

VARIABLE CAPACITANCE DIODE

FEATURES

- Very Low Operating Voltage (1 to 6.5 V)
- Excellent Linearity (CV Curve)
- Large Capacitance Ratio (A1 = 4.70 minimum)
- Two Diodes in a Miniature Package (SOT23-3)
- Very Small Capacitance Deviation at Tape/Reel

APPLICATIONS

- FM Radio
- Voltage Controlled Oscillator
- Battery Operated Products

DESCRIPTION

The KV1460 variable capacitance diode was specially developed for use as FM tuning elements in car radios, radio cassettes, and other consumer radios.

The KV1460 uses a special process to provide a very high capacitance ratio in low voltage operation.


The KV1460 is available in the miniature SOT23-3 surface mount package.

CLASSIFICATION

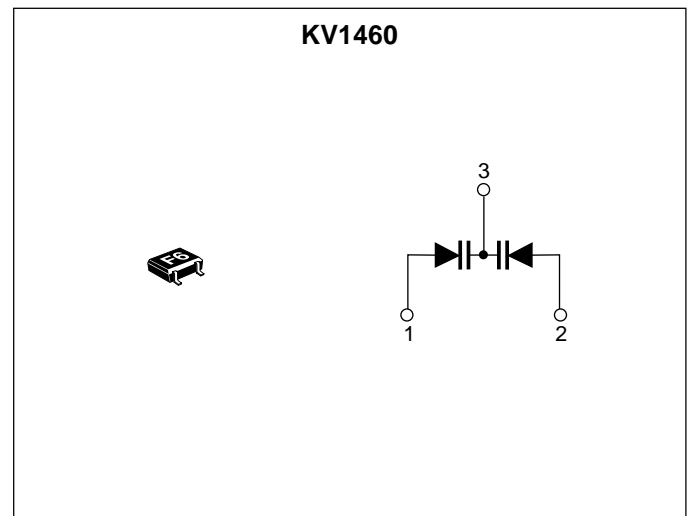
(Unit: pF)

C		RANK		
		1A	2A	3A
C ₁	MIN	86.10	89.60	93.30
	MAX	90.50	94.10	98.00

ORDERING INFORMATION

KV1460  Tape/Reel Code

TAPE/REEL CODE
TL: Tape Left



KV1460

ABSOLUTE MAXIMUM RATINGS

Reverse Voltage 18 V
Forward Current 50 mA
Power Dissipation 100 mW

Storage Temperature Range -55 to +150 °C
Operating Temperature Range -55 to +85 °C

ELECTRICAL CHARACTERISTICS

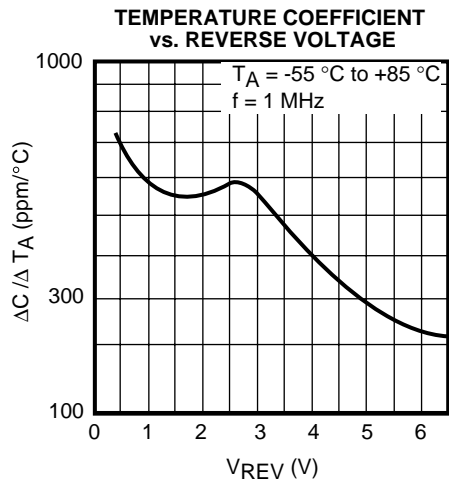
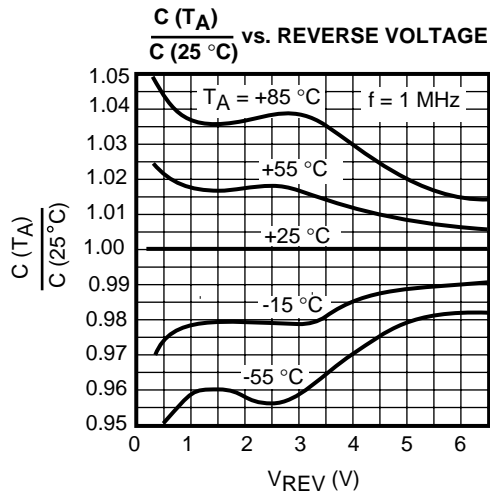
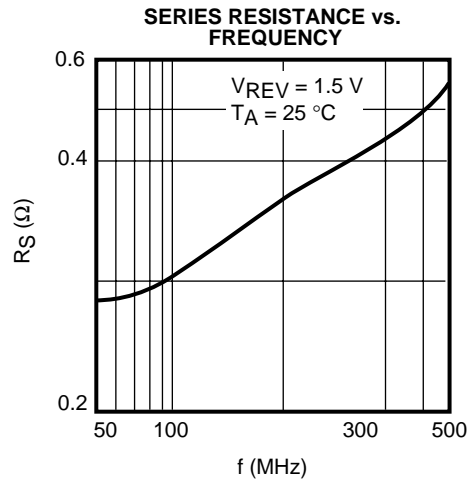
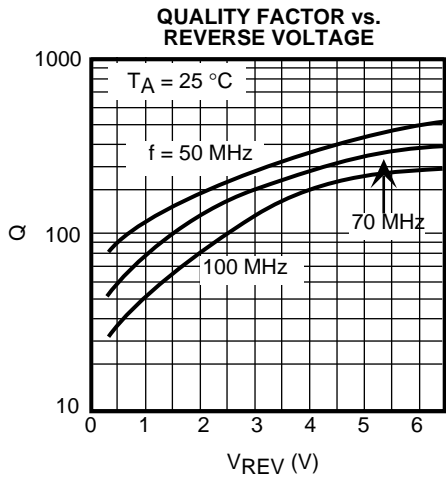
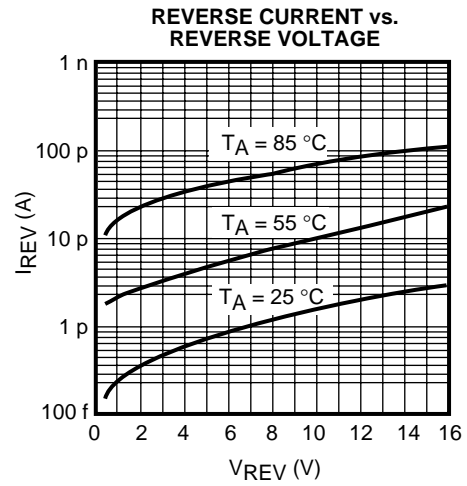
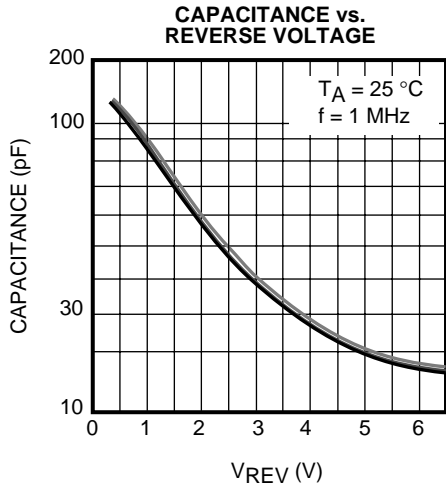
Test conditions: $T_A = 25\text{ °C}$

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	$V_{REV} = 1.0\ \text{V}, f = 1\ \text{MHz}$	86.10	92.00	98.00	pF
$C_{6.5}$	Diode Capacitance 6.5	$V_{REV} = 6.5\ \text{V}, f = 1\ \text{MHz}$	13.90	16.00	18.20	pF
R_s	Series Resistance	$V_{REV} = 1.5\ \text{V}, f = 100\ \text{MHz}$		0.5	0.6	Ω
A	Capacitance Ratio	$C_1 / C_{6.5}$	4.70			

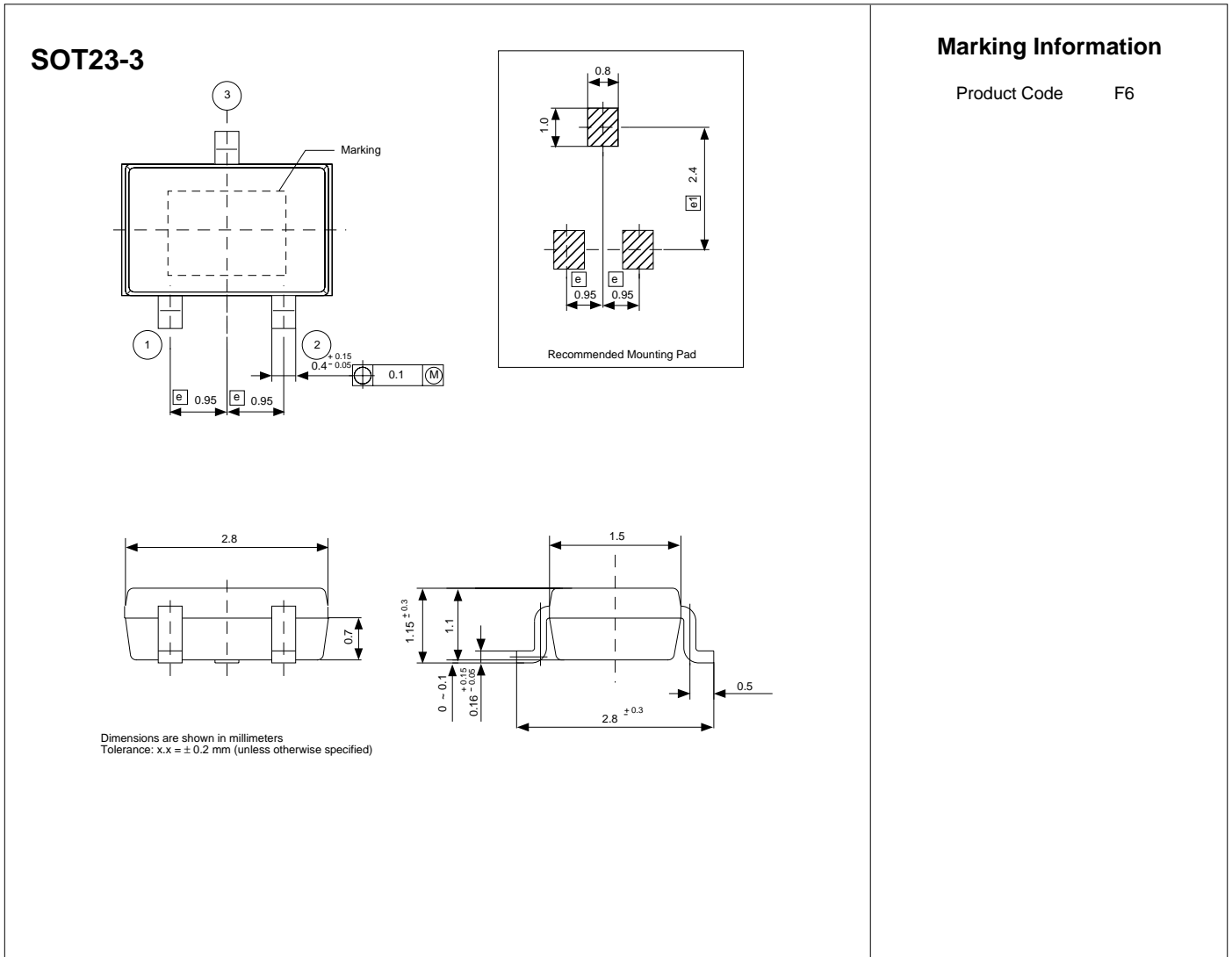
Note 1: Diode Capacitance measured with HP 4279A or equivalent instruments (at OSC level 20 mVrms, ± 5 mVrms).

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

TYPICAL PERFORMANCE CHARACTERISTICS



PACKAGE OUTLINE



Marking Information

Product Code F6



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