

E-Series I/Q Modulator
1070 — 1095 MHz

EKIN2-1082
V1

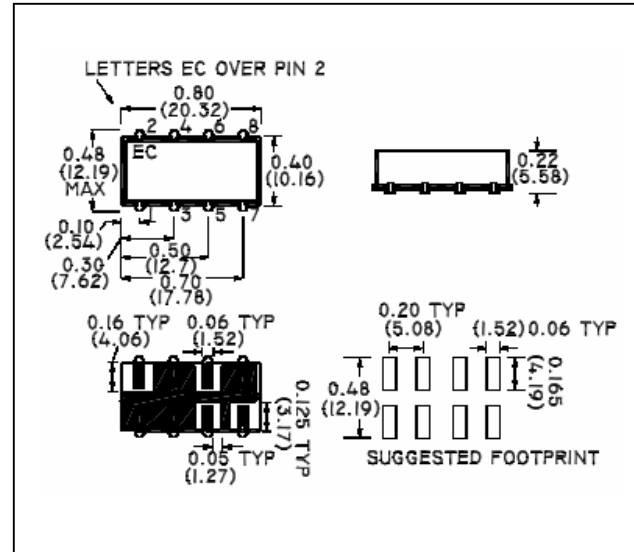
Features

- High Carrier Suppression
- High 3 I and 5 I Suppression
- LO Power + 10 dBm Typical
- Surface Mount
- Tape and reel packaging available

Description

M/A-COM's EKIN2-1082 is a passive, high performance surface mount Modulator. It is ideally suited for Direct Modulation in Cellular Base Stations. Parts are packaged in tape & reel.

SM - 28 Package



Electrical Specifications: $T_A = 25^\circ\text{C}$, $Z_0 = 50\Omega$

| Parameter | Test Conditions | Frequency | Units | Min | Typ | Max |
|------------------------------|---|-------------|-------|-----|---------|------|
| LO Frequency | — | 1070 - 1095 | MHz | — | — | — |
| I/Q Frequency | — | DC - 5 | MHz | — | — | — |
| LO Carrier Suppression | When Q = +90 degrees relative to I; Lower sideband is suppressed. Related to wanted sideband power. | 1070 - 1095 | dBc | 30 | 35 | — |
| SSB Rejection | | 1070 - 1095 | dBc | 30 | 35 | — |
| Harmonic Suppression 3 x I/Q | | 1070 - 1095 | dBc | 30 | 36 | — |
| Harmonic Suppression 5 x I/Q | | 1070 - 1095 | dBc | 40 | 50 | — |
| Conversion Loss | — | 1070 - 1095 | dB | — | 9.7 | 11.5 |
| (LO) Carrier Power | — | 1070 - 1095 | dBm | — | +10 ± 1 | — |
| I/Q Drive Level | — | 1070 - 1095 | dBm | — | -5 | — |

Ordering Information

| Part Number | Package |
|--------------|--------------------------------|
| EKIN2-1082TR | Tape and Reel (300 piece Reel) |

Electrical Specifications: $T_A = 25^\circ\text{C}$, $Z_0 = 50\Omega$

| Parameter | Test Conditions | Frequency | Units | Min | Typ | Max |
|-------------------|-----------------|-------------|-------|-----|-----|-----|
| Sideband Spurious | — | 1025 - 1070 | dBc | 25 | — | — |
| Sideband Spurious | — | 1095 - 1135 | dBc | 25 | — | — |
| Carrier Rejection | — | 1025 - 1070 | dBc | 25 | — | — |
| Carrier Rejection | — | 1095 - 1135 | dBc | 25 | — | — |

Absolute Maximum Ratings ¹

| Parameter | Absolute Maximum |
|------------------------------|------------------|
| Impedance | 50 Ohms Nominal |
| Operating Temperature | -40°C to +85°C |
| Storage Temperature | -55°C to +125°C |
| Pin Temperature (10 seconds) | 260°C |

1. Operation of this device above any one of these parameters may cause permanent damage.

Pin Configuration

| Pin No. | Function |
|---------|-------------|
| 1 | LO |
| 2 | Case Ground |
| 3 | Case Ground |
| 4 | Case Ground |
| 5 | I |
| 6 | Q |
| 7 | Case Ground |
| 8 | RF |