*Engineering Development Model*

# RF Transformer T9-ED10543/2

Impedance Ratio : 9

**Important Note**

This model has been designed, built and tested in our engineering department. Performance data represents model capability.
At present it is a non-catalog model. On request, we can supply a final specification sheet, part number and price/delivery information.

Please click "Back", and then click "Contact Us" for Applications support.

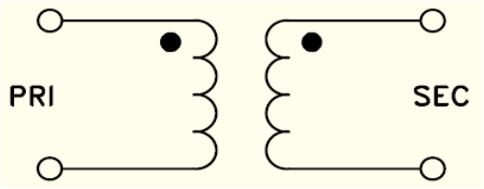
**CASE STYLE : KK81**

| ELECTRICAL SPECIFICATIONS 50Ω @ +25°C | | | | | |
|---|---|---|---|---|---|
| **Parameter** | | **Min.** | **Typ.** | **Max.** | **Units** |
| **Frequency** | | 2.5 | | 280 | MHz |
| **Insertion Loss *** | **3 dB Bandwidth** | | 2.5 - 280 | | MHz |
| | **2 dB Bandwidth** | | 4.5 - 200 | | MHz |
| | **1 dB Bandwidth** | | 20 - 140 | | MHz |

**Notes:**
* Insertion Loss is referenced to mid-band loss, 0.52dB typ.

| MAXIMUM RATINGS | |
|---|---|
| **Operating Temperature** | -20°C to 85°C |
| **Storage Temperature** | -55°C to 100°C |
| **RF Power** | 0.25 W |
| **DC Current** | 30 mA |

**Configuration : C**




| PIN CONNECTIONS | |
|---|---|
| **PRIMARY DOT** | 4 |
| **PRIMARY** | 6 |
| **SECONDARY DOT** | 3 |
| **SECONDARY** | 1 |
| **NOT USED** | 2,5 |

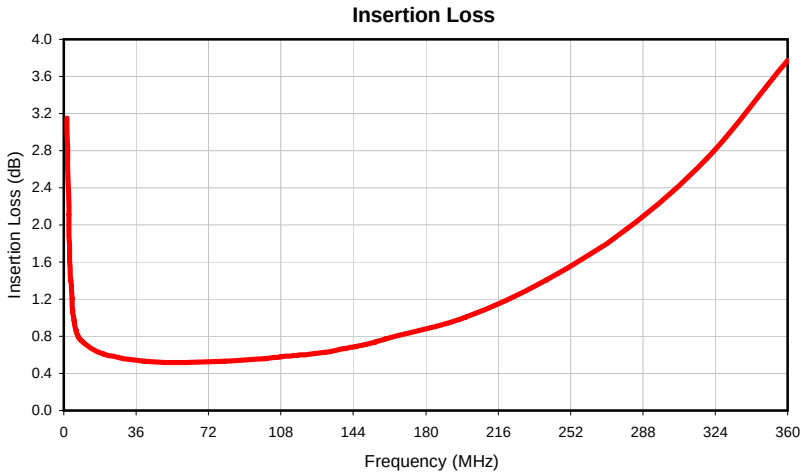
# RF Transformer T9-ED10543/2

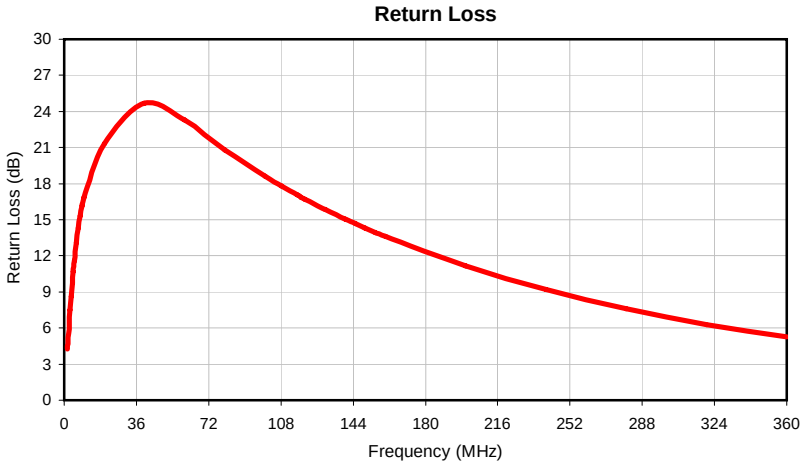
*Typical Performance Data*

| FREQUENCY MHz | INSERTION LOSS (dB) | RETURN LOSS (dB) |
|---|---|---|
| 1.75 | 3.15 | 4.25 |
| 2.00 | 2.73 | 4.91 |
| 2.50 | 2.11 | 6.26 |
| 3.00 | 1.69 | 7.49 |
| 3.50 | 1.40 | 8.64 |
| 4.00 | 1.21 | 9.71 |
| 4.50 | 1.07 | 10.68 |
| 5.00 | 0.97 | 11.57 |
| 6.00 | 0.87 | 13.08 |
| 7.00 | 0.81 | 14.31 |
| 8.00 | 0.77 | 15.31 |
| 9.00 | 0.75 | 16.15 |
| 10.00 | 0.73 | 16.87 |
| 20.00 | 0.61 | 21.31 |
| 40.00 | 0.53 | 24.68 |
| 60.00 | 0.52 | 23.32 |
| 80.00 | 0.53 | 20.82 |
| 100.00 | 0.56 | 18.63 |
| 108.00 | 0.58 | 17.83 |
| 116.00 | 0.59 | 17.07 |
| 118.00 | 0.60 | 16.88 |
| 120.00 | 0.60 | 16.71 |
| 130.00 | 0.63 | 15.84 |
| 140.00 | 0.67 | 15.05 |
| 145.00 | 0.69 | 14.67 |
| 150.00 | 0.71 | 14.31 |
| 155.00 | 0.74 | 13.96 |
| 160.00 | 0.77 | 13.60 |
| 200.00 | 1.01 | 11.18 |
| 240.00 | 1.41 | 9.20 |
| 280.00 | 1.96 | 7.59 |
| 320.00 | 2.72 | 6.29 |
| 360.00 | 3.77 | 5.27 |

# RF Transformer T9-ED10543/2

*Typical Performance Data*

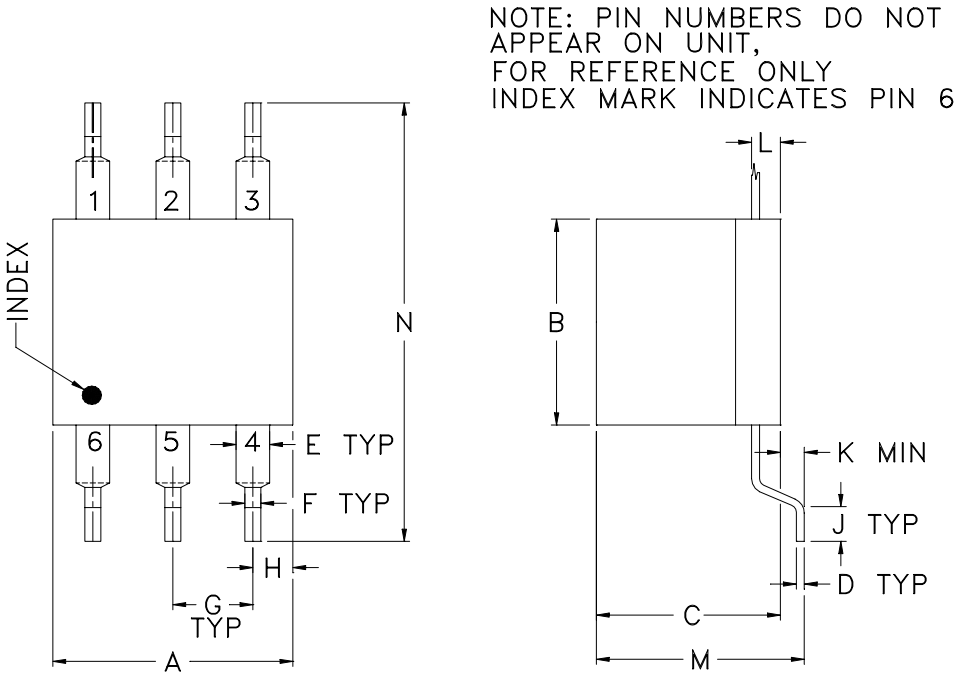


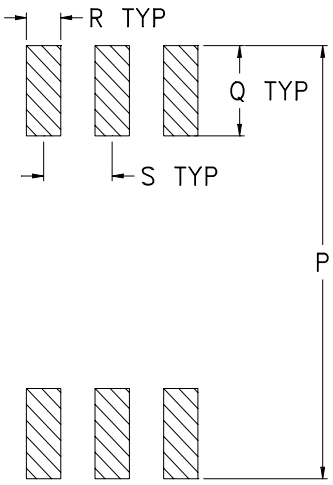
# Case Style KK

**KK81**
**KK265**

## Outline Dimensions




### PCB Land Pattern




Suggested Layout,
Tolerance to be within ±.002

| CASE # | A | B | C | D | E | F | G | H | J | K | L | M | N | P |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| KK81 | .30 (7.62) | .27 (6.86) | .23 (5.84) | .010 (0.25) | 0.42 (1.07) | .020 (0.51) | .100 (2.54) | .05 (1.27) | .05 (1.27) | .020 (0.51) | .036 (0.91) | .26 (6.60) | .575 (14.61) | .600 (15.24) |
| KK265 | .30 (7.62) | .27 (6.86) | .22 (5.84) | .010 (0.25) | .020 (0.50) | .020 (0.51) | .100 (2.54) | .05 (1.27) | .05 (1.27) | 0.1 (0.25) | .032 (0.81) | .23 (5.84) | .450 (10.62) | .475 (12.07) |

| CASE # | Q | R | S | WT. GRAM |
|---|---|---|---|---|
| KK81 | .125 (3.18) | .050 (1.27) | .100 (2.54) | .50 |
| KK265 | .125 (3.18) | .050 (1.27) | .100 (2.54) | .65 |

**Dimensions are in inches (mm). Tolerances: 2 Pl. ± .03; 3 Pl. ± .015**

**Notes:**

1. Case material: Plastic.
2. Termination finish:
   For RoHS Case Styles: Tin plate over Nickel plate.
   For RoHS-5 Case Styles: Tin-Lead plate.
3. Special Tolerances: Termination width ± .005 inch, termination thickness ± .003 inch.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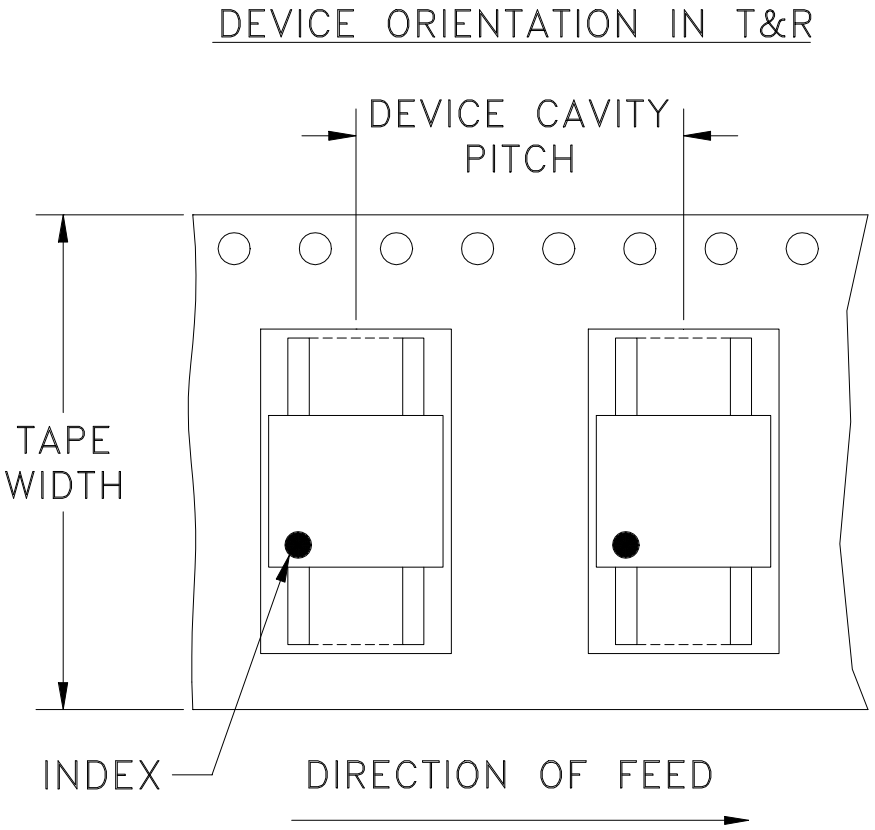
# Tape & Reel Packaging TR-F1




| Tape Width, mm | Device Cavity Pitch, mm | Reel Size, inches | Devices per Reel |
|---|---|---|---|
| 24 | 12 | 13 | 900 |

Mini-Circuits carrier tape materials provide protection from ESD (Electro-Static Discharge) during handling and transportation. Tapes are static dissipative and comply with industry standards EIA-481/EIA-541.

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# Environmental Specifications ENV19

All Mini-Circuits products are manufactured under exacting quality assurance and control standards, and are capable of meeting published specifications after being subjected to any or all of the following physical and environmental test.

| Specification | Test/Inspection Condition | Reference/Spec |
|---|---|---|
| Operating Temperature | -20° to 85°C<br>Ambient Environment | Individual Model Data Sheet |
| Storage Temperature | -55° to 100° C<br>Ambient Environment | Individual Model Data Sheet |
| Thermal Shock | -55° to 100°C, 100 cycles | MIL-STD-202, Method 107, Condition A-3, except +100°C |
| Solder Reflow Heat | Sn-Pb Eutetic Process: 225°C peak<br>Pb-Free Process 245° - 250°C peak | J-STD-020, Table 4-1, 4-2 and 5-2, Figure 5-1 |
| Solderability | 10X Magnification | J-STD-002, Para 4.2.5, Test S, 95% Coverage |
| Vibration (High Frequency) | 20g peak, 10-2000 Hz, 12 times in each of three perpendicular directions (total 36) | MIL-STD-202, Method 204, Condition D |
| Mechanical Shock | 50g, 11 ms, 1/2-sine, 18 shocks: 3 each direction, each of 3 axes | MIL-STD-202, Method 213, Condition A |
| Lead Integrity | 2 Pound Pull, perpendicular to edge of unit | MIL-STD-202, Method 211, Condition A |
| Marking Resistance to Solvents | Isopropyl alcohol + mineral spirits at 25°C; terpene defluxer at 25°C;<br>distilled water + proylene glycol monomethyl ether + monoethanolamine at 63°C to 70°C | MIL-STD-202, Method 215 |


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