

SMD Power Inductors

SDS0402 Series

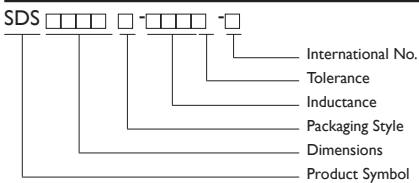


FEATURES

Smallest size and high performance

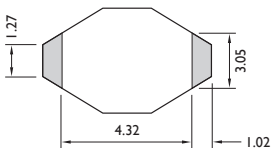
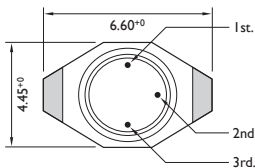
High energy storage and very low resistance.

PRODUCT IDENTIFICATION



- Packaging: T: Tape and Reel
- Tolerance: M \pm 20%
- Note: YAGEO will start to release SDS Series inductors with lead-free terminals which meet SONY SS-00259's criteria for lead-free product in Q2 of 2004, and YAGEO International No. will be changed to "N" as identification. Ex.: SDS0402BL-101M-N.

SHAPE AND DIMENSIONS



Dimensions : mm

These shielded ultra-miniature inductors can help designers achieving significantly longer battery life in handheld communication devices and other portable products.

The SDS0402 Series offers the highest efficiency, smallest size and lowest cost of any comparable part. DC resistance is 10% to 60% lower than other inductors, with greatest efficiency improvements seen at inductance values from 100 to 10,000 μ H.

These magnetically shielded inductors are designed with a flat top and constructed of heat resistant materials to ensure trouble-free assembly and reflow operations.

APPLICATIONS

Notebook computers, step-up and step-down converters.

Flash memory programmers, etc...

ELECTRICAL CHARACTERISTICS

PART NO.	INDUCTANCE (μ H \pm 20%)*	Q Min.	Q FREQUENCY (KHz)	DC RESISTANCE (Ω th) Max.	SRF (MHz)	CURRENT (A) Max.**
SDS0402T-1R0M-S	1.0	30	200	0.040	200	3.0
SDS0402T-1R5M-S	1.5	30	200	0.045	100	2.8
SDS0402T-2R2M-S	2.2	40	200	0.050	90	1.8
SDS0402T-3R3M-S	3.3	40	200	0.060	90	1.6
SDS0402T-4R7M-S	4.7	40	200	0.065	80	1.4
SDS0402T-6R8M-S	6.8	40	200	0.070	40	1.2
SDS0402T-100M-S	10	40	200	0.075	30	1.0
SDS0402T-150M-S	15	40	100	0.090	25	0.80
SDS0402T-220M-S	22	40	100	0.110	20	0.70
SDS0402T-330M-S	33	40	100	0.190	15	0.60
SDS0402T-470M-S	47	40	100	0.230	15	0.50
SDS0402T-680M-S	68	40	100	0.290	10	0.40
SDS0402T-101M-S	100	40	100	0.480	8	0.30
SDS0402T-151M-S	150	40	100	0.590	7	0.26
SDS0402T-221M-S	220	40	100	0.770	4	0.22
SDS0402T-331M-S	330	40	100	1.4	4	0.20
SDS0402T-471M-S	470	40	100	1.8	3	0.19
SDS0402T-681M-S	680	40	100	2.2	2	0.18
SDS0402T-102M-S	1000	40	100	3.4	1	0.15
SDS0402T-152M-S	1500	50	100	4.2	1	0.12
SDS0402T-222M-S	2200	50	100	8.5	1	0.10
SDS0402T-332M-S	3300	50	100	11	0.5	0.08
SDS0402T-472M-S	4700	50	100	13.9	0.5	0.06
SDS0402T-682M-S	6800	50	100	25	0.5	0.04
SDS0402T-103M-S	10000	50	100	32.8	0.4	0.02

* Inductance Tested at 0.1 Vrms, 100KHz

** 30°C Temperature Rise

Operating Temperature Range -40°C to +85°C



ELECTRICAL CHARACTERISTICS : LEAD-FREE & ROHS COMPLIANCE

PART NO.	INDUCTANCE at 50MHz (nH)	TEST FREQUENCY (MHZ)	Rdc Max	I _{rms} (A)	I _{sat} (A)	SRF (MHZ) TYP	Q FREQ MIN (KHz)	COLOR CODING		
								1 st	2 nd	3 rd
								SDS0402T-1R0 □ -N	1	100KHz,0.1V
SDS0402T-1R5 □ -N	1.5	100KHz,0.1V	0.045	2.8	0.25	100	30/200	BRN	GRN	RED
SDS0402T-2R2 □ -N	2.2	100KHz,0.1V	0.05	1.8	0.2	90	40/200	RED	RED	RED
SDS0402T-3R3 □ -N	3.3	100KHz,0.1V	0.06	1.6	0.15	90	40/200	ORN	ORN	RED
SDS0402T-4R7 □ -N	4.7	100KHz,0.1V	0.065	1.4	0.12	80	40/200	YEL	VIO	RED
SDS0402T-6R8 □ -N	6.8	100KHz,0.1V	0.07	1.2	0.1	40	40/200	BLU	GRY	RED
SDS0402T-100 □ -N	10	100KHz,0.1V	0.075	1	0.075	30	40/200	BRN	BLK	ORN
SDS0402T-150 □ -N	15	100KHz,0.1V	0.09	0.8	0.06	25	40/100	BRN	GRN	ORN
SDS0402T-220 □ -N	22	100KHz,0.1V	0.11	0.7	0.06	20	40/100	RED	RED	ORN
SDS0402T-330 □ -N	33	100KHz,0.1V	0.19	0.6	0.04	15	40/100	ORN	ORN	ORN
SDS0402T-470 □ -N	47	100KHz,0.1V	0.23	0.5	0.03	15	40/100	YEL	VIO	ORN
SDS0402T-680 □ -N	68	100KHz,0.1V	0.29	0.4	0.025	10	40/100	BLU	GRY	ORN
SDS0402T-101 □ -N	100	100KHz,0.1V	0.48	0.3	0.025	8	40/100	BRN	BLK	YEL
SDS0402T-151 □ -N	150	100KHz,0.1V	0.59	0.26	0.025	7	40/100	BRN	GRN	YEL
SDS0402T-221 □ -N	220	100KHz,0.1V	0.77	0.22	0.015	4	40/100	RED	RED	YEL
SDS0402T-331 □ -N	330	100KHz,0.1V	1.4	0.2	0.015	4	40/100	ORN	ORN	YEL
SDS0402T-471 □ -N	470	100KHz,0.1V	1.8	0.19	0.01	3	40/100	YEL	VIO	YEL
SDS0402T-681 □ -N	680	100KHz,0.1V	2.2	0.18	0.01	2	40/100	BLU	GRY	YEL
SDS0402T-102 □ -N	1000	100KHz,0.1V	3.4	0.15	0.01	1	40/100	BRN	BLK	GRN
SDS0402T-152 □ -N	1500	100KHz,0.1V	4.2	0.12	0.005	1	50/100	BRN	GRN	GRN
SDS0402T-222 □ -N	2200	100KHz,0.1V	8.5	0.1	0.005	1	50/100	RED	RED	GRN
SDS0402T-332 □ -N	3300	100KHz,0.1V	11	0.08	0.005	0.5	50/100	ORN	ORN	GRN
SDS0402T-472 □ -N	4700	100KHz,0.1V	13.9	0.06	0.005	0.5	50/100	YEL	VIO	GRN
SDS0402T-682 □ -N	6800	100KHz,0.1V	25	0.04	0.005	0.5	50/100	BLU	GRY	GRN
SDS0402T-103 □ -N	10000	100KHz,0.1V	32.8	0.02	0.002	0.4	50/100	BRN	BLK	BLU

NOTE : □ -tolerance K=±10% / =±15% / M=±20% / N=+40% -20%

• Operating Temperature Range from -40°C to 85°C

• inductance drop t10% type

• 30°C rise typ at I_{rms}.

"-N"FOR COMPLETELY LEAD FREE TYPE(INCLUDING FERRITE BODY & SOLDER)

RECOMMEND SOLDERING CONDITIONS

for:CL/ CLH/ SQV/ SMD power inductors/ SMD Chip Beads/ SMD Filters,Transformers, Current Sensors

