Product Series :	GTLVR	Brand :	GOTREND
File Version :	GTLVR-SERIES-V1R1	Editor :	Jerry Chen
Established Date :	2023.04.20	Description :	Coupled Inductors
Latest Edit Date :	2023.11.27	Product Type :	☑ Standard

Version Information :

SN	Date	Version Code	Modify Description	Editior	Check
01	2023.04.20	V1R0	New version update release	WU QIU YI	Toby Zhong 張友派
02	2023.11.27	V1R1	Add GTLVR126008PV-R08L	Jerry Chen	張文的
			NOTE		
			NOTE :		

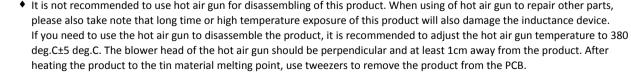


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- Information and data provided in the brochure can and do vary in different applications, and actual performance may vary over time.
- "Delivery Specification" illustrating precautions for the specifications and safety of each product listed in this catalog is available and we strongly recommend to provide these delivery specifications with customers that use these products.
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- Products listed in this catalog are intended for general electronic device usage under normal operation and use condition including telecommunication equipment, home appliances, sports equipment AV equipment, industrial machine, office equipment etc. Please take note that our products are not designed, intended or authorized for use in below mentioned applications unless explicitly agreed in writing between the parties to avoid product failure that could result in situation where personal injury or death could occur.
 - (1) Aerospace/Aviation equipment
 - (2) Atomic energy-related equipment
 - (3) Disaster prevention/crime prevention equipment
 - (4) Electric heating apparatus, burning equipment
 - (5) Medical equipment
 - (6) Military equipment
 - (7) Power-generation control equipment
 - (8) Public information-processing equipment
 - (9) Safety equipment
 - (10) Seabed equipment
 - (11) Transportation control equipment
 - (12) Transportation equipment (cars, electric trains, ships, etc.)
 - (13) Other applications that are not considered general-purpose applications
- Our manufacturing sites fully compliance with requirement regarding the quality management system in the automotive industry under the IATF 16949 standard. GOTREND Technology respect individual agreements with reference to customer requirements and customer specific requirements (CSR). We will like to emphasize that only requirements mutually agreed upon will in implemented in our Quality Management System taking into consideration that IATF 16949 may appear to support the acceptance of unilateral requirements. We will only legally bind to this individually agreed upon agreement under the IATF 16949 standard.
- The product itself is a powder metallurgy product, so the structure is relatively fragile, and it should not be used for products that are easy to fall. In addition, when this product is assembled, it should avoid collision with the tool or mechanism shell.









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	SMD Powe	er Inducto	r - GSTD S	Series Typ)e									
Image	Part Name	A (mm)	B (mm)	C (mm)	Induct	ance Ran	ge (nH)	DCR 1-4 (mΩ)	DCR 2-3 (mΩ)	Isat 25°C (A)	lsat 100°C (A)	Irms 1-4 (A)	Irms 2-3 (A)	Page
N	GTLVR966411PVT8	9.6	6.4	10.5	100		200	0.125	0.33	50-98	40-83	75	40	5-6
N	GTLVR126011PV	11.7	5.7	11	105		200	0.125	0.37	50-137	50-106	77	45	7-8
1	GTLVR126008PV	11.7	5.7	7.7	80	I.	80	0.1	0.3	105	95	78	45	9



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Established Date :	2023.04.20	Description :	Coupled Inductors
Latest Edit Date :	2023.11.27	Product Type :	☑ Standard

Features & Application :

- * PMIC multiphase voltage regulators
- * New architecture Voltage Regulator Modules (TLVR)
- * PC、Server、IPC、VRM and EVRD
- * Data networks and storage systems
- * Graphics cards, Battery power systems and PMIC control
- * Point-of-load modules (POL)
- * DCR sensing circuits

Part No. Example :

PN	:	GTLVR	966411	Р	v	Т8	-	R22	L	S
ID	:	1	2	3	4	5		6	7	8

1	:	GOTREND Series : GTLVR
2	:	Type Size Code : 966411 = L-9.6 x W-6.4 x H-10.5 mm
3	:	P = Pb free < 1000 ppm
4	:	[V]: Vertical type
5	:	[T8] : Material Code
6	:	[L] Value : Inductance R22 = 220 nH
7	:	[L] Tolerance : L = +/-15%

8 : [S]: Product Identification Number

Operating & Storage Condition :

* Operating Temp	-40 ~ +125 deg.C (Including self - temperature rise)
* Storage Temp	110 ~ +45 deg.C , 50 ~ 60% RH (Product with taping)
	240 ~ +125 deg.C (On board)
* Storage Life Time	6 Month (Less than 40 deg.C and 60% RH)

Attention & Caution :

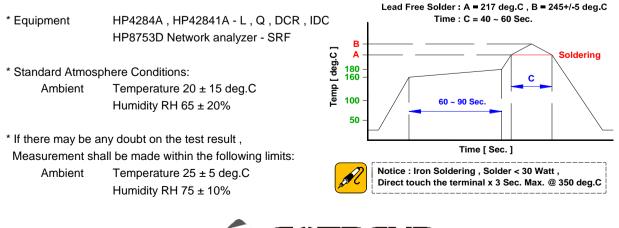
* Keep out of	Splashing water or salt water
* Avoid	Toxic Gas (Hydrogen sulfide, Sulfurous acid, Chlorine, Ammonia)
	Vibrations or shocks which exceed the specified condition

- Dew condense
 - Layout near the edge of PCB
 - Over flexure after SMT mounting & PCBA
- * Pin foot or SMD pad solderablility: Pb free type is best within 6 months after delivery
- * Humidity sensitive , IPC/JEDEC J-STD-020 MSL if over Level 1, recommend bake 30mins@150 degree before PCBA

Recommend IR Reflow Curve : GTX-IR-FILE001

* Caution for human life relative applications : PLS contact & consult with GOTREND team in design stage.

Test Condition :







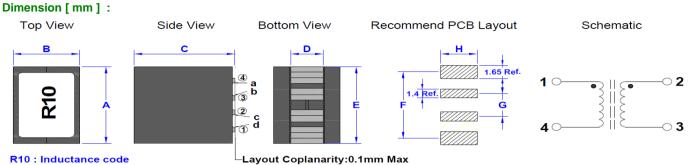
(Picture for reference only)

Basic Information :

Made in	China
Pin Foot	SMD
Shielding	Yes
J-STD-020	MSL Level 1
RoHS	Compliant
REACH	Compliant
Halogen	Free

Product Series :	GTLVR	Brand :	GOTREND		
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Latest Edit Date :	2023.11.27	Product Type :	Standard	Customize	

GTLVR966411PVT8-SERIES-S



A (Max.)	B (Max.)	C (Max.)	D (Typ.)	Е (Тур.)	F (Ref.)	G (Ref.)	H (Ref.)
9.60	6.40	10.50	3.20	9.00	9.50	3.30	3.70

Electrical Characteristics :

Part No.	OCL (nH)	Li (nH)	DCR (1)-(4) (mOhm)	DCR (2)-(3) (mOhm)	lsat (A) Typ.		Irms(A) (1)-(4)	Irms(A) (2)-(3)
	±15%	Min.	+/-10%	+/-10%	25°C	100°C	Тур.	Тур.
GTLVR966411PVT8-R10LS	100	64	0.125	0.33	98.0	83.0	75.0	40.0
GTLVR966411PVT8-R12LS	120	77	0.125	0.33	79.0	67.0	75.0	40.0
GTLVR966411PVT8-R15LS	150	96	0.125	0.33	62.0	53.0	75.0	40.0
GTLVR966411PVT8-R18LS	180	115	0.125	0.33	54.0	46.0	75.0	40.0
GTLVR966411PVT8-R22LS	220	140	0.125	0.33	50.0	40.0	75.0	40.0

* Test Condition : (1)-(4)=(2)-(3) @100KHz , 0.1Vrms , 25deg.C Ambient

* Li is the value of the inductance : at 25°C at the listed rated current.

* The nominal DCR(1)-(4) : is measured from point "d" to point "a", as shown above on the mechanical drawing (Ta=25°C).

* The nominal DCR(2)-(3): is measured from point "c" to point "b", as shown above on the mechanical drawing (Ta=25°C).

- * The IDC as listed is either the Isat (25°C or 100°C) or the Irms depending on which value is lower.
- * Isat (1)-(4) & Isat (2)-(3) : DC current that will cause inductance to drop approximately by 20%.

* Irms : Rated Current Loading when temperature rise approximately 40deg.C

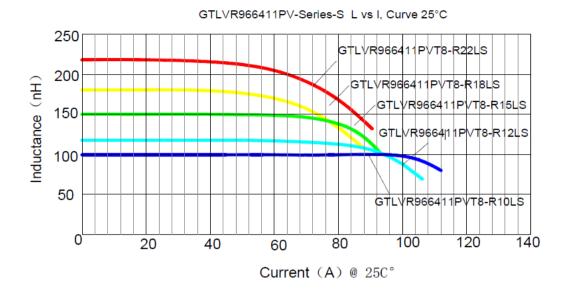
* The part temperature (ambient + temp rise) : Should not exceed 125°C under worst case operating conditions. Circuit design, component, PCB trace size and thickness, airflow and other cooling provisions all affect the part temperature. Part temperature should be verified in the end application.

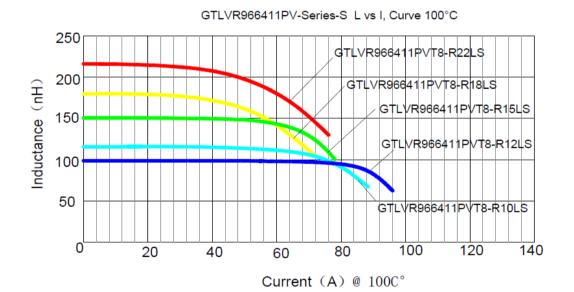
* High pot: 100Vdc, 1s, 3mA



Product Series :	GTLVR	Brand :	GOTREND
File Version :	GTLVR-SERIES-V1R1	Editor :	Jerry Chen
Established Date :	2023.04.20	Description :	Coupled Inductors
Latest Edit Date :	2023.11.27	Product Type :	☑ Standard

Typical Performance Curves :

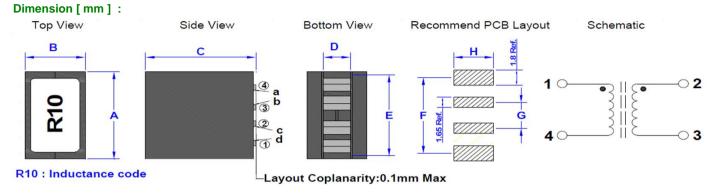




SOTREND

Product Series :	GTLVR	Brand :	GOTREND
File Version :	GTLVR-SERIES-V1R1	Editor :	Jerry Chen
Established Date :	2023.04.20	Description :	Coupled Inductors
Latest Edit Date :	2023.11.27	Product Type :	☑ Standard

GTLVR126011PV-SERIES



A (+/-0.3)	B (+/-0.3)	C (+/-0.2)	D (+/-0.3)	E (+/-0.5)	F (Ref.)	G (Ref.)	H (Ref.)
11.70	5.70	11.00	2.45	10.10	10.10	2.65	2.95

Electrical Characteristics :

Part No.	OCL (nH)	Li (nH)	DCR (1)-(4) (mOhm)	DCR (2)-(3) (mOhm)	()	at A) /p.	Irms(A) (1)-(4)	Irms(A) (2)-(3)
	±15%	Min.	+/-10%	+/-10%	25°C	100°C	Тур.	Тур.
GTLVR126011PV-R10L	105	71.4	0.125	0.37	125.0	106.0	77.0	45.0
GTLVR126011PV-R12L	120	81.6	0.125	0.37	102.0	87.0	77.0	45.0
GTLVR126011PV-R15L	150	102.0	0.125	0.37	84.0	71.0	77.0	45.0
GTLVR126011PV-R17L	170	115.6	0.125	0.37	70.0	60.0	77.0	45.0
GTLVR126011PV-R20L	200	136.0	0.125	0.37	58.0	50.0	77.0	45.0

* Test Condition : (1)-(4)=(2)-(3) @100KHz , 0.1Vrms , 25deg.C Ambient

* Li is the value of the inductance : at 25°C at the listed rated current.

* The nominal DCR(1)-(4) : is measured from point "d" to point "a", as shown above on the mechanical drawing (Ta=25°C).

* The nominal DCR(2)-(3): is measured from point "c" to point "b", as shown above on the mechanical drawing (Ta=25°C).

* The IDC as listed is either the Isat (25°C or 100°C) or the Irms depending on which value is lower.

* Isat (1)-(4) & Isat (2)-(3) : DC current that will cause inductance to drop approximately by 20%.

* Irms : Rated Current Loading when temperature rise approximately 40deg.C

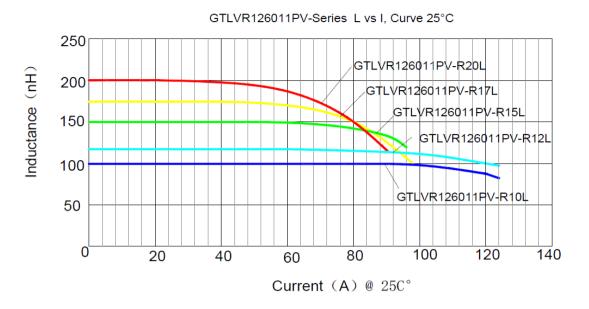
* The part temperature (ambient + temp rise) : Should not exceed 125°C under worst case operating conditions. Circuit design, component, PCB trace size and thickness,airflow and other cooling provisions all affect the part temperature. Part temperature should be verified in the end application.

* High pot: 100Vdc, 1s, 3mA

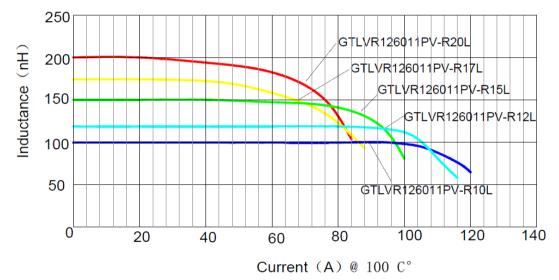


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Established Date :	2023.04.20	Description :	Coupled Inductors
Latest Edit Date :	2023.11.27	Product Type :	☑ Standard

Typical Performance Curves :



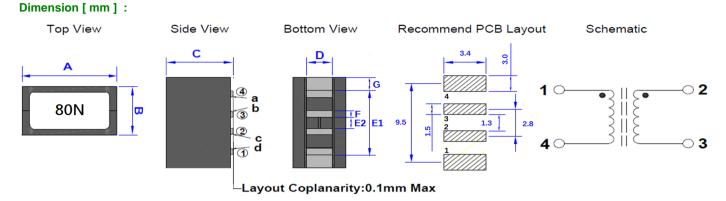
GTLVR126011PV-Series L vs I, Curve 100°C





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File Version :	GTLVR-SERIES-V1R1	Editor :	Jerry Chen
Established Date :	2023.04.20	Description :	Coupled Inductors
Latest Edit Date :	2023.11.27	Product Type :	☑ Standard

GTLVR126008PV-SERIES



A (+/-0.3)	B (+/-0.3)	C (+/-0.3)	D (+/-0.2)	E1 (+/-0.3)	E2 (+/-0.3)	F (+/-0.3)	G(+/-0.3)
11.70	5.70	7.70	2.80	7.20	1.80	1.00	2.40

Electrical Characteristics :

Part No.	OCL (nH)	Li (nH)	DCR (1)-(4) (mOhm)	DCR (2)-(3) (mOhm)		Isat (A) Typ.		Irms(A) (1)-(4)	Irms(A) (2)-(3)
	±15%	Min.	+/-10%	+/-10%	25°C	75°C	100°C	Тур.	Тур.
GTLVR126008PV-R08L	80	57.6	0.100	0.30	105.0	100.0	95.0	78.0	45.0

* Test Condition : (1)-(4)=(2)-(3) @100KHz , 1.0Vrms , 25deg.C Ambient

* Li is the value of the inductance : at 25°C at the listed rated current.

* The nominal DCR(1)-(4) : is measured from point "d" to point "a", as shown above on the mechanical drawing (Ta=25°C).

* The nominal DCR(2)-(3) : is measured from point "c" to point "b", as shown above on the mechanical drawing (Ta=25°C).

* Isat (1)-(4) & Isat (2)-(3) : DC current that will cause inductance to drop approximately by 20%.

* Irms : Rated Current Loading when temperature rise approximately 40deg.C

* The part temperature (ambient + temp rise) : Should not exceed 125°C under worst case operating conditions. Circuit design, component, PCB trace size and thickness,airflow and other cooling provisions all affect the part temperature. Part temperature should be verified in the end application.



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Latest Edit Date :	2023.11.27	Product Type :	☑ Standard

Care note :

Care note for Use :

(1) Storage Condition :

Temperature 25 to 35 °C , Humidity 45 to 60% RH

- (2) Use Temperature :
 - a. Minimum Temperature : -40 °C Ambient temperature of this product.
 - b. Maximum Temperature : +125 °C The value of temperature including ambient and temperature rise of this product.
 - c. Reliability test temperature range from -40 ~ +125 $^\circ\text{C}$
 - d. However, this is not meant as temperature grade guarantee for UL.

(3) Model :

When this product was used in a similar or as new product to the original one, sometimes it might be unable to satisfy the specifications due to difference in condition of usage.

(4) Drop :

If this product suffered mechanical stress such as drop, characteristics may become poor (due to damage on coil / bobbin / ferrite ... etc.)

Never use such stressed product.

Care note for Safety :

(1) Provision to Abnormal Condition :

This product itself does not have any protective function in abnormal condition such as overload, short-circuit and open-circuit conditions, etc.

Therefore, it shall be confirmed from the end product that there is no risk of smoking, fire, dielectric withstand voltage insulation resistance, etc. in abnormal conditions to provide protective devices and /or protection circuit in the end product.

(2) Temperature Rise :

Temperature rise on this product depends on the installation condition on end products. It shall be confirmed on the actual end product that temperature rise of this product is within the specified temperature class limit.

(3) Water :

This product must not be used in wet condition resulted from water, coffee or any liquid contact because insulation strength becomes very low under such condition.

(4) Potting :

If this product is potted in some compound, coating material of magnet wire might be occasionally damaged. Please ask us if you intend to pot this product.

(5) Detergent :

Please consult our company immediately once under such circumstances because product reliability confirmation etc. is needed when this product come in contact with these chemicals.



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Reliability :

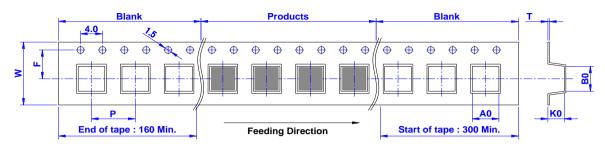
SN	Test Item		Test Condition		Specification
1	Dimension	Actual Size		Meet Spec	
2	Thermal Shock (Temperature Cycle)	Temperature : -4 Cycle : 100 Cycle	0 ~ +125 deg.C kept stat es (power off)	Elec. no variation Appearance no deformation	
3	Humidity Resistance	Humidity : 90% ~ Temperature : 60	· 95% RH) ± 2 deg.C,Test Time:	96 ± 2 Hours	Elec. no variation Appearance no deformation
4	HighTemperature	Temperature : 12 Testing Time : 96			Elec. no variation Appearance no deformation
5	Low Temperature	Temperature : -4 Time : 96 ± 2 Ho	urs		Elec. no variation Appearance no deformation
6	Temperature and Humidity Cycle	Temperature25 deg.C55 deg.C25 deg.CCycle : 20 Cycle	Humidity 90% ~ 95% RH 95% ~ 96% RH 90% ~ 95% RH	Time 3.0 Hr 5.0 Hr 3.0 Hr	Elec. no variation Appearance no deformation
7	Vibration		z ~ 55Hz,Amplitude:1. ,Z,Time:2 Hours each		Elec. no variation Appearance no deformation
8	Solderability	The profile like o Preheat : 160 ± 7 Peak : 245 ± 5 d	SMT IR-Reflow ur suggest profile. 10 deg.C (90 sec) eg.C Sec. / up 217 deg.C	Elec. no variation Appearance no deformation	
9	Soldering Heat Resistance	Solder : Sn / Ag	10 deg.C(90 sec) / Cu(Pb Free) 60 ± 5 deg.C [,] Time:3 ±	- 1 seconds	Elec. no variation Appearance no deformation
10	Iron Solder Heat Resistance	Solder Temp. : 3 Flux : Rosin,Tir	50 ± 5 deg.C me : 3 ± 1 seconds		Elec. no variation Appearance no deformation
11	Bending Strength	Unit : mm	10 x 10	Elec. no variation Appearance no deformation	
12	Flexure Strength	Unit : mm 1.6	10 x 20 4.5 4.5 Solder cream 0.15 mr	Elec. no variation Appearance no deformation	
13	Terminal Strength	Mount on F Solder Cre	X - Qush 1 directi am 0.15 mm Y	Elec. no variation Appearance no deformation	
14	Load life	Temperature : 25 Load : Allowed D	5 ± 3 deg.C 0C Current,Test Time:9	96 ± 2 Hours	Elec. no variation Appearance no deformation



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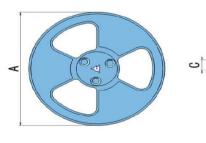
Packaging Information :

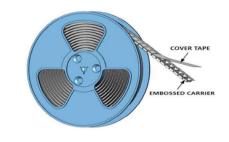
Tape Dimension Schematic Diagram (mm):



SIZE/mm	W	Р	A0	B0	K0	Т	F
966411	24.0	12.0	9.80	6.60	10.70	0.50	11.50
126011	24.0	12.0	6.20	12.20	11.30	0.50	11.50
126008	24.0	12.0	6.20	12.20	8.00	0.50	11.50

Reel Dimension Schematic Diagram (mm):



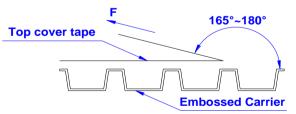


SIZE/mm	Reel Size	А	В	С	D	QTY / Reel
966411	13" × 24 mm	330	100	20.4	24.5	500 PCS
126011	13" × 24 mm	330	100	20.4	24.5	400 PCS
126008	13" × 24 mm	330	100	20.4	24.5	500 PCS

D

В

Tearing Off Force Schematic Diagram :



The force for tearing off cover tape is 10 to 130 grams in the arrow direction under the following conditions (referenced ANSI / EIA - 481 - D - 2008 of 4.11stadnard).

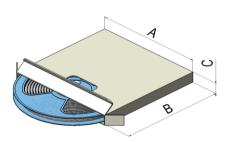
Room Temp.	Room Humidity	Room Atm.	Tearing Speed	
(°C)	(%)	(hPa)	(mm / min)	
5 ~ 35	45 ~ 85	860 ~ 1060	300	



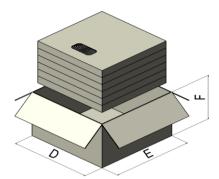
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Packaging Information :

Box Package Schematic Diagram :



13" Small Box



13" Large Box

SIZE/mm	Rells size	A	В	С	Large Box size	D	E	F	Reels in Small Box (QTY)	Small Box in Large Box(QTY)
966411	13"	335	335	23	13"	350	350	220	1(500)	5(2500)
126011	13"	335	335	23	13"	350	350	220	1(400)	5(2000)
126008	13"	335	335	23	13"	350	350	220	1(500)	5(2500)

