



Ferrites and accessories

Toroids

R 3.05, R 3.43, R 3.94

Series/Type: **B64290**

Date: September 2006

R 3.05 × 1.27 × 1.27
B64290P0683
R 3.05 × 1.27 × 2.54
B64290P0739

■ Parylene coating

R 3.05 × 1.27 × 1.27 (mm)
R 0.120 × 0.050 × 0.050 (inch)
Dimensions

d_a (mm)	d_i (mm)	Height (mm)	d_a (inch)	d_i (inch)	Height (inch)	
3.05 ±0.12	1.27 ±0.12	1.27 ±0.12	0.120 ±0.005	0.050 ±0.005	0.050 ±0.005	uncoated ¹⁾
Coating thickness 0.012 mm						coated

Characteristics and ordering codes

Material	A_L value nH	μ_i (approx.)	Ordering code	Magnetic characteristics				Approx. weight g
				$\Sigma I/A$ mm ⁻¹	l_e mm	A_e mm ²	V_e mm ³	
K10	160 ±25%	700	B64290P0683X010	5.65	5.99	1.06	6.4	0.04
T57	830 ±25%	3700	B64290P0683X057					
T65	1000 ±30%	4500	B64290P0683X065					
T38	2200 ±30%	9900	B64290P0683X038					
T46	3340 ±30%	15000	B64290P0683X046					

■ Parylene coating

R 3.05 × 1.27 × 2.54 (mm)
R 0.120 × 0.050 × 0.100 (inch)
Dimensions

d_a (mm)	d_i (mm)	Height (mm)	d_a (inch)	d_i (inch)	Height (inch)	
3.05 ±0.12	1.27 ±0.12	2.54 ±0.12	0.120 ±0.005	0.050 ±0.005	0.100 ±0.005	uncoated ¹⁾
Coating thickness 0.012 mm						coated

Characteristics and ordering codes

Material	A_L value nH	μ_i (approx.)	Ordering code	Magnetic characteristics				Approx. weight g
				$\Sigma I/A$ mm ⁻¹	l_e mm	A_e mm ²	V_e mm ³	
K10	330 ±25%	700	B64290P0739X010	2.82	5.99	2.12	12.7	0.08
T57	1700 ±25%	3800	B64290P0739X057					
T65	2000 ±30%	4500	B64290P0739X065					
T38	4200 ±30%	9400	B64290P0739X038					
T46	6500 ±30%	15000	B64290P0739X046					

1) On request

R 3.05 × 1.78 × 2.03
B64290P0733
R 3.43 × 1.78 × 1.78
B64290P0731

■ Parylene coating

R 3.05 × 1.78 × 2.03 (mm)
R 0.120 × 0.070 × 0.080 (inch)

Dimensions

d_a (mm)	d_i (mm)	Height (mm)	d_a (inch)	d_i (inch)	Height (inch)	
3.05 ±0.12	1.78 ±0.12	2.03 ±0.12	0.120 ±0.005	0.070 ±0.005	0.080 ±0.005	uncoated ¹⁾
Coating thickness 0.012 mm						coated

Characteristics and ordering codes

Material	A_L value nH	μ_i (approx.)	Ordering code	Magnetic characteristics				Approx. weight g
				$\Sigma I/A$ mm ⁻¹	I_e mm	A_e mm ²	V_e mm ³	
K10	160 ±25%	700	B64290P0733X010	5.75	7.23	1.26	9.10	0.06
T57	870 ±25%	4000	B64290P0733X057					
T65	1000 ±30%	4600	B64290P0733X065					
T38	2150 ±30%	9900	B64290P0733X038					
T46	3250 ±30%	15000	B64290P0733X046					

■ Parylene coating

R 3.43 × 1.78 × 1.78 (mm)
R 0.135 × 0.070 × 0.070 (inch)

Dimensions

d_a (mm)	d_i (mm)	Height (mm)	d_a (inch)	d_i (inch)	Height (inch)	
3.43 ±0.12	1.78 ±0.12	1.78 ±0.12	0.135 ±0.005	0.070 ±0.005	0.070 ±0.005	uncoated ¹⁾
Coating thickness 0.012 mm						coated

Characteristics and ordering codes

Material	A_L value nH	μ_i (approx.)	Ordering code	Magnetic characteristics				Approx. weight g
				$\Sigma I/A$ mm ⁻¹	I_e mm	A_e mm ²	V_e mm ³	
K10	160 ±25%	700	B64290P0731X010	5.38	7.63	1.42	10.7	0.06
T57	930 ±25%	4000	B64290P0731X057					
T65	1050 ±30%	4500	B64290P0731X065					
T38	2300 ±30%	10000	B64290P0731X038					
T46	3400 ±30%	15000	B64290P0731X046					

1) On request

R 3.43 × 1.78 × 2.03
B64290P0745
R 3.43 × 1.78 × 2.11
B64290P0709

■ Parylene coating

R 3.43 × 1.78 × 2.03 (mm)
R 0.135 × 0.070 × 0.080 (inch)
Dimensions

d_a (mm)	d_i (mm)	Height (mm)	d_a (inch)	d_i (inch)	Height (inch)	
3.43 ± 0.12	1.78 ± 0.12	2.03 ± 0.12	0.135 ± 0.005	0.070 ± 0.005	0.080 ± 0.005	uncoated ¹⁾
Coating thickness 0.012 mm						coated

Characteristics and ordering codes

Material	A_L value nH	μ_i (approx.)	Ordering code	Magnetic characteristics				Approx. weight g
				$\Sigma I/A$ mm ⁻¹	l_e mm	A_e mm ²	V_e mm ³	
K10	$190 \pm 25\%$	700	B64290P0745X010	4.72	7.63	1.62	12.2	0.07
T57	$1060 \pm 25\%$	4000	B64290P0745X057					
T65	$1200 \pm 30\%$	4500	B64290P0745X065					
T38	$2650 \pm 30\%$	10000	B64290P0745X038					
T46	$4000 \pm 30\%$	15000	B64290P0745X046					

■ Parylene coating

R 3.43 × 1.78 × 2.11 (mm)
R 0.135 × 0.070 × 0.083 (inch)
Dimensions

d_a (mm)	d_i (mm)	Height (mm)	d_a (inch)	d_i (inch)	Height (inch)	
3.43 ± 0.12	1.78 ± 0.12	2.11 ± 0.12	0.135 ± 0.005	0.070 ± 0.005	0.083 ± 0.005	uncoated ¹⁾
Coating thickness 0.012 mm						coated

Characteristics and ordering codes

Material	A_L value nH	μ_i (approx.)	Ordering code	Magnetic characteristics				Approx. weight g
				$\Sigma I/A$ mm ⁻¹	l_e mm	A_e mm ²	V_e mm ³	
K10	$200 \pm 25\%$	700	B64290P0709X010	4.54	7.63	1.68	12.7	0.07
T57	$1100 \pm 25\%$	4000	B64290P0709X057					
T65	$1300 \pm 30\%$	4700	B64290P0709X065					
T38	$2770 \pm 30\%$	10000	B64290P0709X038					
T46	$4000 \pm 30\%$	15000	B64290P0709X046					

1) On request

R 3.94 × 1.78 × 1.78
B64290P0732
R 3.94 × 2.24 × 1.30
B64290P0061

■ Parylene coating

R 3.94 × 1.78 × 1.78 (mm)
R 0.155 × 0.070 × 0.070 (inch)
Dimensions

d_a (mm)	d_i (mm)	Height (mm)	d_a (inch)	d_i (inch)	Height (inch)	
3.94 ± 0.12	1.78 ± 0.12	1.78 ± 0.12	0.155 ± 0.005	0.070 ± 0.005	0.070 ± 0.005	uncoated ¹⁾
Coating thickness 0.012 mm						coated

Characteristics and ordering codes

Material	A_L value nH	μ_i (approx.)	Ordering code	Magnetic characteristics				Approx. weight g
				$\Sigma I/A$ mm ⁻¹	l_e mm	A_e mm ²	V_e mm ³	
K10	$200 \pm 25\%$	700	B64290P0732X010	4.44	8.10	1.82	14.8	0.08
T57	$1100 \pm 25\%$	3900	B64290P0732X057					
T65	$1350 \pm 30\%$	4800	B64290P0732X065					
T38	$2830 \pm 30\%$	10000	B64290P0732X038					
T46	$4200 \pm 30\%$	15000	B64290P0732X046					

■ Parylene coating

R 3.94 × 2.24 × 1.30 (mm)
R 0.155 × 0.088 × 0.051 (inch)
Dimensions

d_a (mm)	d_i (mm)	Height (mm)	d_a (inch)	d_i (inch)	Height (inch)	
3.94 ± 0.12	2.24 ± 0.12	1.30 ± 0.12	0.155 ± 0.005	0.088 ± 0.005	0.051 ± 0.005	uncoated ¹⁾
Coating thickness 0.012 mm						coated

Characteristics and ordering codes

Material	A_L value nH	μ_i (approx.)	Ordering code	Magnetic characteristics				Approx. weight g
				$\Sigma I/A$ mm ⁻¹	l_e mm	A_e mm ²	V_e mm ³	
K10	$100 \pm 25\%$	700	B64290P0061X010	8.56	9.21	1.08	9.90	0.05
T57	$550 \pm 25\%$	3800	B64290P0061X057					
T65	$700 \pm 30\%$	4800	B64290P0061X065					
T38	$1470 \pm 30\%$	10000	B64290P0061X038					
T46	$2200 \pm 30\%$	15000	B64290P0061X046					

1) On request

Mechanical stress and mounting

Ferrite cores have to meet mechanical requirements during assembling and for a growing number of applications. Since ferrites are ceramic materials one has to be aware of the special behavior under mechanical load.

As valid for any ceramic material, ferrite cores are brittle and sensitive to any shock, fast changing or tensile load. Especially high cooling rates under ultrasonic cleaning and high static or cyclic loads can cause cracks or failure of the ferrite cores.

For detailed information see Data Book 2007, chapter “General – Definitions, 8.1”.

Effects of core combination on A_L value

Stresses in the core affect not only the mechanical but also the magnetic properties. It is apparent that the initial permeability is dependent on the stress state of the core. The higher the stresses are in the core, the lower is the value for the initial permeability. Thus the embedding medium should have the greatest possible elasticity.

For detailed information see Data Book 2007, chapter “General – Definitions, 8.2”.

Heating up

Ferrites can run hot during operation at higher flux densities and higher frequencies.

NiZn-materials

The magnetic properties of NiZn-materials can change irreversible in high magnetic fields.

Processing notes

- The start of the winding process should be soft. Else the flanges may be destroyed.
- To strong winding forces may blast the flanges or squeeze the tube that the cores can no more be mount.
- To long soldering time at high temperature (>300 °C) may effect coplanarity or pin arrangement.
- Not following the processing notes for soldering of the J-leg terminals may cause solderability problems at the transformer because of pollution with Sn oxyd of the tin bath or burned insulation of the wire. For detailed information see Data Book 2007, chapter “Processing notes, 2.2”.
- The dimensions of the hole arrangement have fixed values and should be understood as a recommendation for drilling the printed circuit board. For dimensioning the pins, the group of holes can only be seen under certain conditions, as they fit into the given hole arrangement. To avoid problems when mounting the transformer, the manufacturing tolerances for positioning the customers’ drilling process must be considered by increasing the hole diameter.

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