

# 141-24NM-300W+

Mini-Circuits

## ts 50 $\Omega$ 24 inch DC to 6 GHz

#### THE BIG DEAL

- Wideband frequency coverage, DC to 6 GHz
- High Power, 300 W at 3 GHz
- Low Loss, 0.74 dB typ at 6 GHz
- Excellent Return Loss, 26 dB typ up to 6 GHz
- Hand formable to almost any custom shape without special bending tools
- 8mm bend radius for tight installations
- Anti-torque nut prevents cable stress during installation
- Insulated outer jacket standard
- Ideal for interconnect of assembled systems



Generic photo used for illustration purposes only

| Model No.  | 141-24NM-300W+ |        |  |
|------------|----------------|--------|--|
| Case Style | KQ1637-24      |        |  |
| Connectors | N-Male         | N-Male |  |

+RoHS Compliant The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications

### **APPLICATIONS**

- Replacement for custom bent 0.141" semi-rigid cables
- Communication receivers and transmitters
- Military and aerospace system
- Environmental and test chambers

### **PRODUCT OVERVIEW**

141-NM-300W+ series Hand-Flex<sup>™</sup> coaxial cables are ideal for interconnecting coaxial components and sub-assemblies in a wide range of systems, including communications, military and aerospace, environmental test chambers and more. The hand-formable cable provides a minimum bend radius of 8mm to accommodate tight layouts without the need for bending tools, adapters or brackets. N-male connectors make these cables ideal for connection of assemblies with N connector types. 141-NM-300W+ series cables are available in a variety of lengths to meet to meet your system needs.

#### **KEY FEATURES**

| Feature   | Advantages   |  |
|---|--|--|
| Hand-formable RF cables                               | Facilitates the assembly of coaxial systems and sub-systems without the need for special cable-bending tools or adapters. Reduces the risk of damage during bending. |  |
| Tight bend-radius, 8mm                                | 8mm bend-radius makes the cable ideal for connections in tight spaces and crowded layouts.   |  |
| Low insertion loss                                    | Minimizes overall signal path loss.  |  |
| Excellent return loss                                 | Minimizes signal reflection and VSWR ripple contribution.  |  |
| N-Male connectors                                     | Supports easy interconnection of components and equipment in systems with N connector types.   |  |
| Good power handling <ul> <li>300W at 3 GHz</li> </ul> | Supports medium to high RF power levels used in transmit paths.  |  |

REV. OR ECO-012744 141-24NM-300W+ MCL NY 040822





REF PLANE

CONN 2

E1 ACROSS FLATS

C2

0.375

9.53

Т

0.15

3.81

D

wt

0.88

22.35

grams

89.43

REF PLANE

CONN 1

CLACROSS FLATS

\* OVERALL CONNECTOR DIMENSION (CONNECTOR SHAPE MAY VARY)

A

E1

24.00

609.60

0.750

19.05

#### **MAXIMUM RATINGS**

| Operating Temperature                | -45°C to 85°C  |  |
|--------------------------------------|----------------|--|
| Storage Temperature                  | -55°C to 105°C |  |
| Power Handling at 25°C,<br>Sea Level | 300 W at 3 GHz |  |

Permanent damage may occur if any of these limits are exceeded.

**OUTLINE DRAWING** 

– ANTI-TORQUE NUT – - HAND-FLEX<sup>TM</sup> CABLE

E2 ACROSS FLATS - C2 ACROSS FLATS

A+T

OUTLINE DIMENSIONS (Inch)

C1

F

0.750

19.05

CABLE MARKING ON LOOSE FITTING SLEEVE

В

E2

0.375 .163±.004

9.53 4.14±0.10

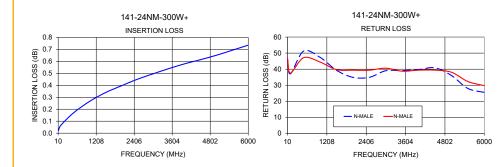
0.88

22.352

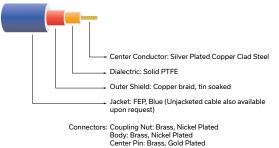
#### **ELECTRICAL SPECIFICATIONS AT 25°C** Frequency Parameter Min. Тур. Max. Units (GHz) DC GHz 6 Frequency range Length 24 inches DC - 20.22 \_ 0.60 Insertion Loss dB 2 - 6 0.57 \_ 1.11 DC - 2 23 41 \_ Return Loss dB 2 - 6 23 36 \_

#### **TYPICAL PERFORMANCE DATA**

| Frequency<br>(MHz) | Insertion<br>Loss<br>(dB) | Return Loss<br>(dB) |        |
|--------------------|---------------------------|---------------------|--------|
|                    |                           | N-MALE              | N-MALE |
| 10                 | 0.02                      | 45.97               | 46.83  |
| 100                | 0.07                      | 37.14               | 37.56  |
| 500                | 0.17                      | 51.24               | 47.15  |
| 1000               | 0.27                      | 47.40               | 44.46  |
| 1500               | 0.34                      | 39.33               | 39.71  |
| 2000               | 0.40                      | 34.92               | 39.36  |
| 2500               | 0.45                      | 34.91               | 39.37  |
| 3000               | 0.50                      | 39.02               | 40.60  |
| 3500               | 0.54                      | 39.12               | 38.74  |
| 4000               | 0.58                      | 39.76               | 39.37  |
| 4500               | 0.61                      | 40.83               | 39.38  |
| 5000               | 0.65                      | 36.06               | 38.07  |
| 5500               | 0.69                      | 27.98               | 32.31  |
| 6000               | 0.74                      | 25.56               | 29.75  |



### **CABLE CONSTRUCTION**



#### NOTES

- A. Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
- B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
- C. The parts covered by this specification document are subject to Mini-Circuits standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the standard terms and the exclusive rights and remedies thereunder, please visit Mini-Circuits' website at www.minicircuits.com/terms/viewterm.html

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