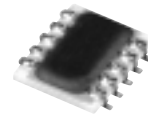


Surface Mount

Frequency Doublers

1.6 to 4.8 GHz

KBA-20 • KBA-40



BLUE CELL™

Features

- low conversion loss, 12 dB typ.
- solder plated leads for strain relief and excellent solderability

Applications

- synthesizers
- local oscillators

| CASE STYLE: | SM2 | MODEL | PRICE | QTY |
|-------------|-------------|---------|-------|-----|
| KBA-20 | \$9.95 ea. | (10-49) | | |
| KBA-40 | \$14.95 ea. | (1-9) | | |

Frequency Doubler Electrical Specifications

| MODEL NO. | FREQUENCY (GHz) | | INPUT POWER (dBm) | | CONVERSION LOSS (dB) | | HARMONIC OUTPUT (dBc) | | | | | | |
|-----------|-----------------|-----------|-------------------|------|----------------------|------|-----------------------|------|------|------|------|------|------|
| | Input | Output | Min. | Max. | Input Freq. | Typ. | Max. | F1 | | F3 | | F4 | |
| | | | | | | | | Typ. | Min. | Typ. | Min. | Typ. | Min. |
| KBA-20 | 1.6 - 2.2 | 3.2 - 4.4 | 11 | 15 | 1.6-2.2 | 12 | 15.8 | 12 | 7 | 20 | 13 | 23 | 10 |
| KBA-40 | 2.7-4.8 | 5.4-9.6 | 10 | 16 | 2.7-4.8 | 12.3 | 17.6 | 18 | 10 | 26 | 15 | 24 | 14 |
| | | | 5 | 10 | 2.7-4.8 | 13 | 19 | 15 | 8 | 26 | 16 | 26 | 12 |

BLUE CELL™ is protected by U.S. Patents 5,534,830 5,640,132 5,640,134 5,640,699

Pin Connections

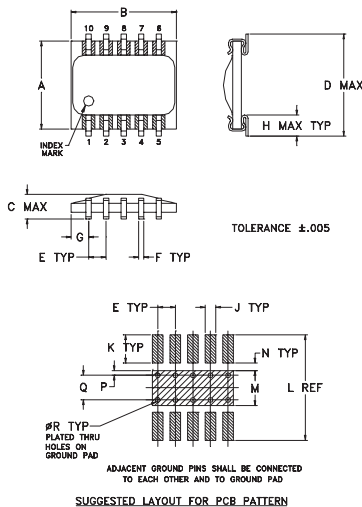
| MODEL | KBA-20 | KBA-40 |
|----------------|---------------|---------------|
| INPUT | 10 | 10 |
| OUTPUT | 5 | 6 |
| SAMPLE* | 3 | — |
| 50Ω TERMINATED | — | 1 |
| GROUND | 1,2,4,6,7,8,9 | 2,3,4,5,7,8,9 |

*sample port output power, -10 dBc typ.
Terminate in 50 ohms if not used.

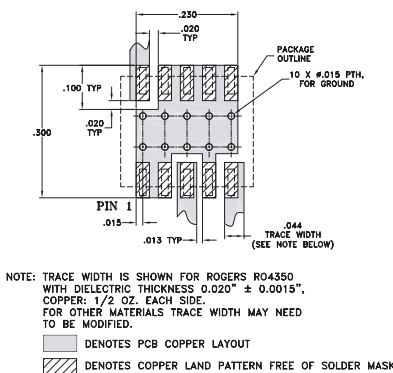
Maximum Ratings

| | |
|-----------------------|----------------|
| Operating Temperature | -40°C to 85°C |
| Storage Temperature | -55°C to 100°C |

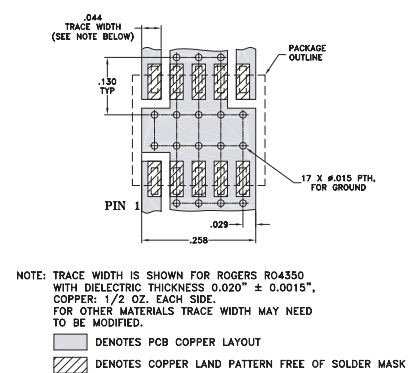
Outline Drawing



KBA-20 Demo Board MCL P/N: TB-99 Suggested PCB Layout (PL-066)



KBA-40 Demo Board MCL P/N: TB-74 Suggested PCB Layout (PL-067)



Outline Dimensions (inch/mm)

| A | B | C | D | E | F | G | H | J | K | L | M | N | P | Q | R | wt. |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|
| .250 | .300 | .070 | .290 | .050 | .015 | .050 | .060 | .030 | .080 | .300 | .100 | .020 | .015 | .070 | .014 | grams |
| 6.35 | 7.62 | 1.78 | 7.37 | 1.27 | .38 | 1.27 | 1.52 | 0.76 | 2.03 | 7.52 | 2.54 | 0.51 | .38 | 1.78 | .36 | .3 |