

# MIXERS

## DOUBLE -BALANCED

$LO = +13 \text{ dBm}$

HIGH DYNAMIC RANGE

### SURFACE MOUNT



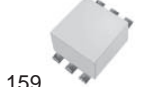
106B



134



134J



159

| FREQUENCY RANGE (MHz) |           | CONVERSION LOSS (dB) |                   | LO-RF ISOLATION (dB) |            |            | LO-IF ISOLATION (dB) |            |            | PACKAGE | PIN OUT | MODEL      |
|-----------------------|-----------|----------------------|-------------------|----------------------|------------|------------|----------------------|------------|------------|---------|---------|------------|
| RF/LO                 | IF        | XMB TYP/MAX          | FULL BAND TYP/MAX | LB TYP/MIN           | MB TYP/MIN | UB TYP/MIN | LB TYP/MIN           | MB TYP/MIN | UB TYP/MIN |         |         |            |
| 0.5 - 500             | DC - 500  | 5.5/7                | 6.0/8.5           | 55/50                | 35/25      | 30/20      | 55/45                | 30/25      | 25/20      | 159     | 1       | SLD-K1RM*  |
| 0.5 - 500             | DC - 500  | 5.5/7                | 6.0/8.5           | 55/50                | 35/25      | 30/20      | 55/45                | 30/25      | 25/20      | 134     | 1       | SMD-K1RM*  |
| 0.5 - 500             | DC - 500  | 5.5/7                | 6.0/8.5           | 55/50                | 35/25      | 30/20      | 55/45                | 30/25      | 25/20      | 134J    | 1       | SMZ-K1RM*  |
| 5 - 1000              | DC - 1000 | 6.5/8                | 7/9               | 60/40                | 40/20      | 25/20      | 55/30                | 30/20      | 20/12      | 159     | 1       | SLD-K2RM*  |
| 5 - 1000              | DC - 1000 | 6.5/8                | 7/9               | 60/40                | 40/20      | 25/20      | 55/30                | 30/20      | 20/12      | 134     | 1       | SMD-K2RM*  |
| 5 - 1000              | DC - 1000 | 6.5/8                | 7/9               | 60/40                | 40/20      | 25/20      | 55/30                | 30/20      | 20/12      | 134J    | 1       | SMZ-K2RM*  |
| 10 - 1000             | 20 - 500  | 6.5/8                | 7.5/9.5           | 52/40                | 43/30      | 33/25      | 53/30                | 44/25      | 39/22      | 159     | 1       | SLD-K2URM* |
| 10 - 1000             | 20 - 500  | 6.5/8                | 7.5/9.5           | 52/40                | 43/30      | 33/25      | 53/30                | 44/25      | 39/22      | 134     | 1       | SMD-K2URM* |
| 10 - 1000             | 20 - 500  | 6.5/8                | 7.5/9.5           | 52/40                | 43/30      | 33/25      | 53/30                | 44/25      | 39/22      | 134J    | 1       | SMZ-K2URM* |
| 5 - 1500              | DC - 1000 | 6.5/8                | 7.5/9.5           | 60/40                | 40/20      | 30/18      | 55/30                | 30/18      | 15/8       | 159     | 1       | SLD-K3RM*  |
| 5 - 1500              | DC - 1000 | 6.5/8                | 7.5/9.5           | 60/40                | 40/20      | 30/18      | 55/30                | 30/18      | 15/8       | 134     | 1       | SMD-K3RM*  |
| 5 - 1500              | DC - 1000 | 6.5/8                | 7.5/9.5           | 60/40                | 40/20      | 30/18      | 55/30                | 30/18      | 15/8       | 134J    | 1       | SMZ-K3RM*  |
| 5 - 2500              | 3 - 600   | 8/9.5                | 10.5/12           | 60/35                | 40/25      | 35/20      | 50/35                | 30/20      | 25/15      | 159     | 1       | SLD-K4RM   |
| 5 - 2500              | 3 - 600   | 8/9.5                | 10.5/12           | 60/35                | 40/25      | 35/20      | 50/35                | 30/20      | 25/15      | 134     | 1       | SMD-K4RM   |
| 5 - 2500              | 3 - 600   | 8/9.5                | 10.5/12           | 60/35                | 40/25      | 35/20      | 50/35                | 30/20      | 25/15      | 134J    | 1       | SMZ-K4RM   |
| 2-600                 | DC-600    | 5.5/7                | 7/8               | 60/50                | 42/30      | 37/25      | 60/45                | 47/30      | 36/22      | 106B    | 2       | TOP-1RMZ   |
| 50-1000               | DC-1000   | 6/7                  | 7.8/9             | 58/45                | 45/30      | 38/25      | 50/35                | 40/20      | 35/18      | 106B    | 2       | TOP-2RMZ   |
| 20-1500               | DC-1000   | 7.5/8                | 8.5/9             | 54/40                | 42/30      | 39/25      | 40/25                | 28/18      | 20/8       | 106B    | 2       | TOP-5RMZ   |

**NOTES:**

- \* Phase Detection, Polarity Positive
- 1. 1dB Compression Point = +7 dBm (Typ)
- 2. IP3 (Input) = +20 dBm (Typ)
- 3. Maximum Input Power without damage = 250 mW ave. cw

XMB= 2LF to HF/2  
 FULL BAND = LF to HF  
 LB= LF to 10LF  
 MB = 10LF to HF/2  
 UB= HF/2 to HF

**PIN-OUT TABLE**

|    | RF | LO | IF | GND     | CASE GND |
|----|----|----|----|---------|----------|
| #1 | 4  | 1  | 5  | 2, 3, 6 | --       |
| #2 | 1  | 4  | 2  | 3       | 3        |

GND = Ground externally

For pin location and package outline drawings, see back pages.

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## DOUBLE -BALANCED

$LO = +13 \text{ dBm}$

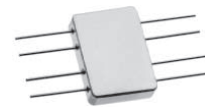
HIGH DYNAMIC RANGE

### THROUGH HOLE (RELAY)



| FREQUENCY RANGE (MHz) |        | CONVERSION LOSS (dB) |                   | LO-RF ISOLATION (dB) |            |            | LO-IF ISOLATION (dB) |            |            | PACKAGE | PIN OUT | MODEL           |
|-----------------------|--------|----------------------|-------------------|----------------------|------------|------------|----------------------|------------|------------|---------|---------|-----------------|
| RF/LO                 | IF     | XMB TYP/MAX          | FULL BAND TYP/MAX | LB TYP/MIN           | MB TYP/MIN | UB TYP/MIN | LB TYP/MIN           | MB TYP/MIN | UB TYP/MIN |         |         |                 |
| 0.5-500               | DC-500 | 5.5/7                | 6.5/8.5           | 50/45                | 45/30      | 35/25      | 45/35                | 40/25      | 30/20      | 102     | 1       | <b>CMP-2D3</b>  |
| 1-500                 | DC-500 | 5.5/7.5              | 6.5/8.5           | 50/35                | 45/30      | 35/25      | 35/30                | 40/25      | 30/20      | 120     | 2       | <b>CMP-2C3*</b> |
| 10-2000               | DC-600 | 7/8.5                | 7.5/9             | 55/45                | 45/30      | 40/30      | 50/45                | 35/30      | 35/25      | 102     | 3       | <b>CMP-256</b>  |
| 1-250                 | DC-200 | 5/7                  | 6/8.5             | 50/45                | 40/30      | 28/23      | 45/40                | 35/25      | 26/20      | 106     | 4       | <b>CMP-3H2</b>  |
| 2-500                 | DC-500 | 6/7.5                | 7/8.5             | 50/45                | 40/30      | 30/20      | 45/40                | 35/25      | 25/20      | 106     | 4       | <b>CMP-3H3</b>  |

### FLAT-PACK



| FREQUENCY RANGE (MHz) |        | CONVERSION LOSS (dB) |                   | LO-RF ISOLATION (dB) |            |            | LO-IF ISOLATION (dB) |            |            | OUTLINE DRAWING | PIN OUT | MODEL          |
|-----------------------|--------|----------------------|-------------------|----------------------|------------|------------|----------------------|------------|------------|-----------------|---------|----------------|
| RF/LO                 | IF     | XMB TYP/MAX          | FULL BAND TYP/MAX | LB TYP/MIN           | MB TYP/MIN | UB TYP/MIN | LB TYP/MIN           | MB TYP/MIN | UB TYP/MIN |                 |         |                |
| 0.5-500               | DC-500 | 6/7                  | 7/9               | 45/40                | 45/40      | 40/30      | 45/40                | 40/35      | 35/25      | 101             | 5       | <b>CMF-1A3</b> |

### COAXIAL



| FREQUENCY RANGE (MHz) |           | CONVERSION LOSS (dB) |                   | LO-RF ISOLATION (dB) |            |            | LO-IF ISOLATION (dB) |            |            | PACKAGE | PIN OUT | MODEL           |
|-----------------------|-----------|----------------------|-------------------|----------------------|------------|------------|----------------------|------------|------------|---------|---------|-----------------|
| RF/LO                 | IF        | XMB TYP/MAX          | FULL BAND TYP/MAX | LB TYP/MIN           | MB TYP/MIN | UB TYP/MIN | LB TYP/MIN           | MB TYP/MIN | UB TYP/MIN |         |         |                 |
| 0.5 - 2000            | 0.2 - 600 | 5.8/8                | 7.2/9.5           | 60/45                | 35/30      | 30/25      | 55/40                | 30/25      | 25/20      | 110     | 4       | <b>CMK-7A6S</b> |

#### NOTES:

- 1dB Compression Point = +7 dBm (Typ)
  - IP3 (Input) = +18 dBm (Typ)
  - Maximum Input Power without damage = 250 mW ave. cw
- \* Non-Hermetic

#### PIN-OUT TABLE

|    | RF | LO | IF   | GND       | CASE GND  |
|----|----|----|------|-----------|-----------|
| #1 | 1  | 8  | *3,4 | 2,5,6,7   | 2         |
| #2 | 1  | 8  | *3,4 | 2,5,6,7   | --        |
| #3 | 1  | 8  | 3    | 2,5,6,7   | 2,5,6,7   |
| #4 | 1  | 4  | 2    | 3         | 3         |
| #5 | 1  | 4  | 5    | All Other | All Other |

GND = Ground externally

For pin location and package outline drawings, see back pages.

XMB= 2LF to HF/2  
 FULL BAND = LF to HF  
 LB= LF to 10LF  
 MB = 10LF to HF/2  
 UB= HF/2 to HF

