



Inlay Layout and Dimensions

	IN523 / IN533*	IN543
Antenna width	45 mm ± 0.2 mm (1.77 ± 0.01 in)	45 mm ± 0.2 mm (1.77 ± 0.01 in)
Antenna length	76 mm ± 0.2 mm (2.99 ± 0.01 in)	76 mm ± 0.2 mm (2.99 ± 0.01 in)
Web width	48 mm ± 0.2 mm (1.89 ± 0.01 in)	53 mm ± 0.2 mm (2.09 ± 0.01 in)
Lengthwise pitch	91 mm ± 0.2 mm (3.58 ± 0.01 in)	84.67 mm ± 0.2 mm (3.33 ± 0.01 in)

* IN533 differs from IN523 only for chip placement: instead of being vertically centered, it is located in the position of “red star” marker.

Inlay Composition

Composition	Material	Thickness* [μm]
Top	Aluminum	30
Support	Polyester PET	38
Bottom	Aluminum	10 ÷ 20

* Overall thickness depends on the IC. For IC thickness please refer to the “Available ICs” table

Available ICs

	NXP ICODE SL2 ICS20	NXP ICODE SLI-S ICS53	NXP ICODE SLI-L ICS50	TI HF-I STD/PRO	ST LRI2K
Product code	IN523-PSL2 IN533-PSL2 IN543-PSL2	IN523-PSSS IN533-PSSS IN543-PSSS	IN523-PSLL IN533-PSLL IN543-PSLL	IN523-TISD IN533-TISD IN543-TISD	IN523-LR2K IN533-LR2K IN543-LR2K
Operating frequency	13.56 MHz	13.56 MHz	13.56 MHz	13.56 MHz	13.56 MHz
Standard compliance	ISO 15693 ISO 18000-3	ISO 15693 ISO 18000-3	ISO 15693 ISO 18000-3	ISO 15693 ISO 18000-3	ISO 15693 ISO 18000-3
Thickness	150μm ± 15μm	150μm ± 15μm	150μm ± 15μm	150μm ± 15μm	180μm ± 15μm
Operating temperature	-25°C to +85°C	-25°C to +85°C	-25°C to +85°C	-25°C to +70°C	-20°C to +85°C
Storage temperature	-55°C to +140°C	-55°C to +140°C	-55°C to +140°C	-40°C to +85°C	n/a
Unique serial number	8 bytes	8 bytes	8 bytes	8 bytes	8 bytes
Memory size	1024 bits	2048 bits	512 bits	256 bits	2048 bits
Memory organization	32 blocks of 4 bytes	16 pages with 4 blocks of 4 bytes	16 blocks of 4 bytes	8 blocks of 4 bytes	64 blocks of 4 bytes
Data retention	10 years	10 years	10 years	10 years	40 years
Write endurance	100 000 cycles	100 000 cycles	100 000 cycles	100 000 cycles	1 000 000 cycles

General supply conditions

Reel dimensions	Internal diameter	76 mm
	External diameter	300 mm
Reel quantity	Inlay per reel	8000 ± 10% (custom sizes available upon request)