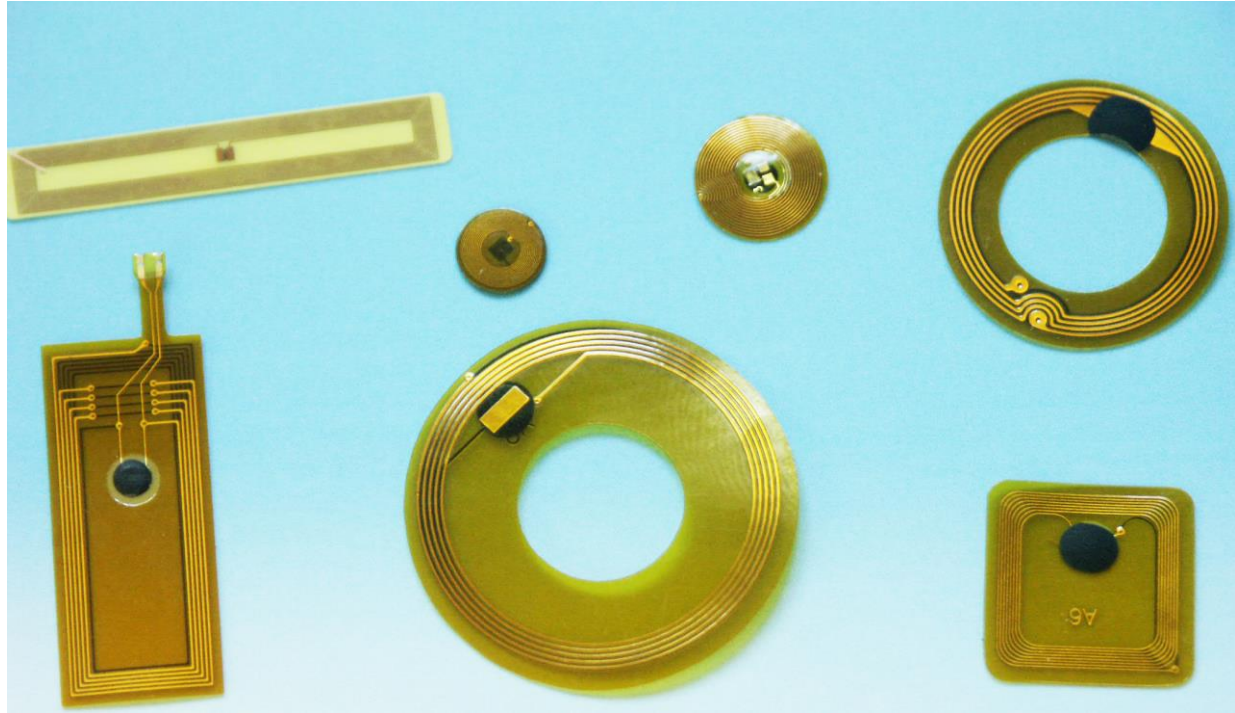


High Frequency 13.56 MHz Data Sheet

FPC Ario Style Tags

Model HF-1500 Series

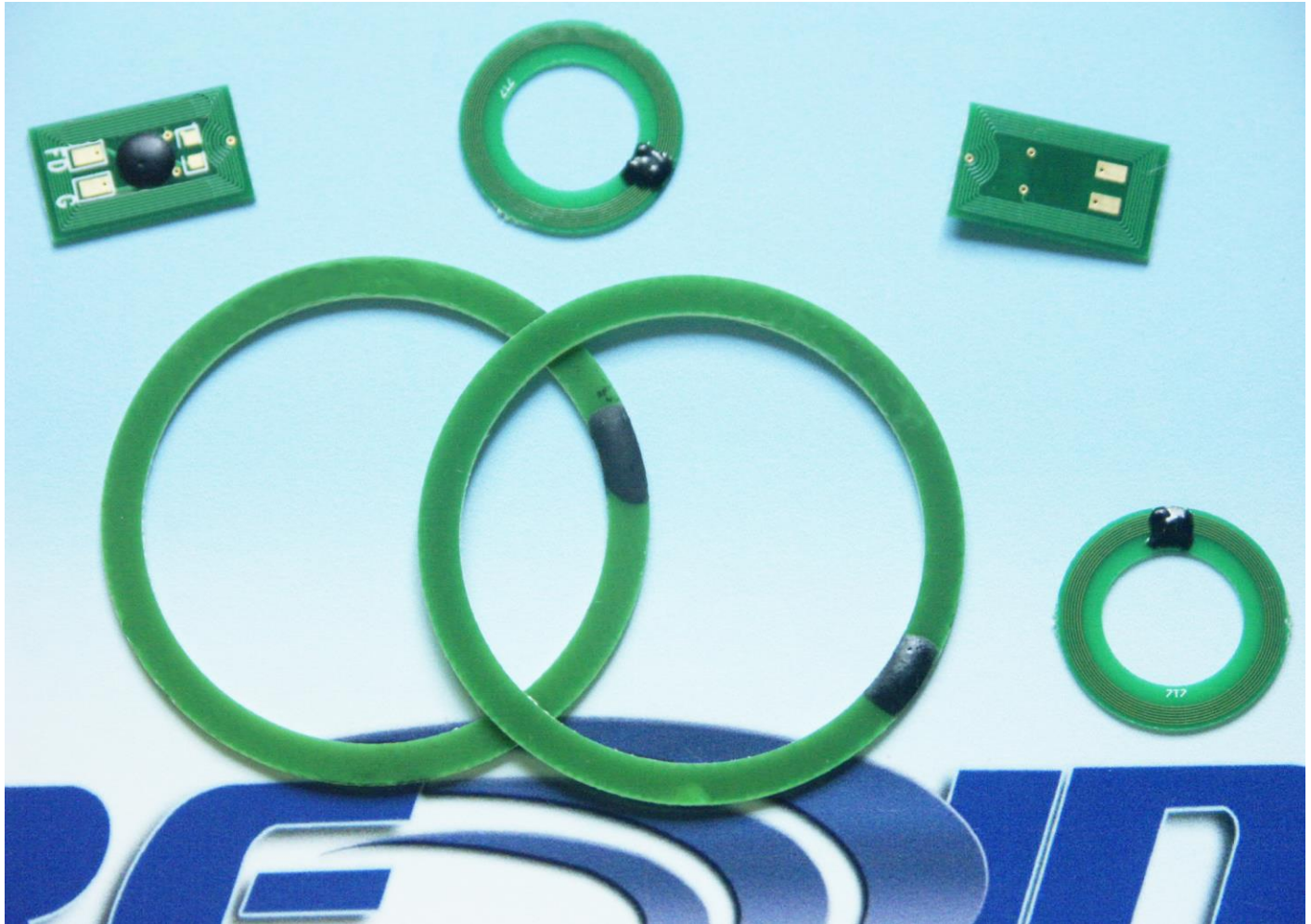


Specifications:	Dimensions:	7.6mm diameter x 1mm 9mm diameter x 1mm 5mm x 5mm x 1mm 14mm x 14mm x 1mm 25mm x 10mm x 1mm 30mm x 5mm x 1mm 19mm diameter OD x 11m ID 26mm diameter OD x 10mm ID	Custom Sizes Available
	All Tags measure less than 1mm in height		
	Material:	Substrate: PET (Polyester Film) Antenna: Copper Etching	FPC Option Peel & Stick Backing
	Storage Temperature:	-40°F to 185°F	-40°C to +85°C
	Operating Temperature:	-40°F to +131°F	-40°C to +55°C
	Ingress Protection:	IP-67	

Part Numbering	Description	Model Number	Part Number
	PET 7.6mm diameter Ario Tag	HF-1500-7.6	850-0003-7.6
	PET 9mm diameter Ario 370-S Tag	HF-1500-9	850-0003-09
	FPC 5mm x 5mm Ario Tag	HF-1500-0505	850-0003-0505
	PET 14mm x 14mm Ario SM Style	HF-1500-1414	850-0003-1414
	PET 25mm x 10mm Ario Tag	HF-1500-2510	850-0003-2510
	PET 30mm x 5mm Ario Tag	HF-1500-3005	850-0003-3005
	PET 19mm dia w/11mm center	HF-1500-19	850-0003-19
	PET 26mm dia. w/10mm center	HF-1500-26	850-0003-26

PCB/FR4 Tags

Model HF-1501 Series



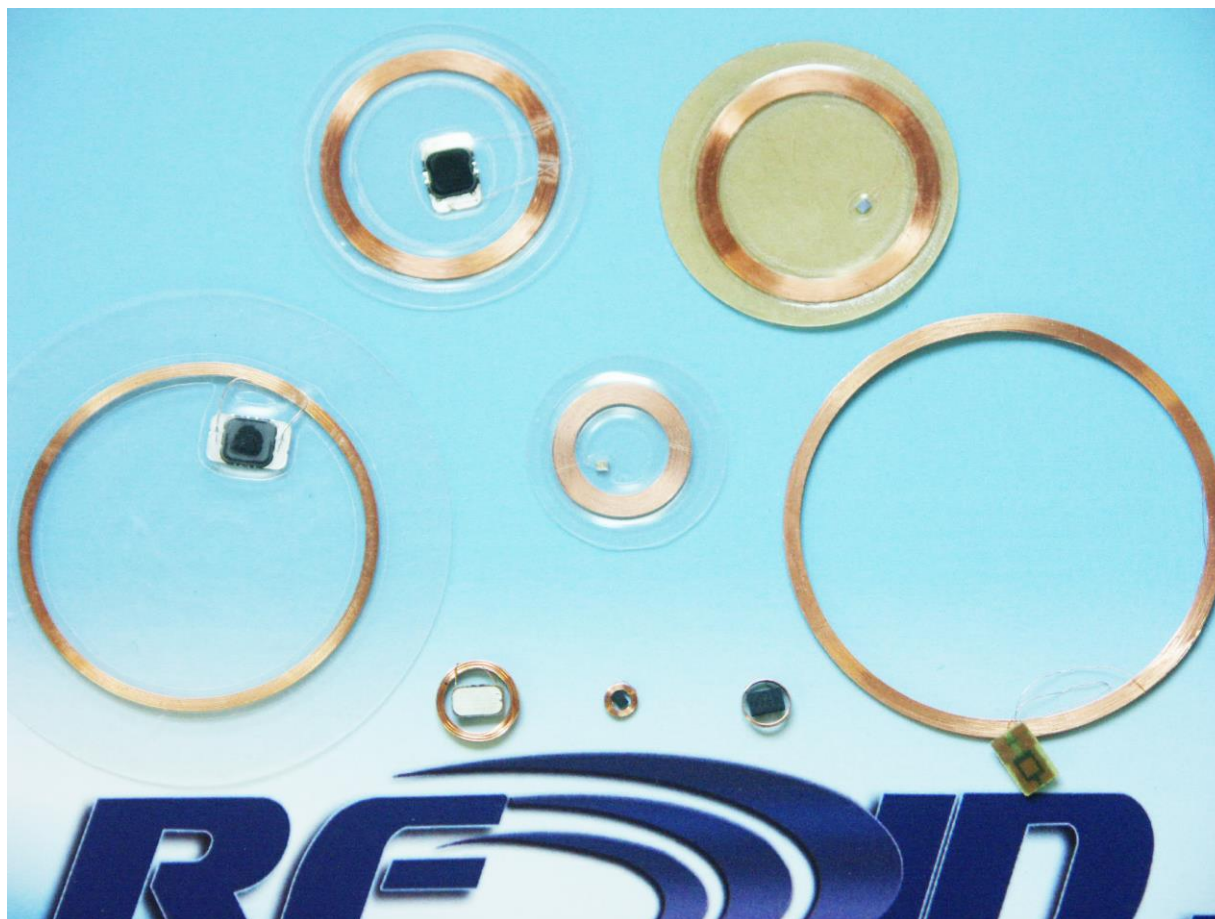
Specifications:	Dimensions:	16mm dia. OD x 10mm ID x 1mm 38mm dia. OD x 32mm ID x 1mm 20mm x 10mm x 1mm	Custom Sizes Available
	Material:	PCB FR4, etched coil	
	Storage Temperature:	-40°F to 185°F	-40°C to +85°C
	Operating Temperature:	-40°F to +131°F	-40°C to +55°C
	Ingress Protection:	IP-67	

Part Numbering	Description	Model Number	Part Number
	PCB/FR4 16mm Ring Tag	HF-1501-16	850-0001-16
	PCB/FR4 38mm Ring Tag	HF-1501-38	850-0001-38
	PCB/FR4 20x10mm Tag	HF-1501-20x10	850-0001-2010



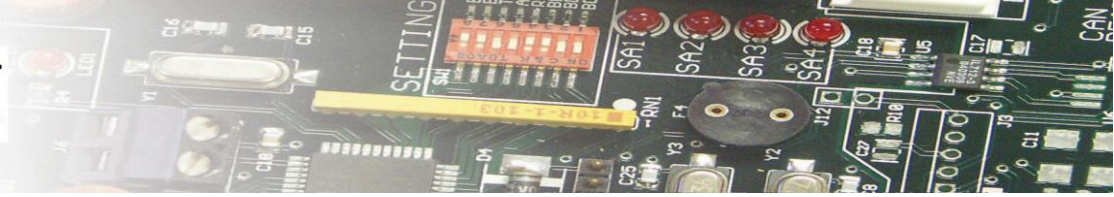
Air Coil & Clear Laminate Tags

Model HF-1502 Series



Specifications:	Dimensions:	3mm, 5mm, 9mm, 20mm 30mm, 44mm, 50mm diameter	Custom Sizes Available
	Material:	Copper Coil + PCB Module Laminate Film where applicable	Option Peel & Stick Backing
	Storage Temperature:	-40°F to 185°F	-40°C to +85°C
	Operating Temperature:	-40°F to +131°F	-40°C to +55°C
	Ingress Protection:	IP-67	

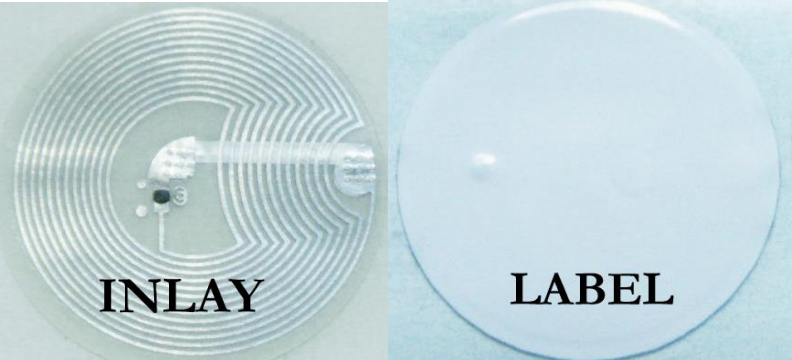
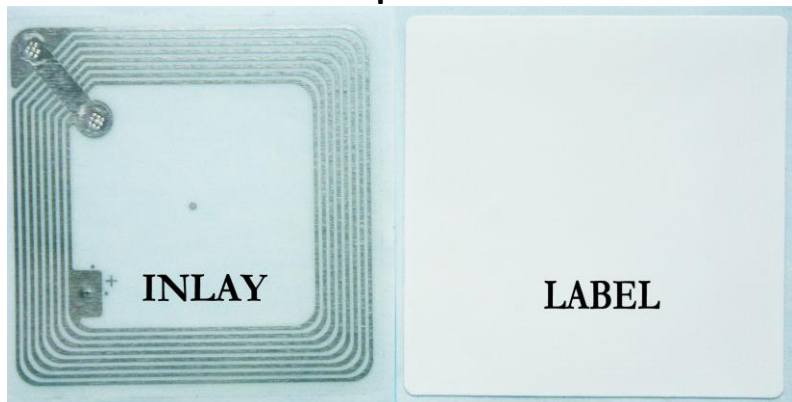
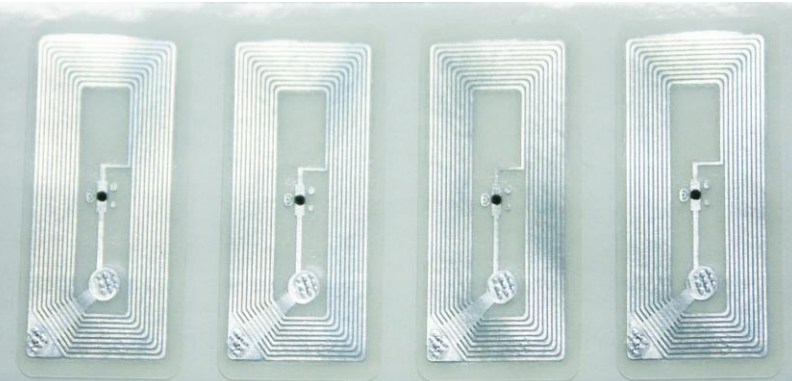
Part Numbering	Description	Model Number	Part Number
P/S = Peel & Stick	Air Coil 3mm diameter	HF-1502-03	850-0002-03
	Air Coil 5mm diameter	HF-1502-05	850-0002-05
	Air Coil 9mm diameter	HF-1502-09	850-0002-09
	Air Coil 44mm diameter	HF-1502-44	850-0002-44
	Clear Laminate 20mm diameter	HF-1502-20	850-0002-20
	Clear Laminate 20mm P/S diameter	HF-1502-20P/S	850-0002-20P/S
	Clear Laminate 30mm diameter	HF-1502-30	850-0002-30
	Clear Laminate 30mm P/S diameter	HF-1502-30P/S	850-0002-30P/S
	Clear Laminate 50mm diameter	HF-1502-50	850-0002-50
	Clear Laminate 50mm P/S diameter	HF-1502-50P/S	850-0002-50P/S

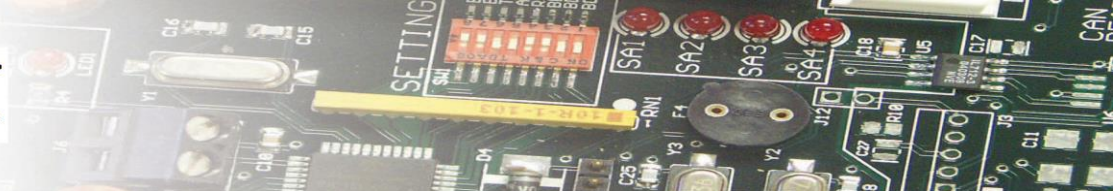


Inlays or Printable Thermal Transfer Labels

Model HF-1503 Series

Specifications:	Dimensions:	See Table Below	Custom Sizes Available
	Material:	PET (Polyester Film) Substrate Coated Paper	Thermal Transfer RFID Label with Acrylic Adhesive
	Storage Temperature:	-40°F to 185°F	-40°C to +85°C
	Operating Temperature:	-40°F to +131°F	-40°C to +55°C

Coil Size	Wet Inlay Size	Label Size	Photo (Deliverable on Rolls or Sheets)	Part Number Add -LB for Label Format
			Circular	
12mm	14mm	16mm		850-0103-12
18mm	20mm	22mm		850-0103-18
20mm	22mm	24mm		850-0103-20
22mm	24mm	26mm		850-0103-22
23mm	25mm	27mm		850-0103-23
24mm	26mm	28mm		850-0103-24
25mm	27mm	30mm		850-0103-25
36mm	38mm	40mm		850-0103-26
40mm	42mm	44mm		850-0103-40
111mm	113mm	115mm		850-0103-111
			Square	
15mm sq.	17mm	19mm		850-0103-15SQ
26mm sq.	28mm	30mm		850-0103-26SQ
45mm sq.	47mm	49mm		850-0103-45SQ
47mm sq.	49mm	51mm		850-0103-47SQ
50mm sq.	52mm	54mm		850-0103-50SQ
			Rectangular	
17x9mm	19x11	21x13		850-0103-1911
18x8mm	20x10	22x12		850-0103-2010
20x15mm	22x17	24x19		850-0103-2015
32x15mm	34x17	36x19		850-0103-3215
38x23mm	40x25	42x27		850-0103-3823
40x25mm	42x27	44x29		850-0103-4025
50x30mm	52x32	54x34		850-0103-5030
50x40mm	52x42	54x44		850-0103-5040
52x15mm	54x17	56x19		850-0103-5215
76x45mm	78x47	80x49		850-0103-7645
86x54mm	88x56	90x58		850-0103-8654



Metal Mount Label & PVC Tags

Model HF-1504 Series

NOTE: Most all Tags can be manufactured to be Metal Mount, please inquire.



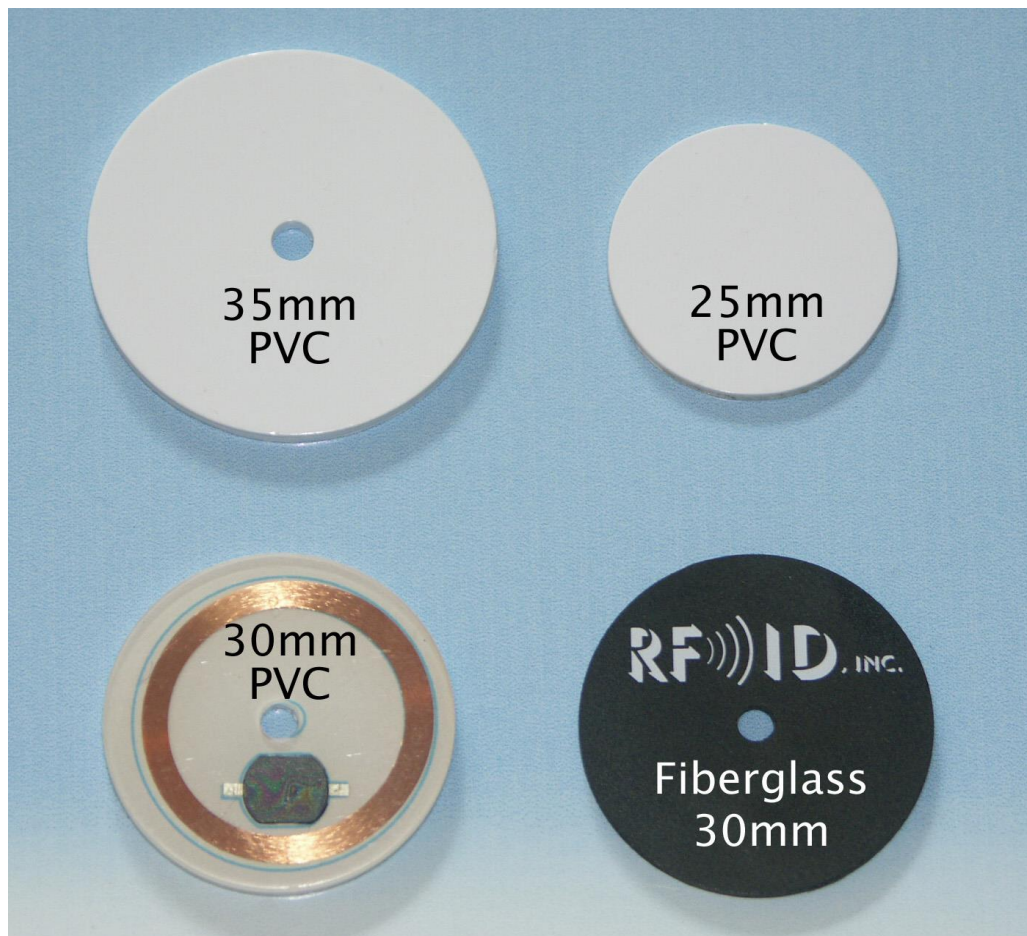
Specifications:	Dimensions:	25mm diameter x 1mm 30mm square x 1mm 40mm x 25mm 65mm x 25mm (PVC)	Custom Sizes Available
	Material:	PET + Ferrous backing PVC Laminate + Ferrous backing	Peel & Stick Backing
	Storage Temperature:	-40°F to 185°F	-40°C to +85°C
	Operating Temperature:	-40°F to +131°F	-40°C to +55°C
	Ingress Protection:	IP-67	

Part Numbering	Description	Model Number	Part Number
	Metal Mount PET Label 25mm dia.	HF-1504-25	850-0104-25
	Metal Mount PET Label 30mm sq.	HF-1504-3030	850-0104-3030
	Metal Mount PET Label 40x25mm	HF-1504-4025	850-0104-4025
	Metal Mount PVC 65x25mm	HF-1504-6525	850-0104-6525



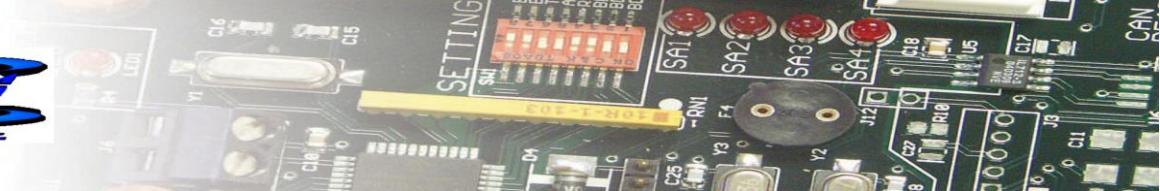
PVC Laminate & Fiberglass Disc Tags

Model HF-1561 Series



Specifications:	Dimensions:	25mm x 1mm 30mm x 2mm 35mm x 2mm 30mm x 1mm (Fiberglass)	Custom Sizes Available Option Peel & Stick Backing
	Material:	PVC Laminate (white)	Fiberglass (black)
	Storage Temperature:	-40°F to 185°F	-40°C to +85°C
	Operating Temperature:	-40°F to +131°F	-40°C to +55°C
	Ingress Protection:	IP-68	

Part Numbering	Description	Model Number	Part Number
P/S = Peel & Stick	PVC Laminate, 25mm	HF-1561-25	850-0006-25
	PVC Laminate, 25mm P/S	HF-1561-25-P/S	850-0006-25P/S
	PVC Laminate, 30mm w/center hole	HF-1561-30	850-0006-30
	PVC Laminate, 30mm w/hole P/S	HF-1561-30-P/S	850-0006-30P/S
	PVC Laminate, 35mm w/center hole	HF-1561-35	850-0006-35
	PVC Laminate, 35mm w/hole P/S	HF-1561-35-P/S	850-0006-35P/S
	Fiberglass, 30mm w/center hole	HF-1561-FG30	850-0006-FG30



ABS & Polycarbonate Disc Tags

Model HF-1562 Series



Specifications:	Dimensions:	20mm x 4mm 30mm x 2mm w/4mm hole 30mm x 2.5mm w/5mm hole 30mm x 5mm w/5mm hole 35mm x 4mm w/4mm hole 36mm x 4mm w/4mm hole 50mm x 8mm w/5mm hole	Custom Sizes Available
	Material:	ABS - Sonically Welded	Polycarbonate - Global Tag
	Storage Temperature:	-40°F to 185°F	-40°C to +85°C
	Operating Temperature:	-40°F to +131°F	-40°C to +55°C
	Ingress Protection:	IP-67	

Part Numbering	Description	Model Number	Part Number
	20mm x 4mm ABS Disc	HF-1562-20	850-0007-20
	30mm Global Tag, Polycarbonate	HF-1562-30-GL	850-0007-30GL
	30mm x 2.5mm PA6 Disc Tag	HF-1562-30-PA6	850-0007-30-PA6
	30mm x 5mm ABS Disc Tag	HF-1562-30	850-0007-30
	35mm x 4mm ABS Disc Tag	HF-1562-35	850-0007-35
	36mm x 4mm ABS Disc Tag	HF-1562-36	850-0007-36
	50mm x 8mm ABS Disc Tag	HF-1562-50	850-0007-50

Keyfobs

Model HF-1568 Series



Specifications:	Material:	See Description Below	Customized graphics or logo when applicable
	Storage Temperature:	-40°F to 185°F	-40°C to +85°C
	Operating Temperature:	-40°F to +131°F	-40°C to +55°C
	Ingress Protection:	IP-65 to P-68	

Part Numbering	Description	Model Number	Part Number
	1 Fiberglass Keyfob	HF-1568-01-RED or -BLK	850-0100-01-RED or -BLK
	2 Epoxy Rectangle Small	HF-1568-02S	850-0100-02S
	2 Epoxy Rectangle Medium	HF-1568-02M	850-0100-02M
	3 Baseball Bat, ABS	HF-1568-03	850-0100-03
	4 Leather Keyfob	HF-1568-04-RED or -BLK -GRN	850-0100-04-RED or -BLK -GRN
	5 Aquatic Keyfob, ABS	HF-1568-05-BLU or -RED	850-0100-05-BLU or -RED
	6 Teardrop Keyfob, ABS	HF-1568-06-(assorted colors)	850-0100-06 (assorted colors)
	7 Epoxy Surfboard Keyfob	HF-1568-07	850-0100-07
	8 Arch Keyfob, PVC Laminate	HF-1568-08	850-0100-08

ISO Cards - Personnel Badges

Model HF-1570 Series



Photographed is ISO Card with Top Slot

Specifications:	Dimensions:	ISO Card - 86mm x 54mm	
	Material:	PVC, Laminate	Optional Printing
	Storage Temperature:	-40°F to 185°F	-40°C to +85°C
	Operating Temperature:	-40°F to +131°F	-40°C to +55°C
	Ingress Protection:	IP-67	

Part Numbering	Description	Model Number	Part Number
	ISO Card - No Slot	HF-1570-NS	850-0114-NS
	ISO Card - Top Slot	HF-1570-TS	850-0114-TS
	ISO Card - Side Slot	HF-1570-SS	850-0114-SS
	ISO Card - MS - RW	HF-1570-HID-NS	850-0114-HID-NS
	ISO Card - Top Slot - RO	HF-1570-HID-TS	850-0114-HID-TS
	ISO Card - Top Slot - RW	HF-1570-HID-SS	850-0114-HID-SS

Wrist Band Tags

Model HF-1571 Series

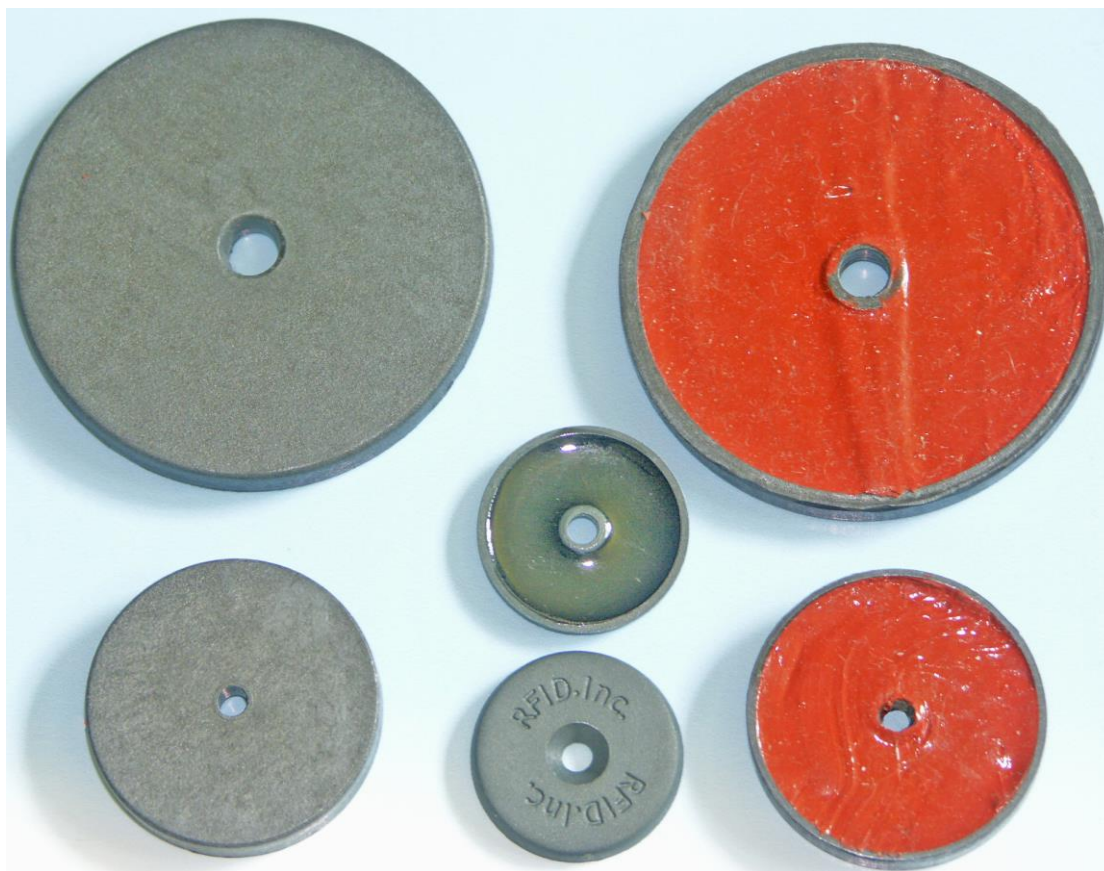


Specifications:	Material:	Soft Silicon Rubber	ABS w/Velcro Strap
		PVC (disposable patient band)	ABS w/Watch Strap
	Storage Temperature:	-40°F to 185°F	-40°C to +85°C
	Operating Temperature:	-40°F to +131°F	-40°C to +55°C
	Ingress Protection:	IP-67	

Part Numbering	Description	Model Number	Part Number
Add -Color to Part Number	Wristband, Patient Style	HF-1571-PS	850-0110-PS
	Wristband, Silicon Slip On	HF-1571-SS	850-0110-SS
	Wristband, Silicon w/Hasp	HF-1571-SH	850-0110-SH
	Wristband, ABS w/Velcro	HF-1571-ABS-VL	850-0110-ABS-VL
	Wristband, ABS, Nylon, Hasp	HF-1571-ABS-NYL	850-0110-ABS-NYL

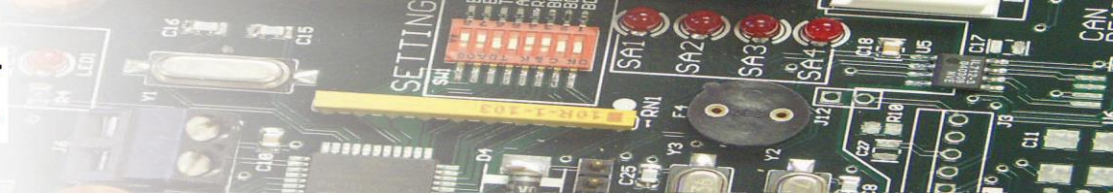
High Temperature Tags

Model 1772 Series



Specifications:	Dimensions:	22mm x 3mm w/3mm center 30mm x 5.8mm w/3mm center 50.2mm x 5.8mm w/5mm center	Countersunk Hole
	Material:	Proprietary	
	Storage Temperature 30 & 50mm Tags w/red fill:	-40°F to 482°F	-40°C to +250°C
	Operating Temperature 30 & 50mm Tags w/red fill:	-40°F to +446°F 15 hours 1x or 30 minute cycles	-40°C to +230°C
	Storage Temperature 22mm Tag w/black fill:	-40°F to +365°F	-40°C to +185°C
	Operating Temperature 22mm Tag w/black fill:	-40°F to +365°F Indefinite	-40°C to +185°C
	Ingress Protection:	IP-68	

Part Numbering	Description	Model Number	Part Number
	22mm, Black	HF-1572-22HT	850-0074-22-CS-HT
	30mm, Black w/red fill	HF-1572-30HT	850-0074-30HT
	50mm, Black w/red fill	HF-1572-50HT	850-0074-50HT



Glass Ampoule Tags

Model HF-1575 Series

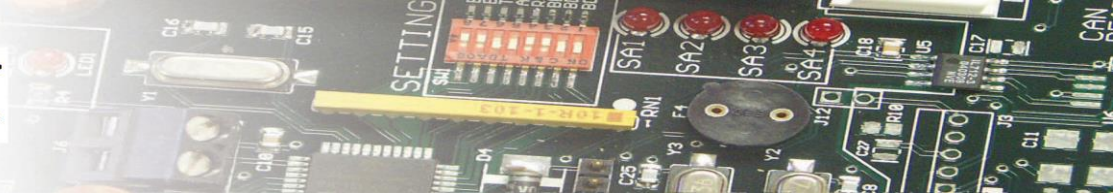


Depicted is 3 x 13 mm

Environment:	Dimensions:	2x12mm, 3x13mm, 4x20mm, 3x34mm	Custom Sizes Available
	Material:	Glass	
	Storage Temperature:	-40°F to 185°F	-40°C to +85°C
	Operating Temperature:	-40°F to +131°F	-40°C to +55°C
	Ingress Protection:	IP-68	

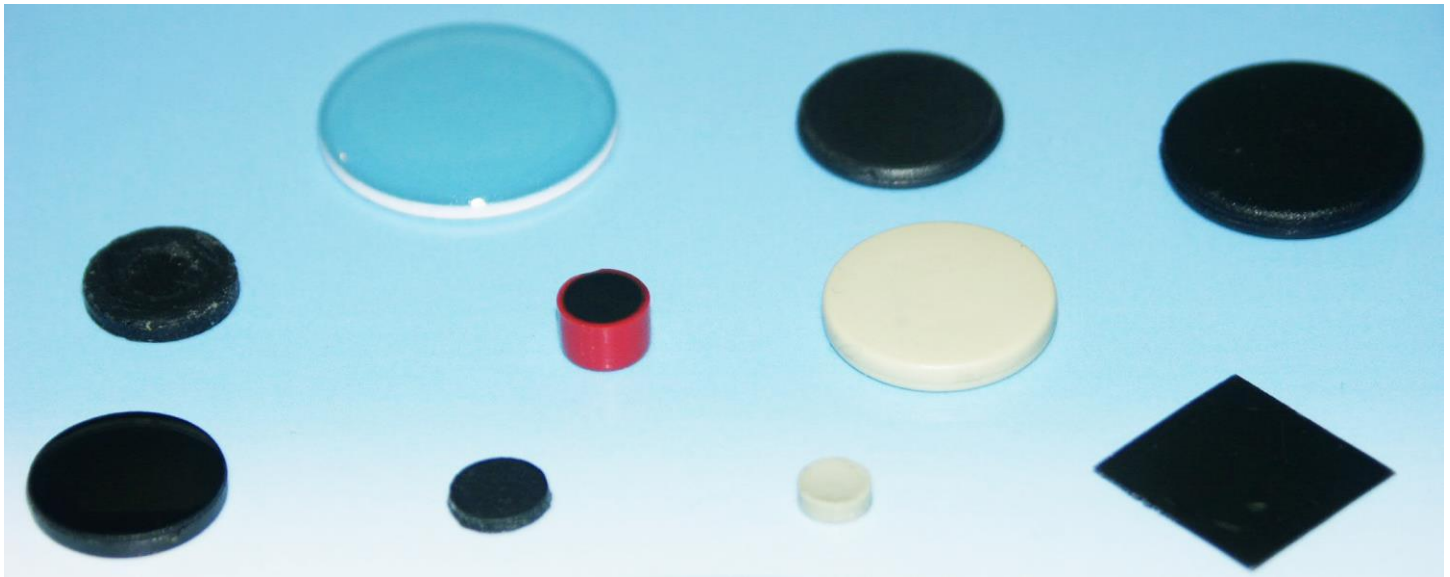
Part Numbering	Description	Model Number	Part Number
	2x12mm Glass Ampoule	HF-1575-212	850-0073-212
	3x13mm Glass Ampoule	HF-1575-313	850-0073-313
	4x20mm Glass Ampoule	HF-1575-420	850-0073-420
	3x34mm Glass Ampoule	HF-1575-334	850-0073-334





Small Diameter, Unique, & Laundry Tags

Model 1579 Series



Specifications:	Laundry Tag - Dimensions:	9, 10, 11, 12, 13, 14, 15, 16, 17, 18 20, 22, 24, 26, 28mm dia. x 2mm	PPS + Epoxy
	Storage Temperature:	-40°F to +248°F indefinite -40°C to +320°F 30 min-200x -40°C to +392°F 30 sec-200x	-40°C to +120°C indefinite -40°C to +160°C 30 min-200x -40°C to +200°C 30 sec-200x
	Operating Temperature:	-40°F to +185°F	-40°C to +85°C
	Ingress Protection:	IP-68	
	Water Pressure:	300 Bars - 5 minutes	45 Bars - 10 hours
	Compression Strength:	Axial 1000 N - 10 seconds	Radial 1000 N - 10 seconds
	Pill Tags	5mm & 13mm diameter x 2mm	PPS + Epoxy, IP-68
	Orange Tea Cup Tag	6mm tall x 4mm diameter	PBT with Epoxy, IP-68
	Soft Epoxy Tags	6mm & 10mm diameter x 2mm	Pliable Epoxy, IP65
Potted Dome Tag, Light Blue	20mm x 2mm	Potted Epoxy, IP-68	
Square Epoxy Tag	13mm x 1mm	Rigid Potted Epoxy, IP-68	

Part Numbering	Description	Model Number	Part Number
	Laundry Tag, xx = diameter	HF-1579-LDxx	850-0113-LDxx
	Pill Tag, 5mm	HF-1579-PL05	850-0113-PL05
	Pill Tag, 13mm	HF-1579-PL13	850-0113-PL13
	Orange Tea Cup Tag	HF-1579-TC	850-0113-TC
	Soft Epoxy Tag, 6mm	HF-1579-SE06	850-0113-SE06
	Soft Epoxy, 10mm	HF-1579-SE10	850-0113-SE10
	Potted Dome, Light Blue, 20mm	HF-1579-PD20-LB	850-0113-PD20-LB
	Square Epoxy, 13mm	HF-1579-SQE13	850-0113-SQE13



Transponder Memory – ISO Standards – 15693 – 14443A – 14443B

Note the **RFID PN Suffix**. Append this to any Tag part number to specify a particular chip.

Pricing: Given the large number of chips available on the market and the many different Tag form factor options, we maintain no static price list. Quotes are provided on a project basis.

Manufacturer & Chip	Memory	ISO Protocol	PN Suffix
ATMEL			
AT88RF020	2kb	14443B	-16
AT88SC0104CRF	1kb	14443B	-17
AT88SC0204CRF	2kb	14443B	-18
AT88SC0404CRF	4kb	14443B	-19
AT88SC3216CRF	32kb	14443B	-20
AT88SC1616CRF	16kb	14443B	-21
AT88SC0808CRF	8kb	14443B	-22
AT88SC6416CRF	64kb	14443B	-23A
AT88SC118	64kb	14443B	-23B
EM			
EM4033	64 bits	15693	-05A
EM4133	448 bits	15693	-05B
EM4233	2kb	15693	-05
EM4233SLIC	1kb	15693	-05C
EM4237	2kb	15693	-05D
EM4237SLIC	1kb	15693	-05E
EM4237SLIX	2kb	15693	-05F
EM4333	4kb	15693/14443A	-05G
EM4423	1920 bits	14443A/Gen2	-05H
FUJITSU			
MB89R118	2KB	15693	-08A
MB89R119	256 bytes	15693	-08B
MB89R112A/B	8KB	15693	-08C
INFINEON			
my-d SLE 66R01L	48 Bytes	14443A	-03A
my-d SLE 66R01P	128 Bytes	14443A	-03B
my-d NFC SLE 66R32P	5120 Bytes	14443A	-03C
my-d NFC SLE 6R16P	5120 Bytes	14443A	-03D
my-d SLE 66R32S	4KB	14443A	-03E
my-d SLE 66R16S	2KB	14443A	-03F
my-d SLE 66R04S	576 Bytes	14443A	-03G
my-d SRF55V02P	232 Bytes	15693	-03H
my-d SRF55V10P	1KB	15693	-03I
my-d SRF55V02S	224 Bytes	15693	-03J
my-d SRF55V10S	992 Bytes	15693	-03K
SLE66R35	1KB	14443A	-03L

Manufacturer & Chip	Memory	ISO Protocol	PN Suffix
PHILIPS NXP			
ICODE SLIX-L	256 bits	15693	-04XL
ICODE SLI	896 bits	15693	-04
ICODE SLIX	896 bits	15693	-04X
ICODE SLIX 2	2528 bits	15693	-04X2
ICODE SLI-S	1280 bits	15693	-04S
ICODE SLIX-S	1280 bits	15693	-04XS
ICODE DNA	2kb	15693	-04DNA
MIFARE UL Nano	40 Bytes	14443A	-10ULN
MIFARE UL EV1	128 Bytes	14443A	-10UL1
MIFARE UL C	144 Bytes	14443A	-10ULC
MIFARE Classic EV1 S50	1kb	14443A	-13N
MIFARE Classic EV4 S70	4kb	14443A	-13
MIFARE DESFire EV1	2/4/8KB	14443A	-10DE1
MIFARE DESFire EV2	2/4/8KB	14443A	-10DE2
MIFARE Plus S	2/4KB	14443A	-10PS
MIFARE Plus SE	1KB	14443A	-10PSE
MIFARE Plus X	2/4KB	14443A	-10PX
MIFARE Plus EV1	2/4KB	14443A	-10P1
MIFARE NTAG 210	48 Bytes	14443A	-10N210
MIFARE NTAG 212	128 Bytes	14443A	-10N212
MIFARE NTAG 213	144 Bytes	14443A	-10N213
MIFARE NTAG 215	504 Bytes	14443A	-10N215
MIFARE NTAG 216	888 Bytes	14443A	-10N216
STM			
SRT512	512 bits	14443B	-16A
SRI2K	2kb	14443B	-16B
SRI4K	4kb	14443B	-16C
ST25TA02K	2kb	14443A	-16D
ST25TA512	512 bits	14443A	-16E
ST25TA16K	16kb	14443A	-16F
ST25TA64K	64kb	14443A	-16G
ST25TV	64kb	15693	-16H
LRI2K	2kb	15693	-16I
LRI564K	64kb	15693	-16J
TAGSYS			
Ario 370S-SDM	1280 bits	15693	-04S
Ario 370S-SM	1280 bits	15693	-04S
Ario 370S-DM	1280 bits	15693	-04S
TEXAS INSTRUMENTS			
Tag-it HF I Standard	256 bits	15693	-01
Tag-it HF Pro	256 bit	15693	-01P
Tag-it HF I Plus	2kb	15693	-01PS



Reader Model HF-3020 - Reader can be commanded to operate with ISO 15693, 14443A/B, and with the original Philips Icode-1 Tag chips. Available at an OEM PCB level or in enclosure. RFID, Inc. has customized many different designs under NDA. Read ranges are not quoted in this document as they are dependent upon the Reader.



Reader with external Antenna



Reader with internal Antenna

Specifications:	Dimensions:	2.5" x 2.375"	62mm x 60mm
	Material:	ABS	
	Power:	+7vdc to +24vdc input	100mA @7v 40mA @ 24v
	Antenna:	Internal or external options	SMA female
	Storage Temperature:	-40°F to +185°F	-40°C to +85°C
	Operating Temperature:	-40°F to +131°F	-40°C to +55°C
Ingress Protection:	IP54		

Part Number	Description
710-0161-20	Model HF 3020 13.56 MHz MicroReader, PCB level, no enclosure, w/o Antenna, USB
830-0003-00	Model HF-3020 13.56 MHz Reader in enclosure, needs external Antenna, USB
830-0003-00-IA	Model HF-3020 13.56 MHz Reader in enclosure, w/internal Antenna, USB
710-0156-00	Model HF-3020 13.56 MHz MicroReader, PCB level, no enclosure, w/o Antenna, RS232
830-0004-00	Model HF-3020 13.56 MHz Reader w/enclosure, needs external Antenna, RS232 9pin, power jack
830-0004-01	Model HF-3020 13.56 MHz Reader w/enclosure, needs external Antenna, RS232 pigtailed, power jack
830-0004-02	Model HF-3020 13.56 MHz Reader w/enclosure, needs external Antenna, RS232 9pin, power pigtailed
830-0004-03	Model HF-3020 13.56 MHz Reader w/enclosure, needs external Antenna, RS232 & power pigtailed
830-0004-00-IA	Model HF-3020 13.56 MHz Reader w/enclosure, w/internal Antenna, RS232 9pin, power jack
830-0004-01-IA	Model HF-3020 13.56 MHz Reader w/enclosure, w/internal Antenna, RS232 pigtailed, power jack
830-0004-02-IA	Model HF-3020 13.56 MHz Reader w/enclosure, w/internal Antenna, RS232 9pin, power pigtailed
830-0004-03-IA	Model HF-3020 13.56 MHz Reader w/enclosure, w/internal Antenna, RS232 & power pigtailed
830-0719-01	Model 5102-01 13.56 MHz Antenna, 56mm x 42mm, SMA male connector
830-0719-09	Model 5102-01 13.56 MHz Antenna, 125mm x 75mm, SMA male connector
720-0008-10	Regulated 24vdc AC adaptable power supply w/mating jack plug, 1amp, 10' cabling
720-0008-11	Regulated 24vdc AC adaptable power supply w/pigtail wiring, 1amp, 10' cabling