

# HIGH FREQUENCY SURFACE MOUNT VCXO

## DFV S1-KECPI (5 V) & DFV S1-LECPI (3.3 V)

### KEY FEATURES

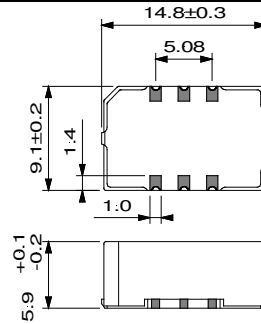
**16 to 200 MHz**

**Encapsulated crystal**

**1 ps RMS jitter over 50 kHz to 80 MHz B.W.**

### APPLICATIONS

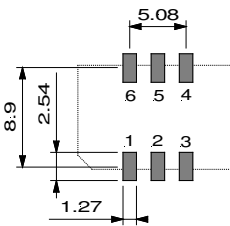
**Sonet/SDH, Datacomms**



Marking:

DFV S1-KE/LE  
Frequency  
Code yrwk

| Function  | DFV S1 |
|-----------|--------|
| V control | 1      |
| E / D     | 2      |
| GND       | 3      |
| Output 1  | 4      |
| Output 2  | 5      |
| Vcc       | 6      |



PC board footprint

| TYPE            | DFV S1-KECPI  | DFV S1-LECPI  |
|-----------------|---------------|---------------|
| Frequency Range | 16 to 185 MHz | 16 to 200 MHz |

| ELECTRICAL SPECIFICATIONS       | DFV S1-KECPI                         | DFV S1-LECPI                         |
|---------------------------------|--------------------------------------|--------------------------------------|
| supply voltage                  | 5 V ± 5 %                            | 3.3 V ± 5 %                          |
| supply current (no load)        | ≤ 70 mA                              | ≤ 60 mA                              |
| output load                     | PECL 100 K ( 50 Ω to 3 V )           | LVPECL 100 K ( 50 Ω to 1.3 V )       |
| duty cycle @ 50% level          | 40/60...60/40 %                      | 40/60...60/40 %                      |
| rise/fall times ( 20 to 80% )   | ≤ 0.5 ns                             | ≤ 0.5 ns                             |
| high/low levels                 | ≥ 3.92 V / ≤ 3.45 V                  | ≥ 2.22 V / ≤ 1.7 V                   |
| jitter RMS ( 12 kHz to 5 MHz )  | ≤ 0.5 ps                             | ≤ 0.5 ps                             |
| jitter RMS ( 50 kHz to 80 MHz ) | ≤ 1 ps ( f = 155.52 MHz )            | ≤ 1 ps ( f = 155.52 MHz )            |
| enable / disable on pin 2       | low or open = enable, high = disable | low or open = enable, high = disable |
| complementary output on pin 5   | 180° phase shifted                   | 180° phase shifted                   |
| start up                        | ≤ 10 ms @ 4.75 V                     | ≤ 10 ms @ 3.15 V                     |

| FREQUENCY STABILITY |                   |            | detailed tolerances [ ppm ]  |        |       |         |        |                                 |                 |
|---------------------|-------------------|------------|--|--------|-------|---------|--------|---------------------------------|-----------------|
| type                | temperature range | model code | stability versus:  |        |       |         |        | pulling range positive function | control voltage |
|                     |                   |            | temp.  | @ 25°C | Vcc   | load    | ageing |                                 |                 |
| DFV S1-KE           | 0 to 70°C         | 100B15     | ≤ ± 15   | ≤ ± 10 | ≤ ± 3 | ≤ ± 0.5 | ≤ ± 2  | ≥ ± 100                         | 2.5 V ± 2 V     |
|                     |                   | 100B25     | ≤ ± 25   |        |       |         |        |                                 |                 |
| DFV S1-LE           | 0 to 70°C         | 100B15     | ≤ ± 15   | ≤ ± 10 | ≤ ± 3 | ≤ ± 0.5 | ≤ ± 2  | ≥ ± 100                         | 1.5 V ± 1.5 V   |
|                     |                   | 100B25     | ≤ ± 25   |        |       |         |        |                                 |                 |
| remarks             |                   |            | input impedance ≥ 10 kΩ,<br>modulation bandwidth ≥ 10 kHz @ -3dB<br>ageing is 1 <sup>st</sup> year at 25°C |        |       |         |        |                                 |                 |

| OPTIONS         | CODE |   |
|-----------------|------|---|
| control voltage | D    | 0.3 to 3.0 V, center @ 1.65 V (code placed into the model code : 100"D"B25) |

| ORDERING CODE | type + option code + frequency + model code |
|---------------|---|
| Example       | DFV S1-LECPI 155.52 MHz 100DB15             |

| REMARK | Please consult factory for -40 to +85°C versions |
|--------|--|
|--------|--|