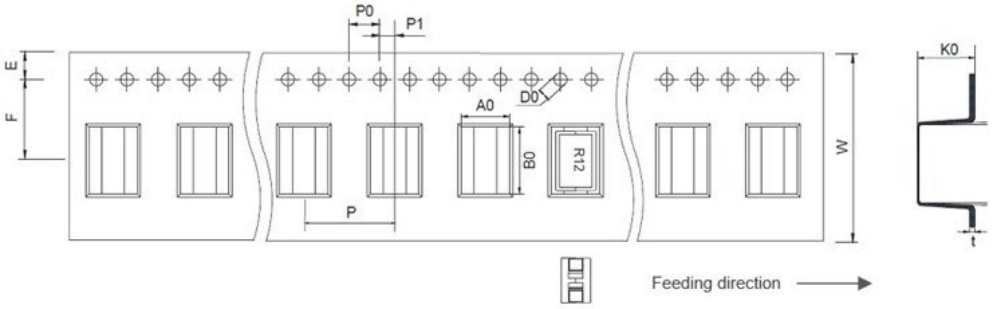
ATL-1Z120612S

Request Samples | Check Inventory

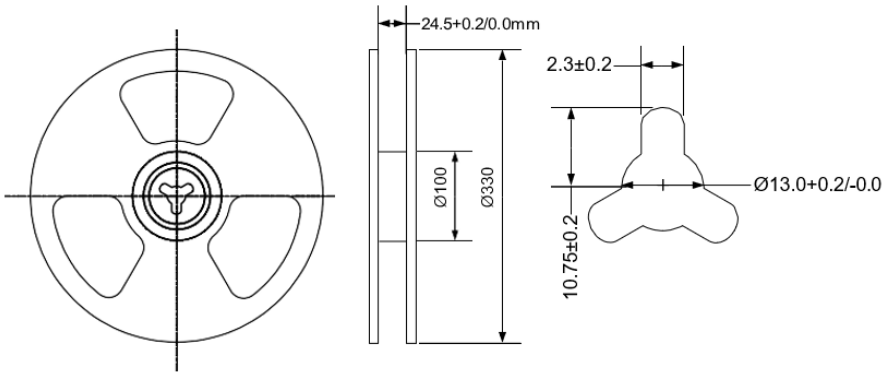
12.0 x 6.2 x 12.0 mm
RoHS/RoHS II Compliant
MSL Level = 1

Packaging

Tape & Reel: 300 pcs/reel



Series	W	E	F	P0	P1	D0	A0	B0	T	K0
ATL-1Z120612S	24.00 ±0.30	1.75 ±0.10	11.50 ±0.10	4.00 ±0.10	2.00 ±0.10	1.50 ±0.10	6.20 ±0.30	12.20 ±0.30	0.50 ±0.05	12.20 ±0.30



Dimensions: mm

ATTENTION: Abracon LLC's products are COTS – Commercial-Off-The-Shelf products; suitable for Commercial, Industrial and, where designated, Automotive Applications. Abracon's products are not specifically designed for Military, Aviation, Aerospace, Life-dependent Medical applications or any application requiring high reliability where component failure could result in loss of life and/or property. For applications requiring high reliability and/or presenting an extreme operating environment, written consent and authorization from Abracon LLC is required. Please contact Abracon LLC for more information.

ABRACON

5101 Hidden Creek Ln Spicewood TX 78669
Phone: 512-371-6159 | Fax: 512-351-8858
For terms and conditions of sales, please visit:
www.abracon.com

REVISION: IR 09-21-23

ABRACON IS ISO9001-2015 CERTIFIED

Downloaded from Arrow.com.