



Product Series Code:	GSDRK	Brand:	GOTREND
File Version:	GSDRK-V3R5	Editor:	Teddy
Established Date:	2009.09.01	Description:	Shielding SMD power choke
Latest Edit Date:	2016.07.28	Pages:	1 / 7

Version Information:

SN	Date	Version Code	Modify Description	Editor
1	2007.07.20	1R0	Original build	Robert
2	2008.10.09	2R0	Build Isat L drop 10% and Irms	Teddy
3	2009.06.11	2R1	Add Pad Layout Dimensions	Teddy
4	2009.06.13	2R2	Add GSDRK127P SERIES	Teddy
5	2009.06.16	2R3	Add GSDRK125P SERIES	Teddy
6	2009.09.01	2R4	Add GSDRK125 / 127 10~1000uH Test Freq. And Delete Part No. Special Code [T]	Teddy
7	2011.05.25	2R5	Add GSDRK125P-2R7N	Teddy
8	2011.07.08	2R6	Add GSDRK127P-1R0N / 2R2M	Teddy
9	2011.11.23	2R7	Add GSDRK127P-222K / 332K	Teddy
10	2013.10.08	3R0	Add GSDRK125P-2R2N	Teddy
11	2013.10.28	3R1	Add stand type storage condition : -40 ~ +105 ° C / RH 65 ± 10%	Teddy
12	2014.05.05	3R2	Add Page.7 Package : GSDRK74P "P" dimension = 12.0 mm	Teddy
13	2014.07.04	3R3	Add Hoop Material External	Teddy
14	2014.11.11	3R4	Add GSDRK127P-R68N / 1R5N	Teddy
15	2016.07.28	3R5	Taping schematic revised	Teddy

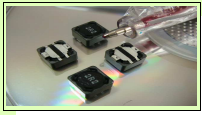
Custom-Made Design Specification:

GOTREND PN	Inductance @ 1KHz / 0.25V (uH)	L-Tolerance M=20% N=30%	RDC (m ohm / Typ.)	RDC (m ohm / Max.)	Isat 1 @ L-Drop 10% (Amp / Max.)	Isat 2 @ L-Drop 35% (Amp / Max.)	Irms @ ΔT=40 °C (Amp / Max.)	Color Code Marking

★ Important Declaration 重要聲明:

Human Life Declaration: If any application in/on human life about device like Aircraft / Medical Equipment / Automobile...etc, the approval must be passed by your unique and detail test or evaluation result. GOTREND Tech. only responsible for our items cost and possible rework charge!
 客戶端生命相關之產品應用,如醫療,航太,車用..等直接人命相關之設備,必須根據客戶特別且仔細之測試驗證,確保研發及量產的產品最終品質,高創科技將僅對不良零件本身之價值及相關直接重工的費用負責!

謝謝您的採用,任何問題,請發電郵反映,或來電工程部洽詢!
 Thanks for your patronage,if any question,PLS feel free Email contact or call for service!
<http://www.gotrend.com.tw> E.mail: service@gotrend.com.tw



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*** Features & Application:**

- 1.Power supply PWM circuit input / output inductor
- 2.Power line noise suppression
- 3.DC-DC Converter
- 4.Shielding Structure for good in EMI effect
- 5.To help you go pass CE/FCC standard
- 6.MB / NB / IPC / LCD Monitor / STB / Network Device
- 7.Low Profile for all compact design

*** Product Identify:**

Pin Foot	EMI	Color	Made In
SMD	Shield	Black	China / Taiwan

RoHS Compliant – SGS Test Report

Pb	Cd	Hg	Cr+6	PBB	PBDE
<1000ppm	ND	ND	ND	ND	ND

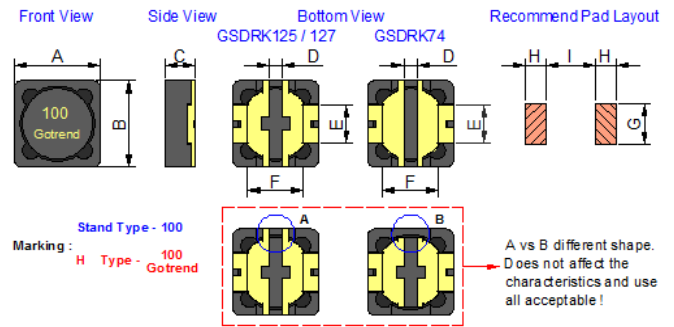
*** Part No. Example:**

PN	GSDRK	127	P	[]	-	100	M	[]
ID	1	2	3	4	5	6	7	

- 1 GOTREND Series Code
- 2 Dimension Code: 127 = (L) 12.5 x (W) 12.5 x (H) 8.0 mm
- 3 RoHS Compliant
- 4 **Special Code for Series** L : Low Profile
H : H Type = High Storage & Operating Condition
- 5 Inductance : 100 = 10.0uH Ex: 3R3=3.3uH, 101=100uH
- 6 Tolerance : M=20%, N=30%
- 7 **Special Code for specific item** : S=Custom Design

*** Dimensions: [mm]**

Base replaceable without notice!



Size Code	A (Max)	B (Max)	C (Max)	D (Ref.)	E (+/-0.3)	F (+/-0.5)	G (Ref.)	H (Ref.)	I (Ref.)
74	7.80	7.80	4.50	1.30	1.98	4.80	2.40	1.65	4.40
125	12.50	12.50	6.00	1.50	5.00	7.60	5.60	2.80	7.00
127	12.50	12.50	8.00	1.50	5.00	7.60	5.60	2.80	7.00

*** Operating & Storage Condition:**

- 1.Storage Condition Stand Type : -40 ~ +105 ° C / RH 65 ± 10%
H Type : -40 ~ +165 ° C / RH 65 ± 10%
(range is application specific)
- 2.Storage Life Time 6 Months @ 20 ° C / RH 65% (no seal off)
- 3.Operating Condition Stand Type : -40 ~ +105 ° C
H Type : -40 ~ +165 ° C
(range is application specific)

Attention & Caution:

- * Keep out of splashing water or salt water
- * Toxic Gas (Hydrogen sulfide, Sulfurous acid, Chlorine, Ammonia)
- * Vibrations or shocks which exceed the specified condition
- * Dew condense
- * Please be careful for the stress to this product by board flexure or something after the mounting.

*** Schematic:**



*** Test Condition:**

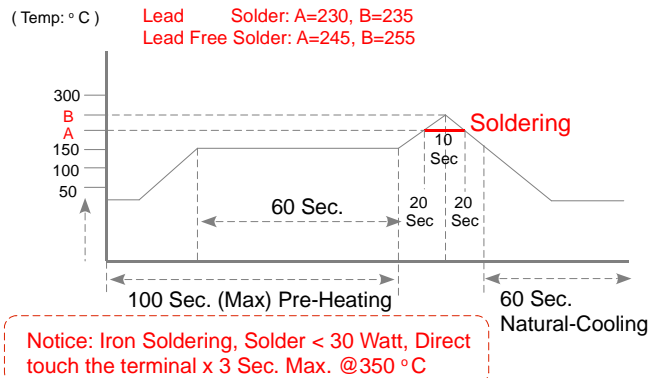
- Equipment**
- 1.L – WK3260 LCR Meter
 - 2.RDC – Twintex TM8089A
 - 3.IDC – WK3260+3265B DC-Bias
 - 4.Dimension - Mitutoyo
 - 5.Temperature – TECPEL 305A

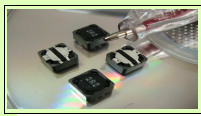
Ambient Temperature 20 ± 5 ° C
Humidity RH 65 ± 20%

If there may be any doubt on the test result, Measurement shall be made within the following limits:

Ambient Temperature 25 ± 5 ° C
Humidity RH 75 ± 10%

*** Recommend IR Reflow Curve: GTX-IR-FILE001**





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GOTREND PN	Inductance (uH)	L-Tolerance	RDC (m Ohm / Typ.)	RDC (m Ohm / Max.)	Isat 1 @ L-Drop 10% (Amp / Max.)	Isat 2 @ L-Drop 35% (Amp / Max.)	Irms @ ΔT=40 °C (Amp / Max.)
GSDRK74P-1R0□	1.0	M / N	10.9	13.2	9.50	10.50	8.40
GSDRK74P-1R5□	1.5	M / N	12.5	15.0	7.90	9.50	7.80
GSDRK74P-1R8□	1.8	M / N	14.1	17.0	7.70	8.60	7.30
GSDRK74P-2R2□	2.2	M / N	16.1	19.0	6.80	7.50	6.60
GSDRK74P-2R7□	2.7	M / N	18.9	23.0	6.30	7.00	6.20
GSDRK74P-3R3□	3.3	M / N	22.2	27.0	6.00	6.50	5.80
GSDRK74P-3R9□	3.9	M / N	25.2	30.0	5.40	6.00	5.40
GSDRK74P-4R7□	4.7	M / N	27.7	34.0	5.00	5.50	5.20
GSDRK74P-5R6□	5.6	M / N	34.8	42.0	4.10	5.00	4.80
GSDRK74P-6R8□	6.8	M / N	40.0	48.0	3.80	4.50	4.50
GSDRK74P-8R2□	8.2	M / N	48.0	58.0	3.60	4.10	4.30
GSDRK74P-100□	10.0	M	55.6	67.0	2.55	3.50	4.00
GSDRK74P-120□	12.0	M	63.2	76.0	2.50	3.40	3.80
GSDRK74P-150□	15.0	M	79.0	95.0	2.40	3.30	3.50
GSDRK74P-180□	18.0	M	97.4	117.0	2.10	2.90	3.20
GSDRK74P-220□	22.0	M	114.0	136.0	2.00	2.60	3.00
GSDRK74P-270□	27.0	M	123.0	147.0	1.90	2.40	2.80
GSDRK74P-330□	33.0	M	152.0	182.0	1.65	2.10	2.40
GSDRK74P-390□	39.0	M	164.0	196.0	1.55	2.00	2.20
GSDRK74P-470□	47.0	M	200.0	240.0	1.50	1.82	2.00
GSDRK74P-560□	56.0	M	250.0	300.0	1.35	1.60	1.78
GSDRK74P-680□	68.0	M	290.0	350.0	1.25	1.50	1.65
GSDRK74P-820□	82.0	M	390.0	470.0	1.10	1.30	1.50
GSDRK74P-101□	100.0	M	490.0	590.0	1.00	1.18	1.30
GSDRK74P-121□	120.0	M	600.0	720.0	0.90	1.10	1.15
GSDRK74P-151□	150.0	M	770.0	920.0	0.75	0.90	1.00
GSDRK74P-181□	180.0	M	860.0	1030.0	0.74	0.86	0.95
GSDRK74P-221□	220.0	M	1050.0	1250.0	0.70	0.77	0.85
GSDRK74P-271□	270.0	M	1300.0	1560.0	0.63	0.70	0.78
GSDRK74P-331□	330.0	M	1620.0	1940.0	0.59	0.65	0.72
GSDRK74P-391□	390.0	M	2100.0	2500.0	0.50	0.59	0.65
GSDRK74P-471□	470.0	M	2340.0	2800.0	0.45	0.54	0.60
GSDRK74P-561□	560.0	M	3000.0	3600.0	0.42	0.50	0.56
GSDRK74P-681□	680.0	M	3350.0	4020.0	0.40	0.44	0.48
GSDRK74P-821□	820.0	M	3800.0	4560.0	0.35	0.40	0.44
GSDRK74P-102□	1000.0	M	5044.0	6050.0	0.28	0.35	0.38
GSDRK74P-152□	1500.0	M	/	6800.0	/	/	0.30
GSDRK74P-202□	2000.0	M	/	10200.0	/	/	0.30
GSDRK74P-103□	10000.0	M	/	63800.0	/	/	0.10

- L Tolerance : M = +/-20% ; N = +/-30% ■ L value test frequency : 1.0~8.2uH @ 100KHz / 0.3V ; 10~1000uH @ 1KHz / 0.3V
- The Isat1 is the current at which the inductance decreases by 10% from the initial value
- The Isat2 is the current at which the inductance decreases by 35% from the initial value
- The Irms is the current at which the temperature rise is Δ40, whichever 20°C).



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GSDRK125P-2R2□	2.2	N	10.00	13.00	15.00	16.00	9.00
GSDRK125P-2R7□	2.7	N	5.00	8.00	13.00	14.00	9.00
GSDRK125P-3R3□	3.3	M / N	9.70	15.00	12.20	13.20	8.20
GSDRK125P-3R9□	3.9	M / N	10.70	16.00	11.00	12.20	7.80
GSDRK125P-4R7□	4.7	M / N	11.40	17.00	10.50	11.30	7.50
GSDRK125P-5R6□	5.6	M / N	14.00	18.00	9.40	10.00	6.70
GSDRK125P-6R8□	6.8	M / N	15.30	20.00	8.50	9.30	6.40
GSDRK125P-8R2□	8.2	M / N	16.60	22.00	7.50	8.40	6.10
GSDRK125P-100□	10.0	M	18.60	24.00	7.00	8.00	5.75
GSDRK125P-120□	12.0	M	21.80	28.00	6.60	7.50	5.30
GSDRK125P-150□	15.0	M	24.00	30.00	6.00	6.60	5.00
GSDRK125P-180□	18.0	M	29.40	37.00	5.40	6.00	4.70
GSDRK125P-220□	22.0	M	33.50	42.00	4.80	5.50	4.40
GSDRK125P-270□	27.0	M	40.50	51.00	4.50	5.00	4.00
GSDRK125P-330□	33.0	M	50.30	63.00	4.00	4.50	3.63
GSDRK125P-390□	39.0	M	62.00	78.00	3.50	4.00	3.20
GSDRK125P-470□	47.0	M	69.00	87.00	3.30	3.60	3.00
GSDRK125P-560□	56.0	M	83.00	104.00	3.00	3.30	2.70
GSDRK125P-680□	68.0	M	98.00	125.00	2.75	3.00	2.50
GSDRK125P-820□	82.0	M	116.00	145.00	2.40	2.70	2.20
GSDRK125P-101□	100.0	M	143.00	180.00	2.30	2.55	1.90
GSDRK125P-121□	120.0	M	166.00	210.00	2.00	2.30	1.70
GSDRK125P-151□	150.0	M	211.00	270.00	1.85	2.05	1.50
GSDRK125P-181□	180.0	M	246.00	310.00	1.65	1.85	1.35
GSDRK125P-221□	220.0	M	293.00	370.00	1.50	1.75	1.25
GSDRK125P-271□	270.0	M	380.00	470.00	1.38	1.58	1.10
GSDRK125P-331□	330.0	M	460.00	580.00	1.25	1.40	1.00
GSDRK125P-391□	390.0	M	550.00	680.00	1.15	1.30	0.92
GSDRK125P-471□	470.0	M	660.00	820.00	1.05	1.20	0.83
GSDRK125P-561□	560.0	M	770.00	960.00	0.98	1.08	0.76
GSDRK125P-681□	680.0	M	950.00	1200.00	0.88	0.98	0.69
GSDRK125P-821□	820.0	M	1120.00	1400.00	0.78	0.88	0.64
GSDRK125P-102□	1000.0	M	1550.00	1940.00	0.68	0.78	0.56

- L Tolerance : M = +/-20% ; N = +/-30%
- L value test frequency : 1.0~8.2uH @ 100KHz / 0.3V ; 10~1000uH @ 1KHz / 0.3V
- The Isat1 is the current at which the inductance decreases by 10% from the initial value
- The Isat2 is the current at which the inductance decreases by 35% from the initial value
- The Irms by Stand-Type is the current at which the temperature rise is $\Delta T \leq 40^{\circ}\text{C}$,whichever ($T_a = 20^{\circ}\text{C}$).
- The Irms by H-Type is the current for an approximate ΔT of 40°C without core loss. Derating is necessary for AC currents. PCB layout, trace thickness and width, air-flow, and proximity of other heat generating components will affect the temperature rise. It is recommended that the temperature of the part not exceed 165°C under worst case operating conditions verified in the end application.



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GSDRK127P-R68□	0.68	N	4.50	5.85	20.00	26.00	11.00
GSDRK127P-1R0□	1.0	N	4.50	5.85	20.00	21.00	11.00
GSDRK127P-1R5□	1.5	N	4.80	7.80	19.00	20.00	10.50
GSDRK127P-2R2□	2.2	M / N	6.50	8.45	19.00	20.00	10.00
GSDRK127P-3R3□	3.3	M / N	7.59	10.00	18.00	19.00	9.60
GSDRK127P-4R7□	4.7	M / N	9.75	13.00	14.50	16.60	8.20
GSDRK127P-5R6□	5.6	M / N	12.50	15.50	13.50	15.00	7.60
GSDRK127P-6R8□	6.8	M / N	13.40	16.80	12.70	13.50	7.35
GSDRK127P-8R2□	8.2	M / N	15.40	19.00	11.30	12.50	6.50
GSDRK127P-100□	10.0	M	18.70	23.50	10.00	11.50	6.10
GSDRK127P-120□	12.0	M	19.60	25.00	9.50	10.50	5.50
GSDRK127P-150□	15.0	M	27.50	34.00	8.60	9.50	5.00
GSDRK127P-180□	18.0	M	29.70	38.00	7.80	8.60	4.80
GSDRK127P-220□	22.0	M	36.60	45.80	7.00	7.70	4.60
GSDRK127P-270□	27.0	M	41.90	52.50	6.35	7.00	4.20
GSDRK127P-330□	33.0	M	51.60	62.00	5.45	6.30	3.80
GSDRK127P-390□	39.0	M	59.70	72.00	5.30	6.00	3.50
GSDRK127P-470□	47.0	M	72.00	87.00	5.00	5.50	3.10
GSDRK127P-560□	56.0	M	90.00	110.00	4.50	5.00	2.90
GSDRK127P-680□	68.0	M	108.00	130.00	4.00	4.30	2.70
GSDRK127P-820□	82.0	M	123.00	148.00	3.60	4.00	2.50
GSDRK127P-850□	85.0	K	137.00	165.00	3.30	3.60	/
GSDRK127P-101□	100.0	M	152.00	182.00	3.20	3.50	2.20
GSDRK127P-121□	120.0	M	170.00	204.00	3.10	3.40	2.00
GSDRK127P-151□	150.0	M	226.00	270.00	2.90	3.20	1.80
GSDRK127P-181□	180.0	M	283.00	340.00	2.50	2.80	1.60
GSDRK127P-221□	220.0	M	348.00	420.00	2.25	2.50	1.45
GSDRK127P-271□	270.0	M	397.00	480.00	2.00	2.30	1.30
GSDRK127P-331□	330.0	M	500.00	600.00	1.90	2.00	1.20
GSDRK127P-391□	390.0	M	560.00	670.00	1.70	1.90	1.10
GSDRK127P-471□	470.0	M	657.00	800.00	1.55	1.70	1.00
GSDRK127P-561□	560.0	M	820.00	1000.00	1.45	1.60	0.90
GSDRK127P-681□	680.0	M	990.00	1200.00	1.30	1.45	0.80
GSDRK127P-821□	820.0	M	1260.00	1500.00	1.20	1.30	0.70
GSDRK127P-102□	1000.0	M	1530.00	1820.00	1.09	1.20	0.60
GSDRK127P-222□	2200.0	K / M	3050.00	3660.00	0.70	0.80	0.42
GSDRK127P-332□	3300.0	K / M	4250.00	5100.00	0.45	0.55	0.35
GSDRK127P-682□	6800.0	M	9130.00	10950.00	0.30	0.30	0.24

■ L Tolerance : K = +/-10% ; M = +/-20% ; N = +/-30%

■ L value test frequency : 1.0~8.2uH @ 100KHz / 0.3V ; 10~1000uH @ 1KHz / 0.3V

■ The Isat1 is the current at which the inductance decreases by 10% from the initial value

■ The Isat2 is the current at which the inductance decreases by 35% from the initial value

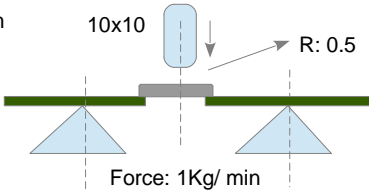
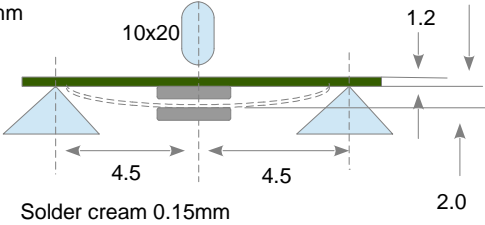
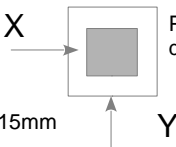
■ The Iirms by Stand-Type is the current at which the temperature rise is ΔT ≤ 40°C , whichever (Ta = 20°C).

■ The Iirms by H-Type is the current for an approximate ΔT of 40°C without core loss. Derating is necessary for AC currents. PCB layout, trace thickness and width, air-flow, and proximity of other heat generating components will affect the temperature rise. It is recommended that the temperature of the part not exceed 165°C under worst case operating conditions verified in the end application.



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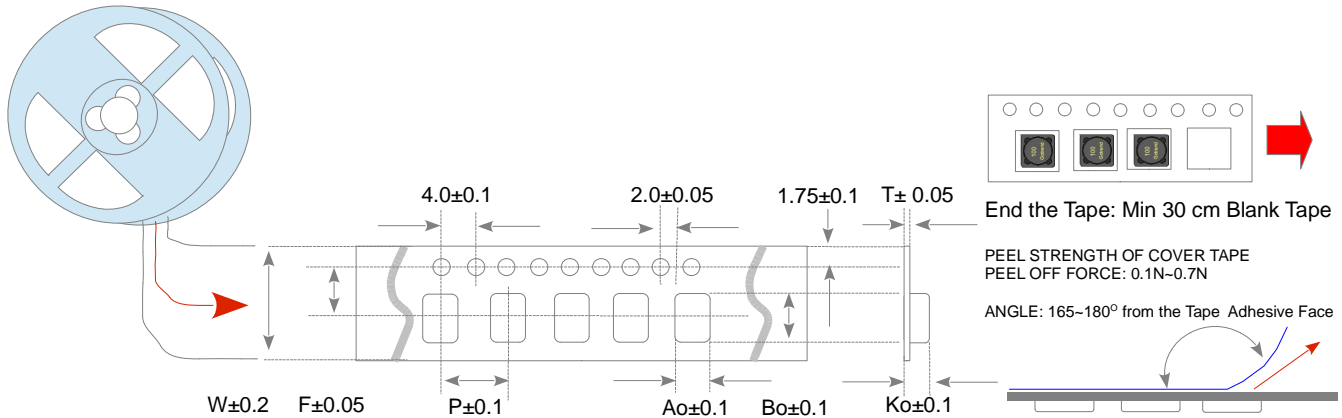
Reliability:

SN	Test Item	Test Condition	Specification	Sample Qty/pcs	Result
1	Dimension 本體相關呎吋	Actual Size ...	Meet Spec	10	Pass
2	Thermal Shock (Temperature Cycle) 溫度循環試驗	Temperature: -40 °C / +165 ° C kept stabilized for 30 minutes each Cycle: 20 Cycles (power off)	Elec. no variation Appearance no deformation	10	Pass
3	Humidity Resistance 耐濕試驗	Humidity: 90%~ 95% RH Temperature: 40±2 ° C Test Time: 120±2 Hours	Elec. no variation Appearance no deformation	10	Pass
4	High Temperature 耐熱試驗	Temperature: 165±2 ° C Humidity: 20% Testing Time: 120±2 Hours	Elec. no variation Appearance no deformation	10	Pass
5	Low Temperature 耐寒試驗	Temperature: -40 ± 2 ° C Time: 120±2 Hours	Elec. no variation Appearance	10	Pass
6	Temperature and Humidity Cycle 溫/濕度循環試驗	Temperature: 165±2 ° C Humidity RH 90~95% Time: 24Hr x 8 Days	Elec. no variation Appearance no deformation	10	Pass
7	Vibration 振動性試驗	Frequency: 10Hz~55Hz Amplitude: 1.5mm Direction: X,Y,Z Time: 2 Hours each	Elec. no variation Appearance no deformation	10	Pass
8	Solderability 吃錫性試驗	Dip pads in Flux and test by Solder Pot (96.5 Sn/3.5Ag Solder) @ Temperature 255 ± 5 ° C / 5 ± 1 Sec Soldering Area must be cover > 90%	Elec. no variation Appearance no deformation	10	Pass
9	IR Reflow Soldering 迴焊爐焊性試驗	Go through real SMT IR-Reflow... Temperature Tolerance : (± 5 ° C): IR temperature curve according to GTX-IR-FILE001 Cycles: x 2	Elec. no variation Appearance no deformation	10	Pass
10	Iron Solder Heat Resistance 手焊槍耐熱試驗	Solder Temp.: 350 ± 5 ° C Flux: Rosin Dip time: 5±1 seconds	Elec. no variation Appearance no deformation	10	Pass
11	Bending Strength 折斷力試驗	Unit: mm 	Elec. no variation Appearance no deformation	10	Pass
12	Flexure Strength 彎曲試驗	Unit: mm 	Elec. no variation Appearance no deformation	10	Pass
13	Terminal Strength 推/拉力試驗	 Mount on PCB Solder Cream 0.15mm Push 10N force to X,Y direction	Must no crack and damage	10	Pass
14	High-Voltage 高壓電擊試驗	100 V DC between core & winding	Elec. no variation Appearance no deformation	10	Pass
15	ORT: on going reliability test 負載電氣試驗	Base on Spec for approval	Elec. no variation Appearance no deformation	10	Pass

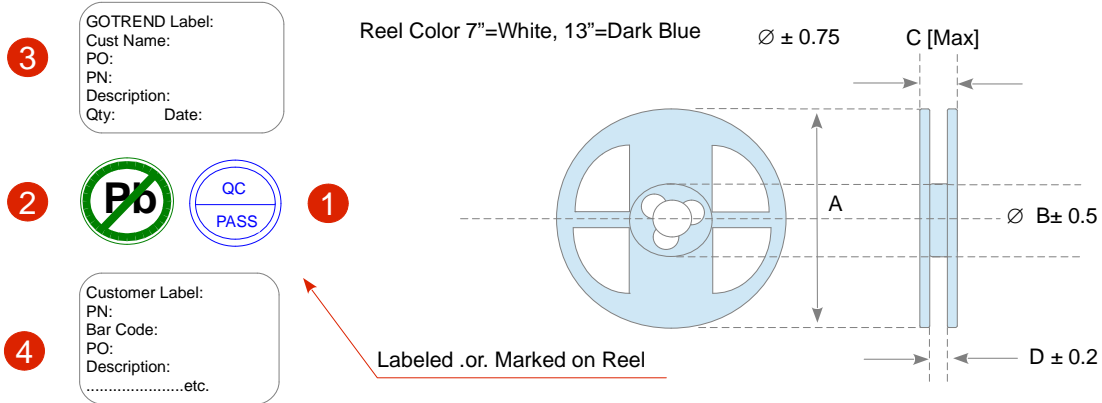


Product Series Code:	GSDRK	Brand:	GOTREND
File Version:	GSDRK-V3R5	Editor:	Teddy
Established Date:	2009.09.01	Description:	Shielding SMD power choke
Latest Edit Date:	2016.07.28	Pages:	7 / 7

Package :



Size / mm	W	P	Ao	Bo	Ko	T	F
GSDRK74	16	12	7.6	7.6	4.5	0.40	7.5
GSDRK125	24	16	12.6	12.6	5.9	0.40	11.5
GSDRK127	24	16	12.6	12.6	8.2	0.40	11.5



Size / mm	A	B	C	D	Reel Size	Qty / Reel
GSDRK74	330	100	21.0	17.0	13"	1000
GSDRK125	330	100	28.9	24.5	13"	500
GSDRK127	330	100	28.9	24.5	13"	500

Unit: [cm]

5 Inner Small Box in Outer Large Box

