

# YSIIC-145T

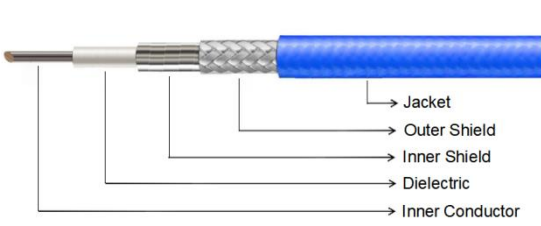
67 GHz,  $\phi$ 1.45 mm Internal Interconnect RF Cable Assembly

## Key Features

- Low Insertion Loss
- Low VSWR
- Compact RF Interconnect Design
- Excellent Phase Stability
- Ideal Semi-Rigid Replacement

## Applications

- Internal Chassis Interconnects
- Cabinet RF Interconnections
- Phased Array Radar Systems
- Internal Module Interconnects
- Semi-Rigid Cable Replacement

| Cable Construction  |            |             |            |                 |                              |             |               |                            |       |        |
|---|------------|-------------|------------|-----------------|------------------------------|-------------|---------------|----------------------------|-------|--------|
|            |            |             |            | Cable Type      |                              | Dia.(mm)    |               | Material                   |       |        |
|   |            |             |            | Inner Conductor |                              | $\phi$ 0.30 |               | Silver plated Copper       |       |        |
|   |            |             |            | Dielectric      |                              | $\phi$ 0.95 |               | Low Density PTFE           |       |        |
|   |            |             |            | Inner Shield    |                              | $\phi$ 1.07 |               | Silver Plated Copper Strip |       |        |
|   |            |             |            | Outer Shield    |                              | $\phi$ 1.25 |               | Silver Plated Copper Braid |       |        |
|   |            |             |            | Jacket          |                              | $\phi$ 1.45 |               | FEP                        |       |        |
| Electrical Specifications   |            |             |            |                 | Mechanical Specifications    |             |               |                            |       |        |
| Operating Freq.   |            | 67 GHz      |            |                 | Static Bending Radius        |             | 7.5 mm        |                            |       |        |
| Cut-off Freq.   |            | 110 GHz     |            |                 | Dynamic Bending Radius       |             | 14.5 mm       |                            |       |        |
| Impedance   |            | 50 $\Omega$ |            |                 | Weight                       |             | 6 g/m         |                            |       |        |
| Velocity of Propagation   |            | 70%         |            |                 | Environmental Specifications |             |               |                            |       |        |
| Shielding Effectiveness   |            | >90 dB      |            |                 | Operating Temperature        |             | -55 to +125°C |                            |       |        |
| Dielectric Withstanding Voltage   |            | 600 VDC     |            |                 |                              |             |               |                            |       |        |
| Attenuation (dB/100 M, Typical at +25°C) & Power Handling (W, Typical at +40°C)             |            |             |            |                 |                              |             |               |                            |       |        |
| Freq.(GHz)  | 1          | 3           | 6          | 8               | 10                           | 12.4        | 18            | 26.5                       | 40    | 67     |
| Attenuation   | 135.2      | 235.1       | 334.0      | 386.5           | 433.0                        | 483.2       | 584.7         | 713.3                      | 882.5 | 1154.5 |
| Avg. Power  | 82         | 47          | 33         | 29              | 26                           | 23          | 19            | 13                         | 11    | 8      |
| Typical Cable Attenuation Calculation Formula: $K1*\sqrt{F}(\text{MHz}) + K2*F(\text{MHz})$ |            |             |            |                 |                              |             |               |                            |       |        |
| K1=4.248276, K2=0.000820  |            |             |            |                 |                              |             |               |                            |       |        |
| Connectors Options  |            |             |            |                 |                              |             |               |                            |       |        |
| Connectors  | Freq.(Max) | VSWR (Max)  | Connectors |                 | Freq.(Max)                   |             | VSWR (Max)    |                            |       |        |
| 1.85 mm(v)  | 67 GHz     | 1.30:1      | SSMA (M)   |                 | 40 GHz                       |             | 1.30:1        |                            |       |        |
| 2.4 mm (2)  | 50 GHz     | 1.30:1      | SMP (P)    |                 | 40 GHz                       |             | 1.30:1        |                            |       |        |
| 2.92 mm (K)   | 40 GHz     | 1.30:1      | SSMP (M)   |                 | 65 GHz                       |             | 1.30:1        |                            |       |        |
| 3.5 mm (3)  | 27 GHz     | 1.30:1      | MCX(C)     |                 | 6 GHz                        |             | 1.25:1        |                            |       |        |
| SMA (S)   | 27 GHz     | 1.25:1      |            |                 |                              |             |               |                            |       |        |

## Cable Assemblies Naming Rule:

PN: Cable-Length(M)-Connector 1-Connector 2

Eg.: YSIIC-145T-1M-SM-SF means YSIIC-145T cable, L=1M, SMA(M)-SMA(F).

Add "R" for Right-Angle Connector, Add "H" for Bulkhead Connector (e.g., SMR, SFH).