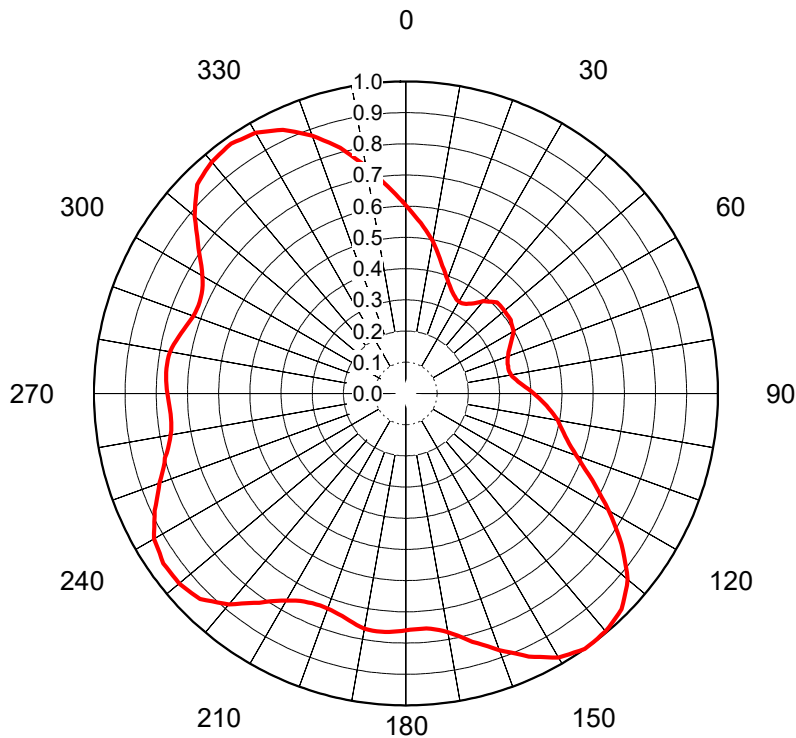


## AZIMUTH PATTERN Horizontal Polarization



Proposal No.

Date

**15-May-18**

Call Letters

**New**

Channel

**23**

Frequency

**527 MHz**

Antenna Type

**TUF-C4-12/48H-2**

Gain

**1.85 (2.68dB)**

Calculated

| Deg | Value | Deg | Value | Deg | Value | Deg | Value | Deg | Value | Deg | Value | Deg | Value | Deg | Value | Deg | Value |
|-----|-------|-----|-------|-----|-------|-----|-------|-----|-------|-----|-------|-----|-------|-----|-------|-----|-------|
| 0   | 0.603 | 36  | 0.356 | 72  | 0.342 | 108 | 0.557 | 144 | 0.999 | 180 | 0.759 | 216 | 0.830 | 252 | 0.821 | 288 | 0.732 |
| 1   | 0.591 | 37  | 0.362 | 73  | 0.340 | 109 | 0.569 | 145 | 1.000 | 181 | 0.761 | 217 | 0.841 | 253 | 0.812 | 289 | 0.729 |
| 2   | 0.580 | 38  | 0.369 | 74  | 0.339 | 110 | 0.581 | 146 | 0.995 | 182 | 0.763 | 218 | 0.854 | 254 | 0.805 | 290 | 0.725 |
| 3   | 0.569 | 39  | 0.377 | 75  | 0.340 | 111 | 0.595 | 147 | 0.990 | 183 | 0.765 | 219 | 0.868 | 255 | 0.799 | 291 | 0.723 |
| 4   | 0.558 | 40  | 0.386 | 76  | 0.338 | 112 | 0.609 | 148 | 0.986 | 184 | 0.766 | 220 | 0.883 | 256 | 0.790 | 292 | 0.722 |
| 5   | 0.548 | 41  | 0.391 | 77  | 0.338 | 113 | 0.625 | 149 | 0.982 | 185 | 0.767 | 221 | 0.892 | 257 | 0.783 | 293 | 0.722 |
| 6   | 0.537 | 42  | 0.396 | 78  | 0.339 | 114 | 0.642 | 150 | 0.978 | 186 | 0.768 | 222 | 0.901 | 258 | 0.776 | 294 | 0.723 |
| 7   | 0.527 | 43  | 0.402 | 79  | 0.340 | 115 | 0.659 | 151 | 0.968 | 187 | 0.768 | 223 | 0.911 | 259 | 0.770 | 295 | 0.725 |
| 8   | 0.516 | 44  | 0.407 | 80  | 0.342 | 116 | 0.676 | 152 | 0.958 | 188 | 0.768 | 224 | 0.922 | 260 | 0.765 | 296 | 0.728 |
| 9   | 0.506 | 45  | 0.413 | 81  | 0.346 | 117 | 0.694 | 153 | 0.948 | 189 | 0.767 | 225 | 0.933 | 261 | 0.762 | 297 | 0.732 |
| 10  | 0.496 | 46  | 0.413 | 82  | 0.351 | 118 | 0.712 | 154 | 0.939 | 190 | 0.766 | 226 | 0.935 | 262 | 0.759 | 298 | 0.738 |
| 11  | 0.483 | 47  | 0.413 | 83  | 0.356 | 119 | 0.731 | 155 | 0.931 | 191 | 0.762 | 227 | 0.938 | 263 | 0.758 | 299 | 0.745 |
| 12  | 0.471 | 48  | 0.413 | 84  | 0.362 | 120 | 0.751 | 156 | 0.918 | 192 | 0.758 | 228 | 0.941 | 264 | 0.757 | 300 | 0.754 |
| 13  | 0.459 | 49  | 0.413 | 85  | 0.368 | 121 | 0.769 | 157 | 0.907 | 193 | 0.754 | 229 | 0.945 | 265 | 0.757 | 301 | 0.763 |
| 14  | 0.447 | 50  | 0.413 | 86  | 0.376 | 122 | 0.787 | 158 | 0.896 | 194 | 0.750 | 230 | 0.948 | 266 | 0.758 | 302 | 0.773 |
| 15  | 0.436 | 51  | 0.412 | 87  | 0.384 | 123 | 0.806 | 159 | 0.885 | 195 | 0.746 | 231 | 0.948 | 267 | 0.759 | 303 | 0.785 |
| 16  | 0.425 | 52  | 0.412 | 88  | 0.393 | 124 | 0.824 | 160 | 0.876 | 196 | 0.742 | 232 | 0.948 | 268 | 0.761 | 304 | 0.798 |
| 17  | 0.415 | 53  | 0.411 | 89  | 0.402 | 125 | 0.844 | 161 | 0.864 | 197 | 0.740 | 233 | 0.948 | 269 | 0.763 | 305 | 0.812 |
| 18  | 0.406 | 54  | 0.411 | 90  | 0.410 | 126 | 0.861 | 162 | 0.852 | 198 | 0.737 | 234 | 0.949 | 270 | 0.765 | 306 | 0.824 |
| 19  | 0.397 | 55  | 0.411 | 91  | 0.419 | 127 | 0.878 | 163 | 0.842 | 199 | 0.735 | 235 | 0.950 | 271 | 0.767 | 307 | 0.838 |
| 20  | 0.389 | 56  | 0.407 | 92  | 0.427 | 128 | 0.895 | 164 | 0.833 | 200 | 0.733 | 236 | 0.945 | 272 | 0.768 | 308 | 0.852 |
| 21  | 0.381 | 57  | 0.405 | 93  | 0.436 | 129 | 0.911 | 165 | 0.824 | 201 | 0.733 | 237 | 0.941 | 273 | 0.770 | 309 | 0.867 |
| 22  | 0.374 | 58  | 0.402 | 94  | 0.444 | 130 | 0.928 | 166 | 0.813 | 202 | 0.733 | 238 | 0.938 | 274 | 0.771 | 310 | 0.883 |
| 23  | 0.367 | 59  | 0.401 | 95  | 0.452 | 131 | 0.938 | 167 | 0.803 | 203 | 0.734 | 239 | 0.935 | 275 | 0.771 | 311 | 0.896 |
| 24  | 0.361 | 60  | 0.399 | 96  | 0.461 | 132 | 0.948 | 168 | 0.793 | 204 | 0.736 | 240 | 0.933 | 276 | 0.772 | 312 | 0.908 |
| 25  | 0.355 | 61  | 0.393 | 97  | 0.469 | 133 | 0.958 | 169 | 0.785 | 205 | 0.740 | 241 | 0.923 | 277 | 0.772 | 313 | 0.921 |
| 26  | 0.351 | 62  | 0.387 | 98  | 0.477 | 134 | 0.968 | 170 | 0.777 | 206 | 0.743 | 242 | 0.914 | 278 | 0.771 | 314 | 0.933 |
| 27  | 0.347 | 63  | 0.381 | 99  | 0.486 | 135 | 0.978 | 171 | 0.771 | 207 | 0.747 | 243 | 0.905 | 279 | 0.770 | 315 | 0.946 |
| 28  | 0.343 | 64  | 0.375 | 100 | 0.494 | 136 | 0.981 | 172 | 0.766 | 208 | 0.752 | 244 | 0.897 | 280 | 0.768 | 316 | 0.951 |
| 29  | 0.341 | 65  | 0.370 | 101 | 0.500 | 137 | 0.985 | 173 | 0.762 | 209 | 0.759 | 245 | 0.889 | 281 | 0.764 | 317 | 0.955 |
| 30  | 0.340 | 66  | 0.364 | 102 | 0.507 | 138 | 0.988 | 174 | 0.759 | 210 | 0.767 | 246 | 0.877 | 282 | 0.760 | 318 | 0.959 |
| 31  | 0.340 | 67  | 0.359 | 103 | 0.514 | 139 | 0.992 | 175 | 0.757 | 211 | 0.775 | 247 | 0.867 | 283 | 0.755 | 319 | 0.964 |
| 32  | 0.341 | 68  | 0.355 | 104 | 0.521 | 140 | 0.996 | 176 | 0.756 | 212 | 0.784 | 248 | 0.857 | 284 | 0.751 | 320 | 0.968 |
| 33  | 0.343 | 69  | 0.352 | 105 | 0.529 | 141 | 0.996 | 177 | 0.756 | 213 | 0.794 | 249 | 0.849 | 285 | 0.746 | 321 | 0.970 |
| 34  | 0.346 | 70  | 0.349 | 106 | 0.537 | 142 | 0.997 | 178 | 0.757 | 214 | 0.806 | 250 | 0.841 | 286 | 0.741 | 322 | 0.972 |
| 35  | 0.351 | 71  | 0.345 | 107 | 0.547 | 143 | 0.998 | 179 | 0.758 | 215 | 0.819 | 251 | 0.830 | 287 | 0.737 | 323 | 0.973 |

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## ELEVATION PATTERN

Proposal No.

Date **15-May-18**

Call Letters **New**

Channel **23**

Frequency **527 MHz**

Antenna Type **TUF-C4-12/48H-2**

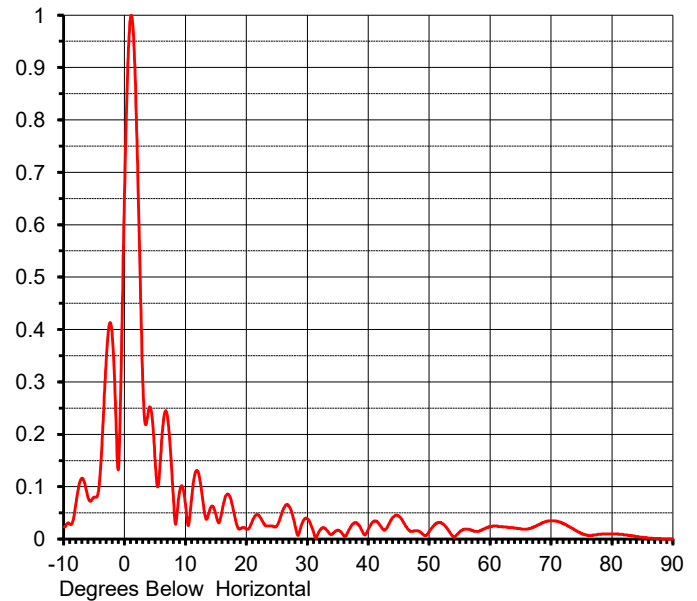
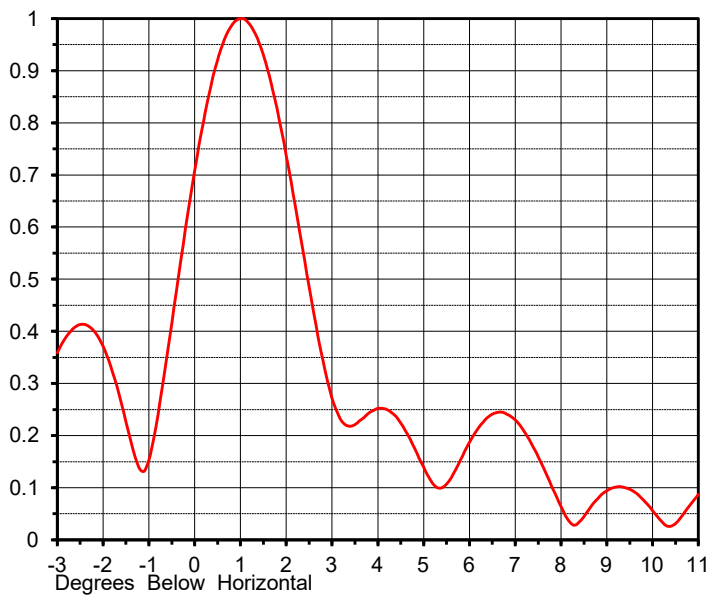
RMS Directivity at Main Lobe **23.3 ( 13.67 dB )**

RMS Directivity at Horizontal **11.7 ( 10.68 dB )**

**Calculated**

Beam Tilt **1.00 deg**

Pattern Number **12U233100**



| Angle | Field | Angle | Field | Angle | Field | Angle | Field | Angle | Field |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| -10.0 | 0.023 | 10.0  | 0.056 | 30.0  | 0.038 | 50.0  | 0.016 | 70.0  | 0.035 |
| -9.0  | 0.028 | 11.0  | 0.087 | 31.0  | 0.011 | 51.0  | 0.029 | 71.0  | 0.034 |
| -8.0  | 0.073 | 12.0  | 0.128 | 32.0  | 0.017 | 52.0  | 0.030 | 72.0  | 0.029 |
| -7.0  | 0.116 | 13.0  | 0.053 | 33.0  | 0.018 | 53.0  | 0.018 | 73.0  | 0.023 |
| -6.0  | 0.077 | 14.0  | 0.059 | 34.0  | 0.010 | 54.0  | 0.003 | 74.0  | 0.016 |
| -5.0  | 0.080 | 15.0  | 0.042 | 35.0  | 0.017 | 55.0  | 0.015 | 75.0  | 0.010 |
| -4.0  | 0.140 | 16.0  | 0.059 | 36.0  | 0.005 | 56.0  | 0.019 | 76.0  | 0.007 |
| -3.0  | 0.359 | 17.0  | 0.085 | 37.0  | 0.023 | 57.0  | 0.016 | 77.0  | 0.008 |
| -2.0  | 0.371 | 18.0  | 0.043 | 38.0  | 0.031 | 58.0  | 0.015 | 78.0  | 0.009 |
| -1.0  | 0.153 | 19.0  | 0.020 | 39.0  | 0.013 | 59.0  | 0.020 | 79.0  | 0.010 |
| 0.0   | 0.708 | 20.0  | 0.019 | 40.0  | 0.021 | 60.0  | 0.024 | 80.0  | 0.010 |
| 1.0   | 1.000 | 21.0  | 0.038 | 41.0  | 0.035 | 61.0  | 0.025 | 81.0  | 0.009 |
| 2.0   | 0.738 | 22.0  | 0.045 | 42.0  | 0.024 | 62.0  | 0.023 | 82.0  | 0.008 |
| 3.0   | 0.272 | 23.0  | 0.026 | 43.0  | 0.022 | 63.0  | 0.022 | 83.0  | 0.007 |
| 4.0   | 0.252 | 24.0  | 0.025 | 44.0  | 0.042 | 64.0  | 0.021 | 84.0  | 0.005 |
| 5.0   | 0.139 | 25.0  | 0.027 | 45.0  | 0.043 | 65.0  | 0.019 | 85.0  | 0.003 |
| 6.0   | 0.187 | 26.0  | 0.058 | 46.0  | 0.026 | 66.0  | 0.019 | 86.0  | 0.002 |
| 7.0   | 0.230 | 27.0  | 0.061 | 47.0  | 0.015 | 67.0  | 0.023 | 87.0  | 0.001 |
| 8.0   | 0.064 | 28.0  | 0.021 | 48.0  | 0.016 | 68.0  | 0.028 | 88.0  | 0.000 |
| 9.0   | 0.094 | 29.0  | 0.028 | 49.0  | 0.008 | 69.0  | 0.033 | 89.0  | 0.000 |
|       |       |       |       |       |       |       |       | 90.0  | 0.000 |

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