

VARIABLE CAPACITANCE DIODE

FEATURES

- Very Low Operating Voltage (1 to 4.5 V)
- Excellent Linearity (CV Curve)
- Large Capacitance Ratio (A = 5 minimum)
- Very Small URD Surface Mount Package
- Very Small Capacitance Deviation at Tape/Reel

APPLICATIONS

- Communications Equipment
- Multi-Channel Cordless Telephone
- Voltage Controlled Oscillator

DESCRIPTION

The KV1471E is a 5 volt range variable capacitance diode designed for FM tuner applications.

The KV1471E is available in a very small URD Surface Mount Package.

CLASSIFICATION

(Unit: pF)

RANK		1	2	3
C				
C ₁	MIN	30.16	33.30	36.77
	MAX	33.63	37.13	40.99

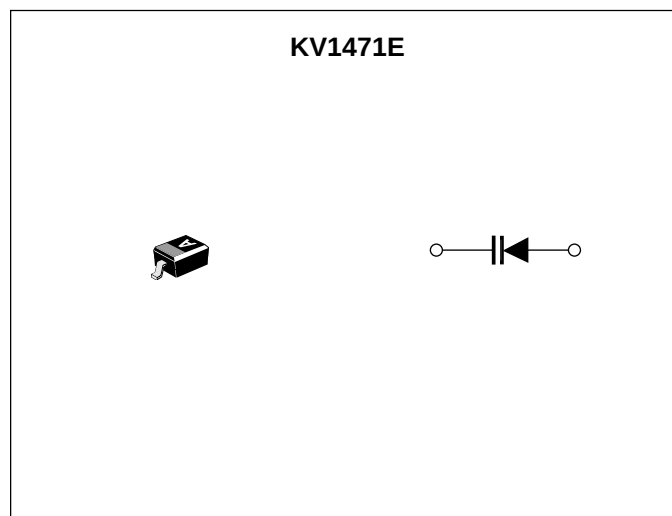
Note: Rank is determined after testing and marked on the reel. All the diodes on a reel have the same rank, but rank can not be specified when ordering.

ORDERING INFORMATION

KV1471E □□

Tape/Reel Code

TAPE/REEL CODE
TR: Tape Right



KV1471E

ABSOLUTE MAXIMUM RATINGS

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

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

ELECTRICAL CHARACTERISTICS

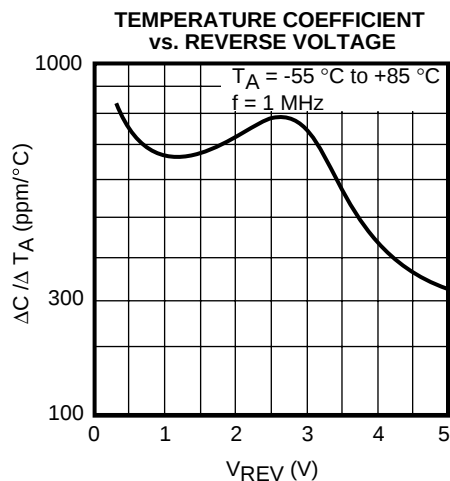
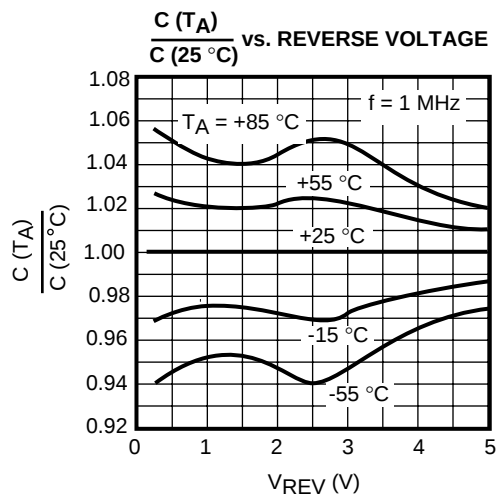
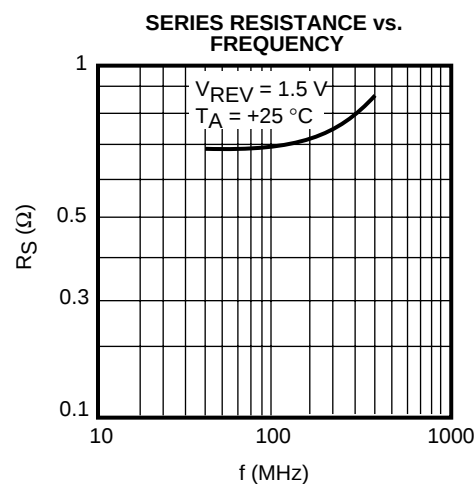
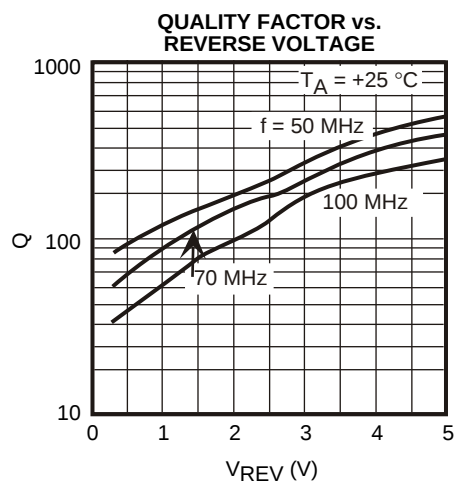
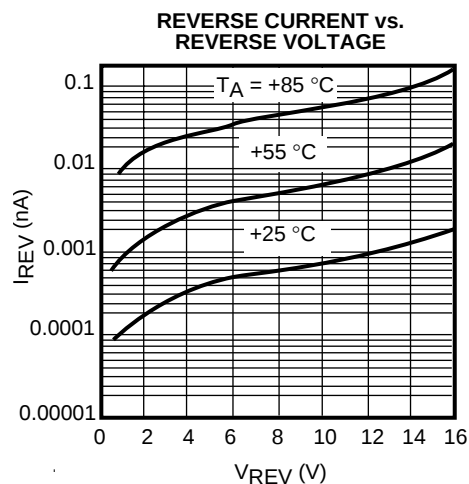
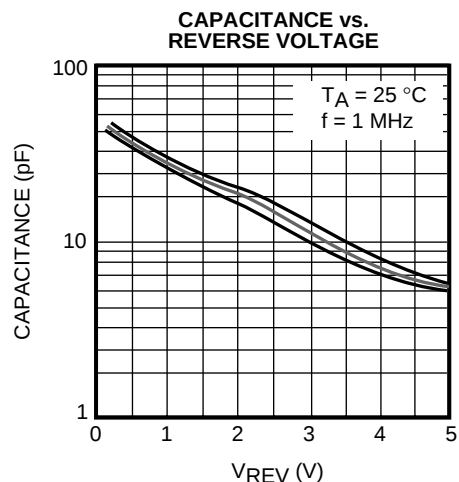
Test conditions: $T_A = 25\text{ °C}$

SYMBOL	PARAMETER	TEST CONDITIONS	MIN	TYP	MAX	UNITS
V_{REV}	Reverse Voltage	$I_{REV} = 10\text{ }\mu\text{A}$	16			V
I_{REV}	Reverse Current	$V_{REV} = 10\text{ V}$			50	nA
C_1	Diode Capacitance 1	$V_{REV} = 1\text{ V}$, $f = 1\text{ MHz}$	30.16	35.60	40.99	pF
$C_{4.5}$	Diode Capacitance 4.5	$V_{REV} = 4.5\text{ V}$, $f = 1\text{ MHz}$	6.20	7.70	9.20	pF
R_S	Series Resistance	$V_{REV} = 1.5\text{ V}$, $f = 100\text{ MHz}$		0.8	1.0	Ω
A	Capacitance Ratio	C_1 / C_5	5.00			

Note 1: Diode Capacitance measured with HP 4279A or equivalent instruments (at OSC level 20 mVrms, $\pm 5\text{ mVrms}$).

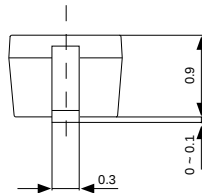
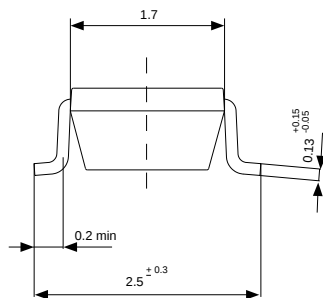
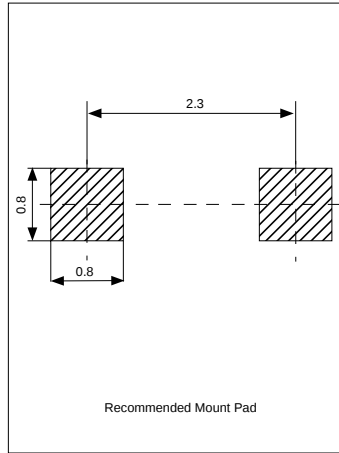
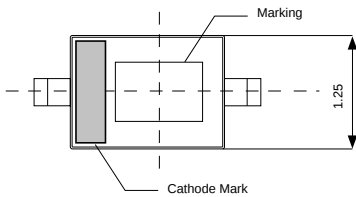
Note 2: Series Resistance measured with HP 4191A or equivalent instruments.

TYPICAL PERFORMANCE CHARACTERISTICS



PACKAGE OUTLINE

URD



Dimensions are shown in millimeters.
Tolerance: x.x = ± 0.2 mm (unless otherwise specified)

Marking Information

Product Code A



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