

VARIABLE CAPACITANCE DIODE

FEATURES

- Very Low Operating Voltage (1 to 4.5 V)
- Excellent Linearity (CV Curve)
- Large Capacitance Ratio (A1 = 5.0 minimum)
- Two Diodes in a Miniature Package (SOT23-3)
- Very Small Capacitance Deviation at Tape/Reel

APPLICATIONS

- FM Radio
- Voltage Controlled Oscillator

DESCRIPTION

The KV1470 is a 5 volt range variable capacitance diode designed for FM tuner applications. It contains two elements housed in the miniature SOT23-3 surface mount package.

CLASSIFICATION

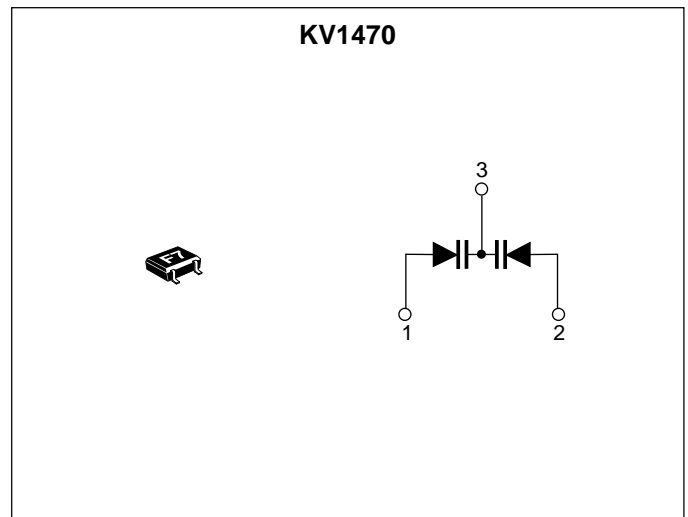
(Unit: pF)

C		RANK		
		1	2	3
C ₁	MIN	65.80	68.27	70.74
	MAX	69.25	71.72	74.20

ORDERING INFORMATION

KV1470  Tape/Reel Code

TAPE/REEL CODE
TL: Tape Left



KV1470

ABSOLUTE MAXIMUM RATINGS

Reverse Voltage 18 V Storage Temperature Range -55 to +150 °C
Forward Current 50 mA Operating Temperature Range -55 to +85 °C
Power Dissipation 100 mW Lead Soldering Temperature (10 s) 235 °C

ELECTRICAL CHARACTERISTICS

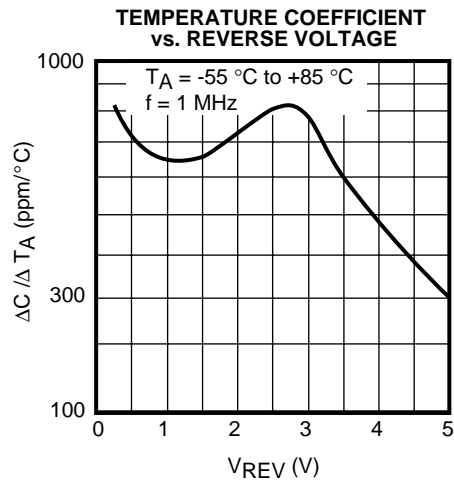
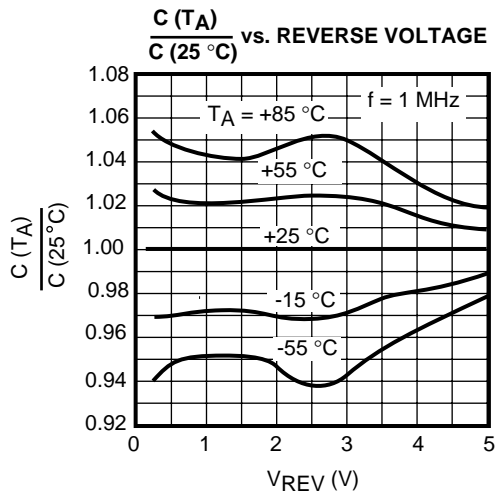
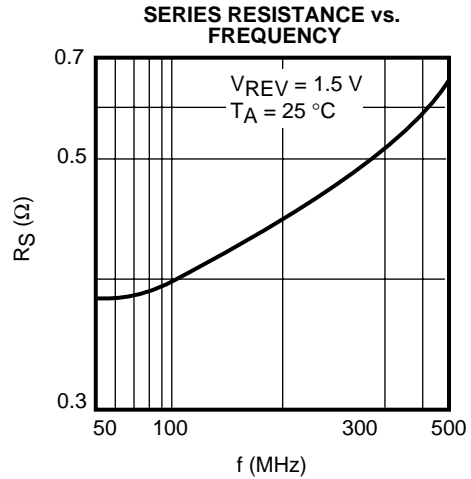
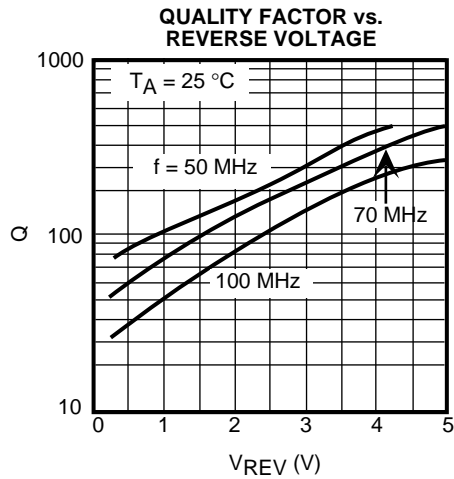
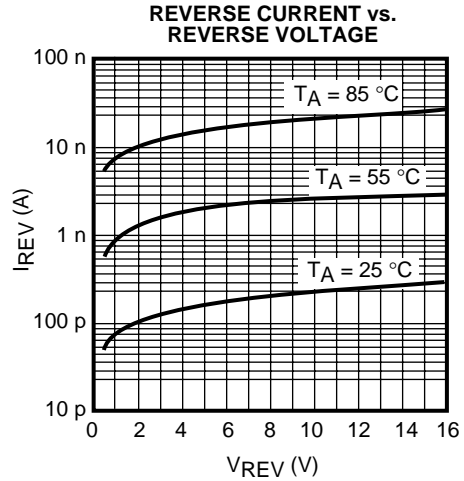
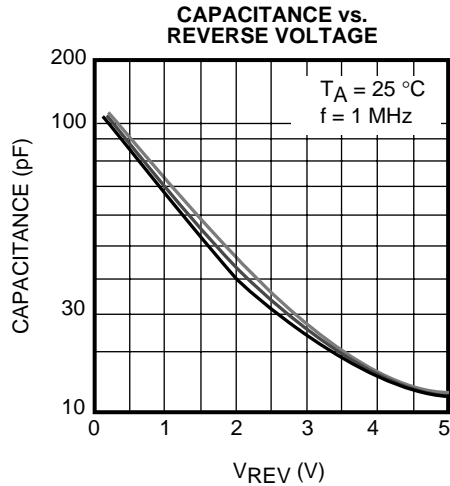
Test conditions: $T_A = 25\text{ °C}$

SYMBOL	PARAMETER	TEST CONDITIONS	MIN	TYP	MAX	UNITS
V_{REV}	Reverse Voltage	$I_{REV} = 10\ \mu\text{A}$	16			V
I_{REV}	Reverse Current	$V_{REV} = 10.0\ \text{V}$			50	nA
C_1	Diode Capacitance 1	$V_{REV} = 1.0\ \text{V}, f = 1\ \text{MHz}$	65.80	70.00	74.20	pF
$C_{4.5}$	Diode Capacitance 4.5	$V_{REV} = 4.5\ \text{V}, f = 1\ \text{MHz}$	12.00	13.40	14.80	pF
R_S	Series Resistance	$V_{REV} = 1.5\ \text{V}, f = 100\ \text{MHz}$		0.43	0.5	Ω
A	Capacitance Ratio	C_1 / C_5	5.0			

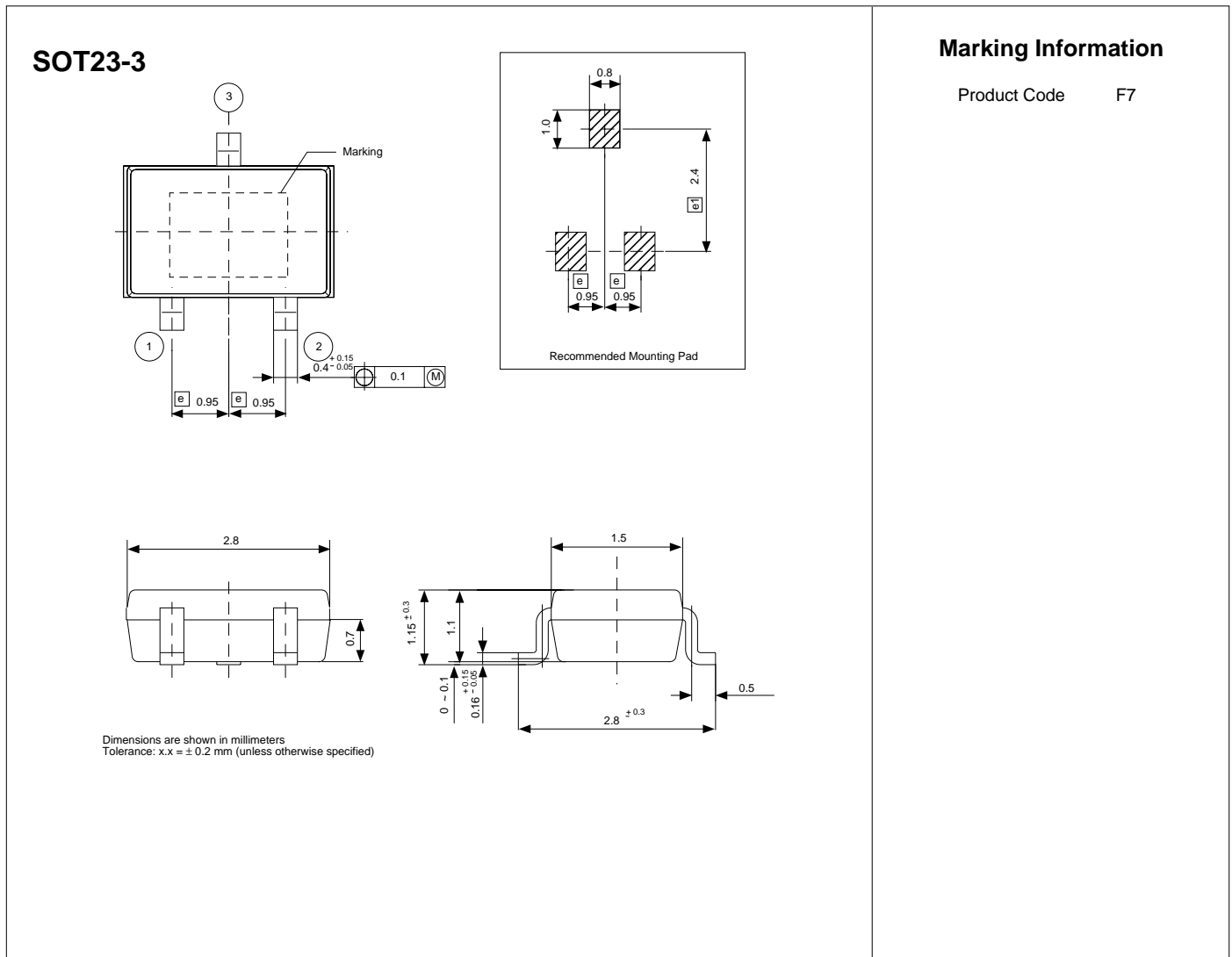
Note 1: Diode Capacitance measured with HP 4279A or equivalent instruments (at OSC level 20 mVrms, ± 5 mVrms).

Note 2: Series Resistance measured with HP 4191A or equivalent instruments.

TYPICAL PERFORMANCE CHARACTERISTICS



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