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450 MHz Antennas for RFID Readers

Last Update: February, 2006

Antenna P/N		MT-182016/NRH	MT-182011/NV
Frequency Band	MHz	430-437	405-450
Gain	dBi (Min.)	9 dBic	8 dBi
Polarization		RHCP	Linear, Vertical
AZ/EL BW	Degree	68° / 70°	68° / 70°
Sidelobe Level (AZ/EL)	dB (Max.)	-10.5	-20@± 120° / -20
Cross Polarization	dB (Max.)	N/A	-18
axial ratio Level	dB (Max.)	4	N/A
Front to Back Ratio	dB (Max.)	10.5	18
VSWR 50 Ohm	(typ)	1.2:1	1.7:1
Max. Input Power	Watt	6	6
Additional Features			
Size	mm	370x370x30	370x370x40
Weight	Kg	2	2
Connector other connectors available		N-Type Female	N-Type Female
Mounting Kit		MT-120018	MT-120018

Environmental

Temperature Range	-55 to +71 degree per IEC 68
Temperature Shock	-40°C to +71°C, 3 cycles 30°C/min
Vibration	1 g rms, 10-500 Hz (2 hrs per axis)
Mechanical Shock	10 g, 11 msec half sine pulse
Transit Drop	MIL-STD-810E 26 drops from height of 122 cm
Humidity	95% per ETSI EN300
Water Tightness	IP67
Salt Spray	500 hours per IEC 68
Solar Radiation	1000 hours per ASTM G53
Flammability	Class HB per UL-94

Key Features

- High-Quality Low-Cost
- High Robustness and Endurance
- Lightweight antenna with low profile
- Very aesthetic look and environmental friendly
- Various polarities
- Various configurations such as standalone, integrated or internal component
- Meets RFID electrical and environmental requirements
- Asymmetrical beam antenna can be tilted 90˚ for different beam width ratio

Benefits

- Provides High performance Low Cost reader antenna solution
- Low installation and maintenance cost
- Maintains real estate aesthetic look and value

Notes

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865-870 MHz Circular Polarization Single Polarized Antennas for RFID Readers

Last Update: June, 2006

Antenna P/N		MT-242032 Preliminary-Ultra Low Axial Ratio		MT-242027 Preliminary	MT-242014	MT-242017
Frequency Band	MHz	865-870	865-870	865-870	865-870	865-870
Gain	dBic (Min)	7	7	8.5	8.5	10
Polarization		RHCP	RHCP	RHCP or LHCP	RHCP or LHCP	RHCP or LHCP
AZ/EL BW	Degree	65° / 65°	(TBD)/**120°**	65° / 65°	65° / 65°	60° / 48°
Sidelobe Level	dB (Max)	TBD	TBD	-12	-16	-12
axial ratio Level	dB (Max)	1	TBD	2	2	2
Front to Back Ratio	dB (Max)	17	TBD	18	18	20
Port to Port Isolation	dB (Max)	N/A	TBD	N/A	N/A	N/A
VSWR 50 Ohm	(Max)	1.3:1	TBD	1.3:1	1.3:1	1.3:1
Max. Input Power	Watt	6	TBD	6	6	6
Size: • T1	mm	190x190x30	540x470x220	260x260x30	305x305x25	371x371x40
• T2	mm	N/A	TBD	N/A	220X220X21	TBD
• T3	mm	N/A	TBD	N/A	240X220X32	442X292X32
Weight T1/T2/T3	Kg (Max)	0.8	4.2	1	1.2/0.6/0.9	2/1.2/1.5
Connector other connectors available		N-Type Female	N-Type Female	N-Type Female	N-Type Female	N-Type Female
Mounting Kit (T1 & T2)		MT-120018/A	MT-120019	MT-120018(A)	MT-120018	

The antennas are available in three different configurations:
T1 - Tooled radome with connector at the back • T2 - Very low-profile with connector at the back •
T3 - Very low-profile with connector on the side.

Environmental

Temperature Range	-55 to +71 degree per IEC 68
Temperature Shock	-40°C to +71°C, 3 cycles 30°C/min
Vibration	1 g rms, 10-500 Hz (2 hrs per axis)
Mechanical Shock	10 g, 11 msec half sine pulse
Transit Drop	MIL-STD-810E 26 drops from height of 122 cm
Humidity	95% per ETSI EN300
Water Tightness	IP54
Salt Spray	500 hours per IEC 68
Solar Radiation	1000 hours per ASTM G53
Flammability	Class HB per UL-94

Key Features

- High-Quality Low-Cost
- High Robustness and Endurance
- Lightweight antenna with low profile
- Very aesthetic look and environmental friendly
- Various polarities
- Various configurations such as standalone, integrated or internal component
- Meets RFID electrical and environmental requirements
- Asymmetrical beam antenna can be tilted 90˚ for different beam width ratio

Benefits

- Provides High performance Low Cost reader antenna solution
- Low installation and maintenance cost
- Maintains real estate aesthetic look and value

Notes

All specifications are subject to change without notice
Preliminary specs are for antennas under development
Upon request MTI may provide the complete spec controlled document for specific antenna

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865-870 MHz Circular Polarization Dual Polarized Antennas for RFID Readers

Last Update: June, 2006

Antenna P/N		MT-243008	MT-242026 Preliminary	MT-243010 Preliminary
Frequency Band	MHz	865-870	865-870	865-870
Gain	dBic (Min)	8	8	10
Polarization		2xRHCP or RH+LH	RHCP+LHCP	2 x RHCP
AZ/EL BW	Degree	60° / 65°	60° / 60°	64° / 45°
Sidelobe Level	dB (Max)	-12	-12	-14
axial ratio Level	dB (Max)	2.5	3	2
Front to Back Ratio	dB (Max)	20	18	25
Port to Port Isolation	dB (Max)	-40	-35	-40
VSWR 50 Ohm	(Max)	1.4:1	1.5:1	1.5:1
Max. Input Power	Watt	6	6	6
Size: • T1	mm	536x360x26	200x500	920x325x34
• T2	mm	550x251x21	TBD	TBD
• T3	mm	550x251x34	TBD	TBD
Weight T1/T2/T3	Kg (Max)	2.1/1.5/1.7	1.5	4
Connector other connectors available		2xN-Type Female	2x N-Type Female	2xN-Type Female
Mounting Kit (T1 & T2)		MT-120018	MT-120018	MT-120021

The antennas are available in three different configurations:
T1 - Tooled radome with connector at the back • T2 - Very low-profile with connector at the back • T3 - Very low-profile with connector on the side.

Environmental

Temperature Range	-55 to +71 degree per IEC 68
Temperature Shock	-40°C to +71°C, 3 cycles 30°C/min
Vibration	1 g rms, 10-500 Hz (2 hrs per axis)
Mechanical Shock	10 g, 11 msec half sine pulse
Transit Drop	MIL-STD-810E 26 drops from height of 122 cm
Humidity	95% per ETSI EN300
Water Tightness	IP54
Salt Spray	500 hours per IEC 68
Solar Radiation	1000 hours per ASTM G53
Flammability	Class HB per UL-94

Key Features

- High-Quality Low-Cost
- High Robustness and Endurance
- Lightweight antenna with low profile
- Very aesthetic look and environmental friendly
- Various polarities
- Various configurations such as standalone, integrated or internal component
- Meets RFID electrical and environmental requirements
- Asymmetrical beam antenna can be tilted 90˚ for different beam width ratio

Benefits

- Provides High performance Low Cost reader antenna solution
- Low installation and maintenance cost
- Maintains real estate aesthetic look and value

Notes

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865-870 MHz Linear Polarization Antennas for RFID Readers

Last Update: 6/1/2006

Antenna P/N		MT- 242021/NV	MT- 242020/NV	MT- 243012/NV	MT- 243009/N
Frequency Band	MHz	865-870	865-870	865-870	865-870
Gain	dBi (Min)	8	9.5	10.5	13
Polarization		Linear Vertical	Linear Vertical	Linear Vertical	Linear V/H
Port-to-Port Isolation		N/A	N/A	N/A	N/A
AZ/EL BW	Degree	70° /65°	62° /58°	43° /76°	37° /37°
Sidelobe Level (AZ/EL)	dB (Max)	-20/-16	-23/-22	-18	-15
Cross Polarization Level (AZ/EL)	dB (Max)	-20	-17/-25	-15/-26	-20
Front to Back Ratio	dB (Max)	20	21	22	15
VSWR 50 Ohm	(Max)	1.3:1	1.3:1	1.3:1	1.7:1
Max. Input Power	Watt	6	6	6	6
Size: • T1	mm	190x190x30	305x305x25	370x370x40	450x450x35
• T2	mm	N/A	N/A	N/A	N/A
• T3	mm	N/A	N/A	N/A	N/A
Weight T1/T2/T3	Kg (Max)	0.7	1.2	2	2
Connector other connectors available		N-Type Female	N-Type Female	N-Type Female	N-Type Female
Mounting Kit (T1 & T2)		MT-120018/A	MT-120018	MT-120018	MT-120018

Environmental

Temperature Range	-55 to +71 degree per IEC 68
Temperature Shock	-40°C to +71°C, 3 cycles 30°C/min
Vibration	1 g rms, 10-500 Hz (2 hrs per axis)
Mechanical Shock	10 g, 11 msec half sine pulse
Transit Drop	MIL-STD-810E 26 drops from height of 122 cm
Humidity	95% per ETSI EN300
Water Tightness	IP54
Salt Spray	500 hours per IEC 68
Solar Radiation	1000 hours per ASTM G53
Flammability	Class HB per UL-94

Notes

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Preliminary specs are for antennas under development

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Key Features

- High-Quality Low-Cost
- High Robustness and Endurance
- Lightweight antenna with low profile
- Very aesthetic look and environmental friendly
- Various polarities
- Various configurations such as standalone, integrated or internal component
- Meets RFID electrical and environmental requirements
- Asymmetrical beam antenna can be tilted 90˚ for different beam width ratio

Benefits

- Provides High performance Low Cost reader antenna solution
- Low installation and maintenance cost
- Maintains real estate aesthetic look and value

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902-928 MHz Circular Polarization Antennas for RFID Readers

Last Update: June, 2006

Antenna P/N		MT-262013 Preliminary-Ultra Low Axial Ratio	MT-262011	MT-262006	MT-263007	MT-263020 Preliminary	MT-262014 Preliminary
Frequency Band	MHz	902-928	902-928	902-928	902-928	902-928	902-928
Gain	dBic (Min)	8	8.5	9	10	11	7
Polarization		RHCP	RHCP	RHCP or LHCP	RHCP or LHCP	RHCP or LHCP	RHCP
AZ/EL BW	Degree	65°/65°	68° / 63°	63° / 63°	63° / 45°	63° / **30°**	45°(± 5°)/**120°**
Sidelobe Level	dB (Max)		-14	-16	-12	-12	TBD
Axial Ratio Level	dB (Max)	1.5	4	4	2.5	3	4
Front to Back Ratio	dB (Max)	17	18	18	20	20	20
VSWR 50 Ohm	(Max)	1.5:1	1.5:1	1.3:1	1.3:1	1.5:1	1.5:1
Max. Input Power	Watt	6	6	6	6	6	6
Size: • T1	mm	190x190x30	260x260x25	305x305x25	371x371x40	630x320x40	540x470x220
• T2	mm	TBD	TBD	220X220X21	413X293X21	N/A	N/A
• T3	mm	TBD	TBD	240X220X32	411X292X33	N/A	N/A
Weight T1/T2/T3	Kg (Max)	1	2	1.2/0.6/0.9	2/1.2/1.5	2.8	4.2
Connector other connectors available		N-Type	TNC	TNC or N-Type	TNC or N-Type	TNC RP	N-Type
Mounting Kit (T1 & T2)		MT-120018/A	MT-120018	MT-120018(A)	MT-120018	MT-120019	MT-120019

The antennas are available in three different configurations:

T1 - Tooled radome with connector at the back • T2 - Very low-profile with connector at the back • T3 - Very low-profile with connector on the bottom/side.

Environmental

Temperature Range	-55 to +71 degree per IEC 68
Temperature Shock	-40°C to +71°C, 3 cycles 30°C/min
Vibration	1 g rms, 10-500 Hz (2 hrs per axis)
Mechanical Shock	10 g, 11 msec half sine pulse
Transit Drop	MIL-STD-810E 26 drops from height of 122 cm
Humidity	95% per ETSI EN300
Water Tightness	IP54
Salt Spray	500 hours per IEC 68
Solar Radiation	1000 hours per ASTM G53
Flammability	Class HB per UL-94

Key Features

- High-Quality Low-Cost
- High Robustness and Endurance
- Lightweight antenna with low profile
- Very aesthetic look and environmental friendly
- Various polarities
- Various configurations such as standalone, integrated or internal component
- Meets RFID electrical and environmental requirements
- Asymmetrical beam antenna can be tilted 90˚ for different beam width ratio

Benefits

- Provides High performance Low Cost reader antenna solution
- Low installation and maintenance cost
- Maintains real estate aesthetic look and value

Notes

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902-928 MHz Dual Circular Polarization Antennas for RFID Readers

Last Update: June, 2006

Antenna P/N		MT-262010
Frequency Band	MHz	902-928
Gain	dBic	8.7
Polarization		2xRH or 2xLH or R+L
AZ/EL BW	Degree	70° / 60°
Sidelobe Level	dB (Max)	-10
Axial Ratio Level	dB (Max)	4
Front to Back Ratio	dB (Max)	18
Port to Port Isolation	dB (Max)	35
VSWR 50 Ohm	(Max)	1.5:1
Max. Input Power	Watt	6
Size: • T1	mm	500x200x30
• T2	mm	TBD
• T3	mm	TBD
Weight T1/T2/T3	Kg (Max)	1.5
Connector other connectors available		2xTNC or N-Type
Mounting Kit (T1 & T2)		MT-120018

The antennas are available in three different configurations:
T1 - Tooled radome with connector at the back • T2 - Very low-profile with connector at the back • T3 - Very low-profile with connector on the bottom/side.

Environmental

Temperature Range	-55 to +71 degree per IEC 68
Temperature Shock	-40°C to +71°C, 3 cycles 30°C/min
Vibration	1 g rms, 10-500 Hz (2 hrs per axis)
Mechanical Shock	10 g, 11 msec half sine pulse
Transit Drop	MIL-STD-810E 26 drops from height of 122 cm
Humidity	95% per ETSI EN300
Water Tightness	IP54
Salt Spray	500 hours per IEC 68
Solar Radiation	1000 hours per ASTM G53
Flammability	Class HB per UL-94

Notes

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Key Features

- High-Quality Low-Cost
- High Robustness and Endurance
- Lightweight antenna with low profile
- Very aesthetic look and environmental friendly
- Various polarities
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- Meets RFID electrical and environmental requirements
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Benefits

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902-928 MHz Linear Polarization Antennas for RFID Readers

Last Update: February, 2006

Antenna P/N		MT-262002/N/A	MT-262001/N/A	MT-263003/N	MT-263006/N	MT-264003/NV	MT-264003/NH	MT-243004/NVH	MT-263004/NV	MT-263004/NH	MT-243005/NVH	MT-262003/NV	MT-243003/NV	MT-243003/NH
Frequency Band	MHz	902-928	902-928	902-928	902-928	902-928	902-928	902-928	902-928	902-928	902-928	902-928	902-928	902-928
Gain	dBi (Min)	8	9	10	12.5	13.5	13.5	13(V)/12.5(H)	12	12.5 - / + 0.5	12	8 -/+ 1.25	11 -/+ 0.5	11.5
Polarization		Linear V/H	Linear V/H	Linear V/H	Linear V/H	Vertical	Horizontal	Dual V+H	Vertical	Horizontal	Dual V+H	Vertical	Vertical	Horizontal
Port to Port Isol.	dB (Min)	-	-	-	-	-	-	35	-	-	35	-	-	-
AZ/EL BW	Degree	70° /70°	65° /55°	50° /50°	42° /42°	90° /14°	90° /14.5°	90° /16.5°	120° /14°	120° /14.5°	120(V)/110(H)/16	360° /12°	360° /6°	360°/9.5°
Sidelobe Level	dB (Max)	-	-18 @ ± 90°	-20	-19	1st Null >-20dB	1st Null >-22dB	N/A	1st Null >-20dB	1st Null >-20dB	N/A	-11	1st Null >-16dB	1st Null >-20dB
Cross Polarization Level	dB (Max)	-14	-13	-25	-20	-20	-16	-23(AZ)/-18(EL)	-20	-20	-25	-20	-20	-20
Front to Back Ratio	dB (Max)	-11	-18	-27	-24	-23	-23	-24(V)/-15(H)	-21	-16	-24(V)/-16(H)	N/A	N/A	2:1
VSWR 50 Ohm		1.7:1	1.5:1	1.5:1	1.7:1	1.7:1	1.7:1	1.5:1	1.7:1	1.7:1	1.5:1	1.7:1	1.7:1	50
Max. Input Power	Watt	6	6	6	6	20	20	20	20	20	20	20	50	
Additional Features		Available w/o DC ground	Available w/o DC ground	High Grade	High Grade	Null Field 1.5° Down Tilt	Null Field 1.25° Down Tilt		Null Field 1.5° Down Tilt	Null Field 1.25° Down Tilt		0-3° Down Tilt	Null Field 0-3° Down Tilt	
Size	mm	190X190X30	305X305X25	305X305X25	450X450X36	1260X400X115	1252X298X55	1220X450X145	1260X400X115	1320X375X55	1220X500X145	1318 X 44	3700 X 90	1940X280X55
Weight	Kg (Max)	0.7	1.5	1.5	3	7	7	6	7	7	6	5	16	20
Connector		N-Type Female	N-Type Female	N-Type Female	N-Type Female	N-Type Female	N-Type Female	2XN-Type Fem.	N-Type Female	N-Type Female	2X N-Type Fem.	N-Type Female	N-Type Female	N-Type Female
Mounting Kit		MT-120018/A	MT-120018	MT-120018	MT-120018	MT-120021	MT-120021	MT-120021	MT-120021	MT-120021	MT-120021	Included	Included	Included

Environmental

Temperature Range	-45 to +70 degree per IEC 68
Vibration	Random 4M3 per IEC 60721
Mechanical Shock	4M3 per IEC 60721
Humidity	95% per ETSI EN300
Water Tightness	Per IEC 529 IP67 (IP52 for some sector antennas) Subject to change upon request
Salt Spray	500 hours per IEC 68
Solar Radiation	1000 hours per ASTM G53
Ice and Snow	25mm Radial
Wind Speed	160 Kmph Operation/220Kmph Survival
Flammability	UL-94HB

Key Features

- High-Quality Low-Cost
- High Robustness and Endurance
- Lightweight antenna with low profile
- Very aesthetic look and environmental friendly
- Various polarities
- Various configurations such as standalone, integrated or internal component
- Meets RFID electrical and environmental requirements

Benefits

- Provides High performance Low Cost reader antenna solution
- Low installation and maintenance cost
- Maintains real estate aesthetic look and value

Notes

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950-956 MHz Circular Polarization Antennas for RFID Readers

Last Update: June, 2006

Antenna P/N		MT-262017 Preliminary-Ultra Low Axial Ratio	MT-262009 Preliminary	MT-263008 Preliminary		MT-262007 Preliminary	MT-263010 Preliminary
Frequency Band	MHz	950-956	950-956	950-956		950-956	950-956
Gain	dBic (Min.)	6.5	8.5	10		8	10
Polarization		RHCP	RHCP	RHCP		2 x RHCP	2 x RHCP
AZ/EL BW	Degree	65° / 65°	63° / 65°	60° / 45°		65° / 65°	60° / 45°
Sidelobe Level	dB (Max.)	TBD	-12	-12		-12	-12
axial ratio Level	dB (Max.)	1	4	3		3	3
Front to Back Ratio	dB (Max.)	-17	-18	-20		-40	-40
Port-to-Port Isolation	dB (Min.)	N/A	N/A	N/A		40	40
VSWR 50 Ohm		1.3:1	1.5:1	1.5:1		1.5:1	1.5:1
Max. Input Power	Watt	6	6	6		6	6
Size: • T1	mm	190x190x30	305x305x25	371x371x40		536x360x26	920x325x34
Weight T1/T2/T3	Kg	0.8	1.2/TBD/TBD	2/TBD/TBD		2	2
Connector other connectors available		N-Type Female	N-Type Female	N-Type Female		2xN-Type Female	2xN-Type Female
Mounting Kit (T1 & T2)		MT-120018/A	MT-120018	MT-120018		MT-120018	MT-120021

The antennas are available in three different configurations:
T1 - Tooled radome with connectors at the back • T2 - Very low-profile with connectors at the back • T3 - Very low-profile with connectors at the bottom.

Environmental

Temperature Range	-55 to +71 degree per IEC 68
Temperature Shock	-40°C to +71°C, 3 cycles 30°C/min
Vibration	1 g rms, 10-500 Hz (2 hrs per axis)
Mechanical Shock	10 g, 11 msec half sine pulse
Transit Drop	MIL-STD-810E 26 drops from height of 122 cm
Humidity	95% per ETSI EN300
Water Tightness	IP54
Salt Spray	500 hours per IEC 68
Solar Radiation	1000 hours per ASTM G53
Flammability	Class HB per UL-94

Key Features

- High-Quality Low-Cost
- High Robustness and Endurance
- Lightweight antenna with low profile
- Very aesthetic look and environmental friendly
- Various polarities
- Various configurations such as standalone, integrated or internal component
- Meets RFID electrical and environmental requirements
- Asymmetrical beam antenna can be tilted 90˚ for different beam width ratio

Benefits

- Provides High performance Low Cost reader antenna solution
- Low installation and maintenance cost
- Maintains real estate aesthetic look and value

Notes

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865-956 MHz Linear or Circular Polarization Antennas for RFID Readers

Last Update: June, 2006

Antenna P/N		MT- 242022/NV	MT- 243013/NV	MT-242025 Preliminary	MT-243011/NRH/B
Frequency Band	MHz	Wide Band: 865–956	Wide Band: 865–956	865-956	865-956
Gain	(Min)	8dBi ±0.5	10.5dBi ±0.5	7 dBic (8@902-928)	8 dBic
Polarization		Linear Vertical	Linear Vertical	RHCP	RHCP
AZ/EL BW	Degree	71° /67°	43°/50°	65°/65°	60°/85°
Sidelobe Level (AZ/EL)	dB (Max)	-20@±120° /-20		-15	TBD
Cross Polarization Level	dB (Max)	-17 to -22	-22 / -26	N/A	N/A
Axial Ratio Level		N/A	N/A	1.5 (2.5 @ 865-870)	3
Front to Back Ratio	dB (Max)	-20	-24	17	-20
VSWR 50 Ohm	(Max)	2.5:1	1.7:1 to 2.3:1	1.5:1	1.5:1
Max. Input Power	Watt	6	6	6	6
Size	mm	190x190x30	370x370x40	190x190x30	306 x 158 x 34
Weight	Kg (Max)	0.7	2	1	1
Connector		N-Type Female	N-Type Female	TNC or N-Type	N-Type Female
Mounting Kit		MT-120018/A	MT-120018	MT-120018/A	MT-120018/A

Environmental

Temperature Range	-45 to +70 degree per IEC 68
Vibration	Random 4M3 per IEC 60721
Mechanical Shock	4M3 per IEC 60721
Humidity	95% per ETSI EN300
Water Tightness	Per IEC 529 IP67 (IP52 for some sector antennas) Subject to change upon request
Salt Spray	500 hours per IEC 68
Solar Radiation	1000 hours per ASTM G53
Ice and Snow	25mm Radial
Wind Speed	160 Kmph Operation/220Kmph Survival
Flammability	UL-94HB

Key Features

- High-Quality Low-Cost
- High Robustness and Endurance
- Lightweight antenna with low profile
- Very aesthetic look and environmental friendly
- Various polarities
- Various configurations such as standalone, integrated or internal component
- Meets RFID electrical and environmental requirements

Benefits

- Provides High performance Low Cost reader antenna solution
- Low installation and maintenance cost
- Maintains real estate aesthetic look and value

Notes

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Preliminary specs are for antennas under development
Upon request MTI may provide the complete spec controlled document for specific antenna

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2.4GHz Circular Polarization Antennas for RFID Readers

Last Update: February, 2006

Antenna P/N		MT-343025 Preliminary	MT-344034 Preliminary	MT-345014 Preliminary
Frequency Band	GHz	2.4-2.5	2.4-2.5	2.4-2.5
Gain	(Min.)	13 dBic	15.5 dBic	19 dBic
Polarization		RHCP	RHCP	RHCP
AZ/EL BW	Degree	32°/32°	22°/22°	17°/17°
ETSI		N/A	N/A	N/A
Sidelobe Level	dB (Max.)	-10	-9	-12
Axial Ratio Level	dB (Max.)	3	3	2
Cross Pol. Level	dB (Max.)	N/A	N/A	N/A
Front to Back Ratio	dB (Max.)	27	30	30
VSWR 50 Ohm		1.4:1	1.5:1	1.5:1
Max. Input Power	Watt	10	6	6
Size	mm	190x190x30	305x305x15	371x371x40
Weight	Kg	1	1	2
Connector other connectors available		N-Type Female	N-Type Female	N-Type Female
Mounting Kit		MT-120018/A	MT-120018	MT-120018

Environmental

Temperature Range	-55 to +71 degree per IEC 68
Temperature Shock	-40°C to +71°C, 3 cycles 30°C/min
Vibration	1 g rms, 10-500 Hz (2 hrs per axis)
Mechanical Shock	10 g, 11 msec half sine pulse
Transit Drop	MIL-STD-810E 26 drops from height of 122 cm
Humidity	95% per ETSI EN300
Water Tightness	IP67
Salt Spray	500 hours per IEC 68
Solar Radiation	1000 hours per ASTM G53
Flammability	Class HB per UL-94

Key Features

- High-Quality Low-Cost
- High Robustness and Endurance
- Lightweight antenna with low profile
- Very aesthetic look and environmental friendly
- Various polarities
- Various configurations such as standalone, integrated or internal component
- Meets RFID electrical and environmental requirements
- Asymmetrical beam antenna can be tilted 90˚ for different beam width ratio

Benefits

- Provides High performance Low Cost reader antenna solution
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2.4 GHz Linear Polarization Antennas for RFID Readers

Last Update: February, 2006

Antenna P/N		MT-10004/N	MT-30081/A	MT-345013/N	MT-344030/NV	MT-344029/NV	MT-343018/NV	MT-343018/NH	MT-344027/NV	MT-344031/NV	MT-342007/N	MT-343013/N
Frequency Band	GHz	2.4-2.5	2.4-2.5	2.4-2.5	2.4-2.5	2.4-2.5	2.4-2.5	2.4-2.5	2.4-2.5	2.4-2.5	2.4-2.5	2.4-2.5
Gain	dBi (Min)	13.5 dBi	15.5 dBi	19 dBi	14	17.5	13	13 -/+ 1	17	13	9	12 -/+ 1
Polarization		Linear V/N	Linear V/N	Linear V/N	Vertical	Vertical	Vertical	Horizontal	Vertical	Vertical	Vertical	Vertical
AZ/EL BW	Degree	33° /33°	20° /20°	17° /17°	60° /19°	60° /6°	90° /20°	13° / 90°	90 (13.5dBi)/5.5	120° /12°	360° /10°	360° /5.1°
ETSI		N/A	TS2	TS3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Sidelobe Level	dB (Max)	-12/-9	TS2	TS3	-21 @ ± 90°	-19 @ ± 90°	-25 @ ± 135°	-27 @ ± 135°	-32 @ ± 135°	-	-10 EL Plane	-10 EL Plane
Cross Polarization Level	dB (Max)	-18	TS2	TS3	-18	-20	-20	-20	-20	-	-	-
Front to Back Ratio	dB (Max)	-26	-26	TS3	-30	-30	-30	-30	-32	-	N/A	N/A
VSWR 50 Ohm		1.5:1	1.5:1	1.7:1	1.7:1	1.7:1	1.7:1	1.5:1	1.7:1	1.7:1	1.5:1	1.5:1
Max. Input Power	Watt	6	6	6	6	6	6	6	6	10	6	6
Size	mm	190X190X30.5	305X305X25	371X371X40	350X150X30	1050X128X28	500X200X30	500X200X30	1232X330X28	500X200X30	730X30	1400X30
Weight	Kg (Max)	0.7	1.5	2	1.2	2.5	1.5	1.5	5.5	1.5	0.7	1
Connector		N-Type Female	N-Type Female	N-Type Female	N-Type Female	N-Type Female	N-Type Female	N-Type Female	N-Type Female	N-Type Female	N-Type Female	N-Type Female
Mounting Kit		MT-120018/A	MT-120018	MT-120018	MT-120019	MT-120021/A	MT-120019	MT-120019	MT-120021	MT-120019	Included	Included

Environmental

Temperature Range	-45 to +70 degree per IEC 68
Vibration	Random 4M3 per IEC 60721
Mechanical Shock	4M3 per IEC 60721
Humidity	95% per ETSI EN300
Water Tightness	Per IEC 529 IP67 (IP52 for some sector antennas) Subject to change upon request
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Mounting Kits

Last Update: February, 2006

Mounting Kit P/N		MT-120018/A	MT-120018	MT-120019	MT-120021
Mechanical					
Pole Mount	Yes/No	Yes	Yes	Yes	Yes
Wall Mount	Yes/No	Yes	Yes	No	Yes
Pole Size	Intch	1.75-3	1.75-3	2.75-3.5	2.5-4.5
Azimuth Control	Degree	0-360	0-360	0-360	0-360 (on pole)
Elevation Control	Degree	See Spec	See Spec	0 to -10	0 to -10
Weight	Kg (max)	0.9	0.9	2.2	2.5
Front Thrust	Kg (max)	56	15	104	138
Side Thrust	Kg (max)	6	6	9	27

Environmental

Temperature Range	-45 to +70 degree per IEC 68
Vibration	Random 4M3 per IEC 60721
Mechanical Shock	4M3 per IEC 60721
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