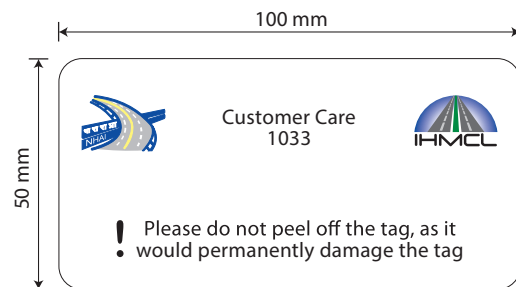
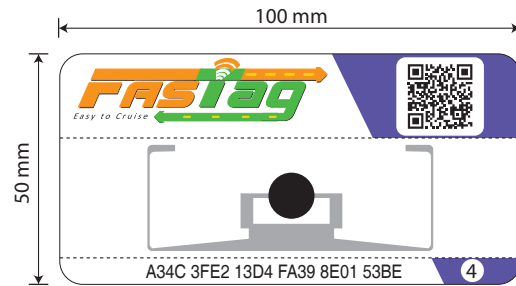
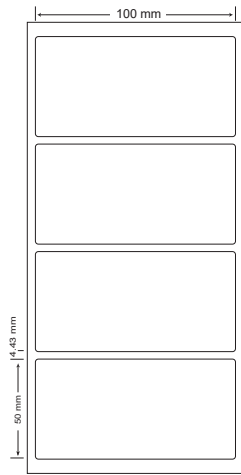
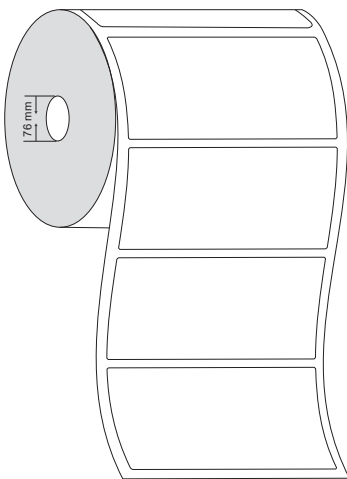
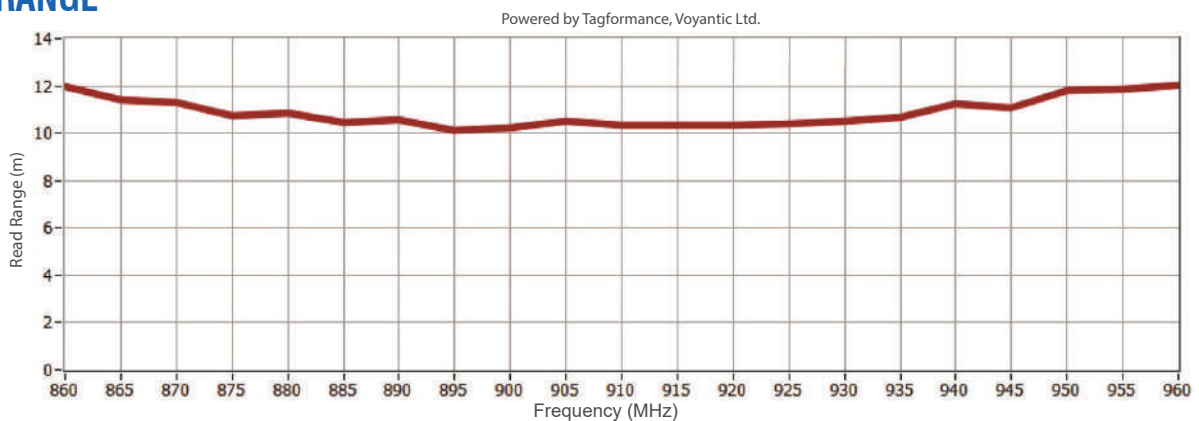


SIVA's FASTag¹ with special substrate is a non-transferable tamper-proof label for vehicle windshields. It has been developed in accordance with guidelines of NHAI² & IHMCL² for the purpose of vehicle identification and electronic toll collection. Supplied in roll form as finished label with pre defined encoding the tag allows additional data encoding as per requirements specified. SIVA FASTag is certified by ARAI³ and NPCI³ and complies with all the technical as well as artwork guidelines specified by NHAI / IHMCL



READ RANGE



1 - The "FASTag" brand ownership is with Minister of Road Transport & Highways (MoRTH).

2 - Technical/ Design specification provided by National Highways Authority of India (NHAI) & Indian Highways Management Company Ltd (IHMCL) as per document H-25011/04/2011 P&P (Toll) Vol. VI dated 07.11.2017

3 - Certifying authorities for FASTag are Automotive Research Association of India (ARAI) & National Payments Corporation of India. FASTag manufactured by SIVA INOTEC Ltd. approved under NPCI circular NPCI/2017-18/NETC/003 dated 04 Oct. 2017 & ARAI under MoRTH Resolution H-25011/4/2011-P&P (Toll) Vol. II Dated 28 Sep. 2011

GENERAL SPECIFICATION

Parameter	Specifications as per NHAH & IHMCL	SIVA Fastag Specifications	Specification Met/Not Met
Power	Tags are passive	Class 1 Gen 2 Passive UHF RFID transponder	✓
Frequency	UHF 860 MHz to 960 MHz as per EPC Gen 2 standards	Global 860-960 MHz	✓
Data Transfer rate	At least 512 kbps under ideal conditions & 64 to 512 kbps under field conditions	As per requirement	✓
Protocol	EPC Gen 2, ISO 18000-6C	EPC Global Class 1 Gen 2 ISO 18000-6C.	✓
Dimensions (including the substrate/backing)	Tag dimensions as per individual Automobile Manufacturers current size, occupied on the windshield shall be 50 Sq.cm. till new update direction issued.	As per requirement	
Material	Printed or Etched	Printed	✓
Physical printing of Tag ID on the tag	QR Code as per ISO/IEC18004:2015 standard. Also, the Tag printed on the Tag using the Hexadecimal numbering system Contents embedded within the QR Code shall be provided by NHAH	Encoding and Printing possible as required	✓
Tamper Proof RFID Label	RFID Tamper Proof Label specially designed for tagging directly to windshield of an automobile. Any attempt to rip or tamper the tag should result in disabling the functionality of the tag and thus maintain a unique one to one relationship between the tag and the vehicle thereby preventing unauthorized tag removal and transfers. Tampering RFID label should result in following actions: <ul style="list-style-type: none"> • Destroy Damage the Antenna • Break the chip-antenna connection. The tags and should ensure reliable tamper indication even when sophisticated tamper methods of Mechanical attack (e.g. Razor Blades, Knives etc.), Chemical Attack (Corrosives, solvents) and thermal attacks are employed	SIVA Fastag Label with special substrate is a non-transferable tamperproof label for vehicles windshields. Meets requirements as specified	✓
Tag Read Range	6m (min) RFID Tag (max tag size 50 sq. cm) fixed on Vehicle Windshield from inside in open air.	up to 11 m / 36 ft	✓
Printing & Design	As defined by NHAH from time to time	Printing Possible	✓

ENVIRONMENTAL SPECIFICATION

Parameter	Specifications as per NHAH & IHMCL	SIVA Fastag Specifications	Specification Met/Not Met
Relative Humidity	95% Condensing	95% Condensing	✓
Operating Temperature	-20°C to 80°C ambient	-20°C to 80°C ambient	✓
Storage Temperature	-40°C to 100°C	-40°C to 100°C	✓

MEMORY SPECIFICATION

Parameter	Specifications as per NHAH & IHMCL	SIVA Fastag Specifications	Specification Met/Not Met
Tag Memory (Minimum)	Unique TID - 96 bits, EPC Memory - 96 bits, User 512 bits.	EPC Size 96 Bits, User Memory 512 Bits, 96 bits TID with 64 bits Unique serial number	✓
Data Retention	-10 Years minimum with UV protection for normal sunlight exposure and ambient temperature of 45 Degree C.	Upto 50 Years	✓