

- Frequency range 3.5MHz to 70.0MHz
- Fully RoHS compliant
- Industry-standard package
- Standard EIA tape and reel supply



### DESCRIPTION

86SMX crystals were among the first surface mount crystal designs available in the industry. As a result the package is still widely used. Supply on 24mm EIA tape and reel is standard.

### SPECIFICATION

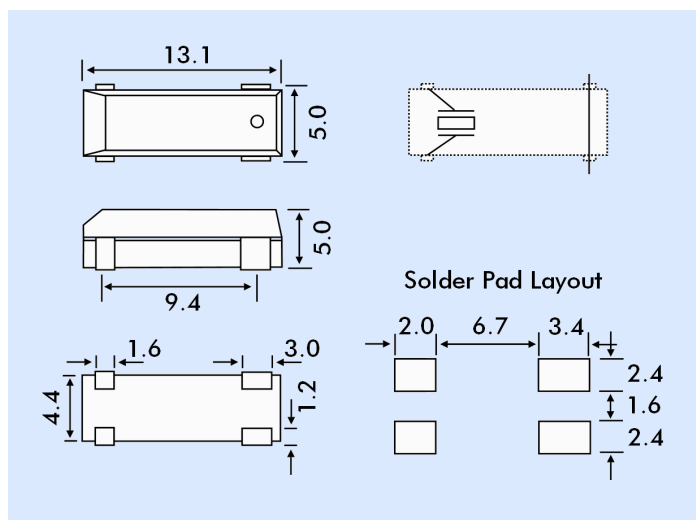
|                                       |   |
|---------------------------------------|---|
| Frequency Range                       |   |
| AT-Cut Fundamental:                   | 3.5MHz to 30.0MHz                                     |
| AT-Cut 3rd Overtone:                  | 30.1MHz to 70.0MHz                                    |
| BT-Cut Fundamental:                   | 25.0MHz to 40.0MHz                                    |
| Calibration Tolerance at 25°C*:       | ±50ppm at 25°C  |
| Frequency Stability over Temperature* |   |
| AT-Cut:                               | ±50ppm over -10° to +60°C                             |
| BT-Cut:                               | ±100ppm over -10° to +60°C                            |
| Storage Temperature:                  | -40°~+85°C  |
| Equivalent Series Resistance:         | See table   |
| Shunt Capacitance (C0):               | 7pF maximum   |
| Load Capacitance (CL):                | Series or from 8pF to 32pF<br>(Customer specified CL) |
| Ageing:                               | ±3ppm per year at +25°C                               |
| Drive level:                          | 100µW maximum   |
| Reflow Soldering:                     | 10s maximum at 260°C twice<br>or 180s at 230°C, once. |
| Crystal Holder:                       | Moulded plastic                                       |
| Packaging:                            | 24mm EIA tape and reel,<br>1k per reel.               |

Note: Tighter calibration tolerance and operating temperature range parts may be available, check with Euroquartz sales.

### EQUIVALENT SERIES RESISTANCE / OSCILLATION MODE

| Frequency Range MHz | Crystal Cut/ Osc. Mode | ESR (Ω) Max. |
|---------------------|------------------------|--------------|
| 3.5 ~ 3.99          | AT Fund                | 200          |
| 4.0 ~ 4.99          | AT Fund                | 150          |
| 5.0 ~ 5.99          | AT Fund                | 120          |
| 6.0 ~ 6.99          | AT Fund                | 100          |
| 7.0 ~ 7.99          | AT Fund                | 80           |
| 8.0 ~ 12.9          | AT Fund                | 60           |
| 13.0 ~ 30.0         | AT Fund                | 40           |
| 25.1 ~ 45.0         | BT Fund                | 40           |
| 30.0 ~ 70.0         | AT 3rd OT              | 100          |

### OUTLINE & DIMENSIONS



### PART NUMBER GENERATION

Part numbers for 86SMX crystals are generated as follows:

