

VARIABLE CAPACITANCE DIODE

FEATURES

- Very Small URD Surface Mount Package
- Very Low Series Resistance
- Large Capacitance Ratio (A = 3.9 minimum)
- Excellent Linearity (CV Curve)
- Very Small Capacitance Deviation at Tape/Reel

APPLICATIONS

- UHF Communications Equipment
- Voltage Controlled Oscillator
- 900 MHz Communications Systems

DESCRIPTION

The KV1851E is a variable capacitance diode designed for UHF applications.

The KV1851E is available in a very small URD Surface Mount Package.

CLASSIFICATION

(Unit: pF)

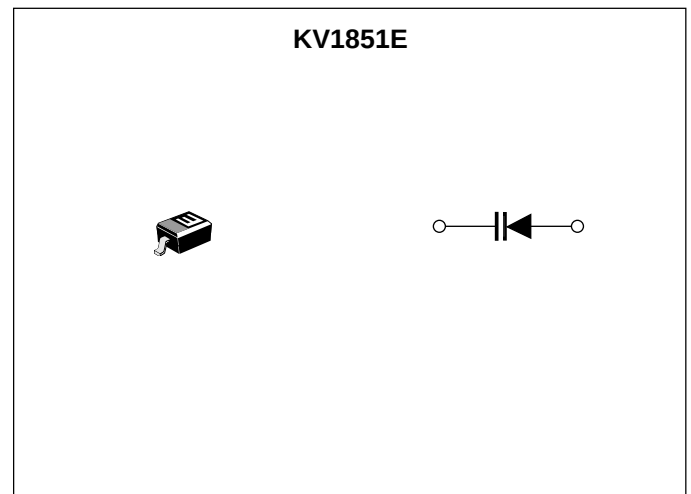
RANK		1	2	3
C	MIN	25.00	26.50	28.10
	MAX	26.90	28.50	30.00

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

KV1851E 
 Tape/Reel Code

TAPE/REEL CODE
 TR: Tape Right



KV1851E

ABSOLUTE MAXIMUM RATINGS

Reverse Voltage 18 V
Forward Current 10 mA
Power Dissipation 50 mW

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

ELECTRICAL CHARACTERISTICS

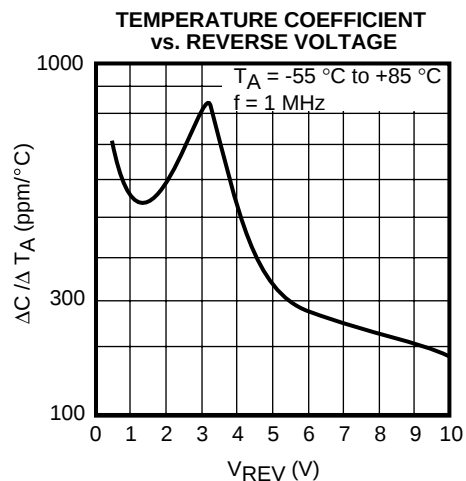
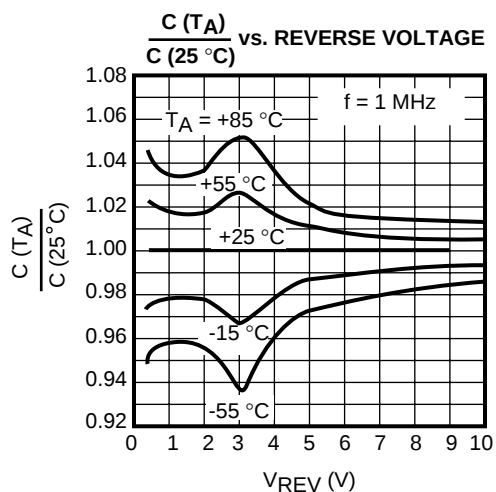
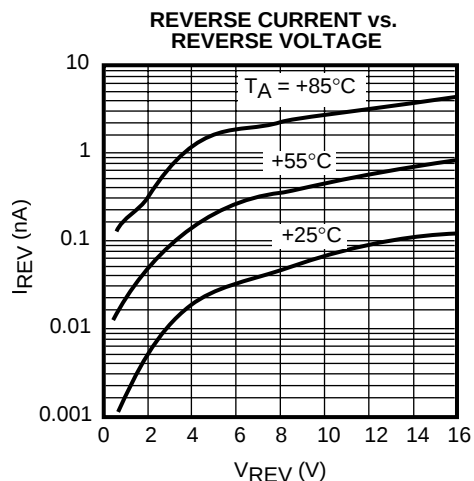
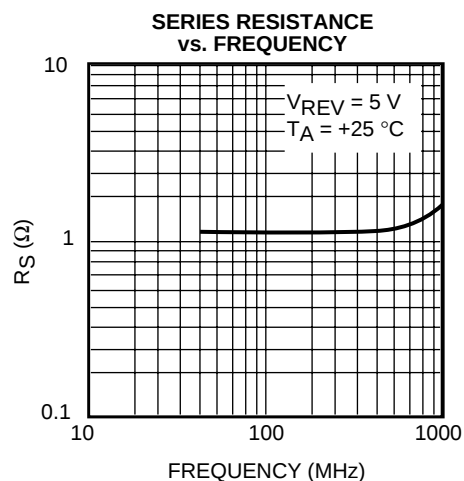
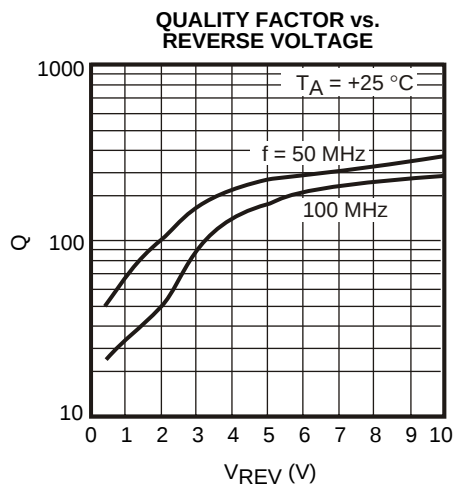
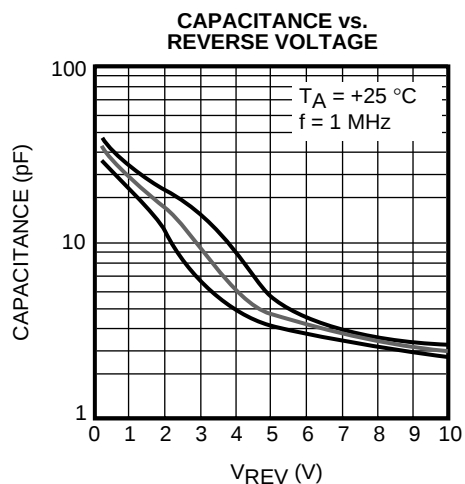
Test conditions: $T_A = 25\text{ °C}$

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	$V_{REV} = 10\text{ V}$			5.00	nA
C_1	Diode Capacitance 1	$V_{REV} = 1\text{ V}$, $f = 1\text{ MHz}$	25.00		30.00	pF
C_4	Diode Capacitance 4	$V_{REV} = 4\text{ V}$, $f = 1\text{ MHz}$	4.90		7.00	pF
R_S	Series Resistance	$V_{REV} = 4\text{ V}$, $f = 100\text{ MHz}$			1.7	Ω
A	Capacitance Ratio	C_1 / C_4	3.90			

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

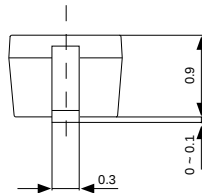
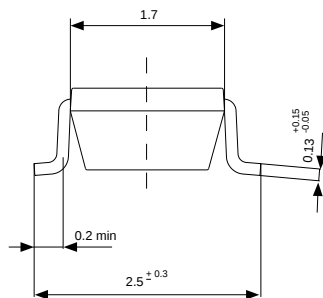
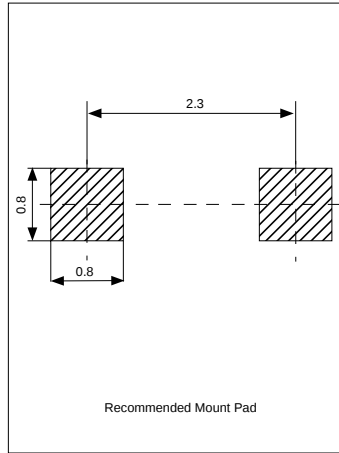
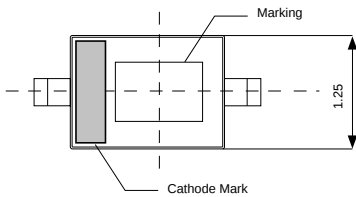
Note 2: Series Resistance measured with HP 4191A or equivalent instruments.

TYPICAL PERFORMANCE CHARACTERISTICS



PACKAGE OUTLINE

URD



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

Marking Information

Product Code E



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