

VARIABLE CAPACITANCE DIODE

FEATURES

- Very Small URD Surface Mount Package
- Very Low Series Resistance
- Large Capacitance Ratio (A = 2.35)
- Excellent Linearity (CV Curve)
- Very Small Capacitance Deviation at Tape/Reel

APPLICATIONS

- Communications Equipment
- Multi-Channel Cordless Telephone
- Voltage Controlled Oscillator
- UHF Wireless Communication Systems

DESCRIPTION

The KV1841E is a variable capacitance diode designed for UHF applications.

The KV1841E is available in a very small URD Surface Mount Package.


CLASSIFICATION

(Unit: pF)

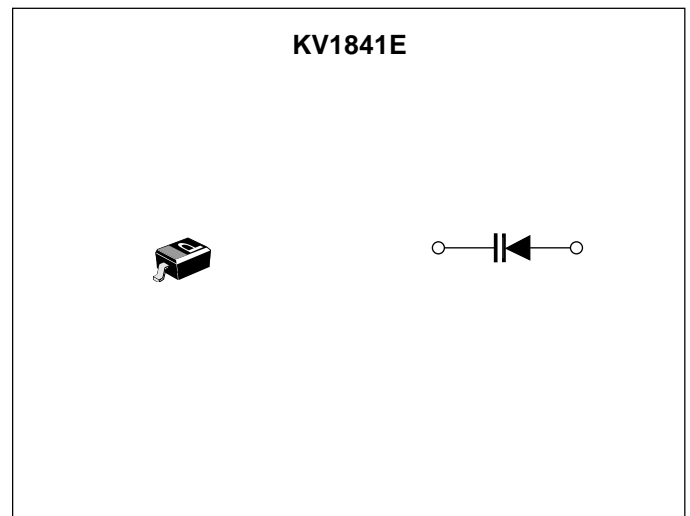
C		RANK			
		1	2	3	4
C ₂	MIN	13.50	13.93	14.35	14.78
	MAX	14.23	14.65	15.08	15.50

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

KV1841E  Tape/Reel Code

TAPE/REEL CODE
TR: Tape Right



KV1841E

ABSOLUTE MAXIMUM RATINGS

Reverse Voltage 18 V Storage Temperature Range -55 to +150 °C
Forward Current 7 mA Operating Temperature Range -55 to +85 °C
Power Dissipation 25 mW

ELECTRICAL CHARACTERISTICS

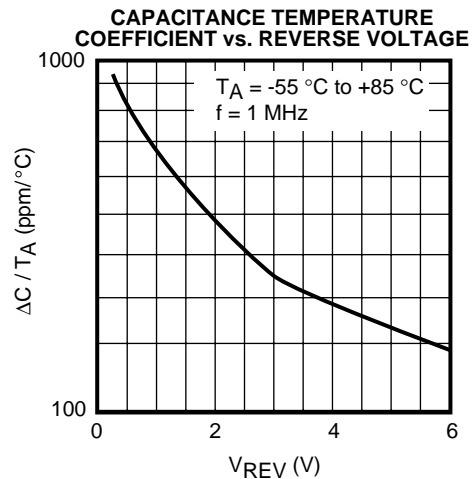
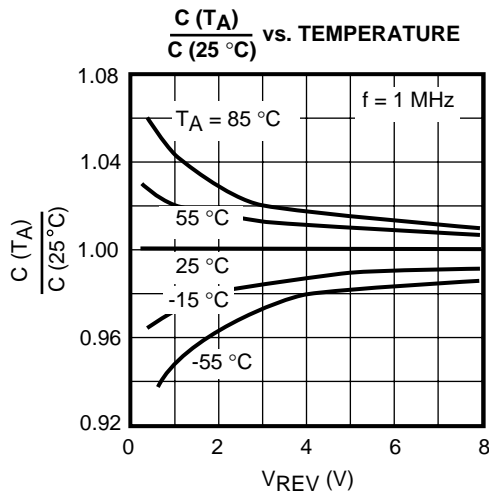
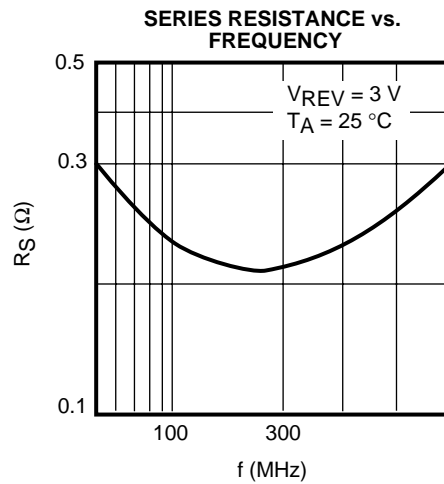
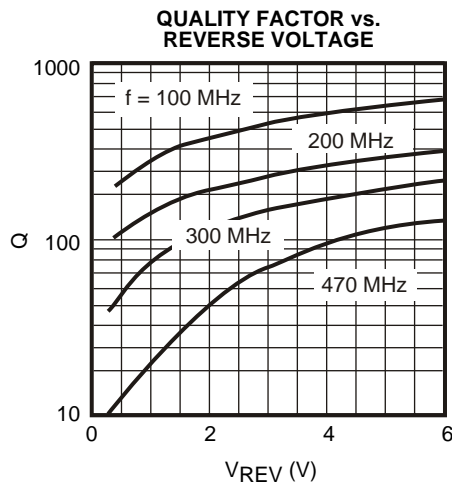
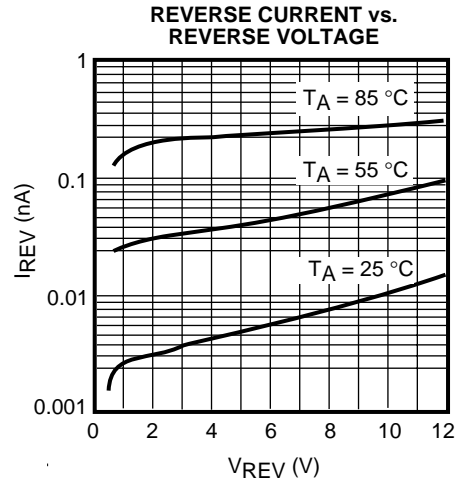
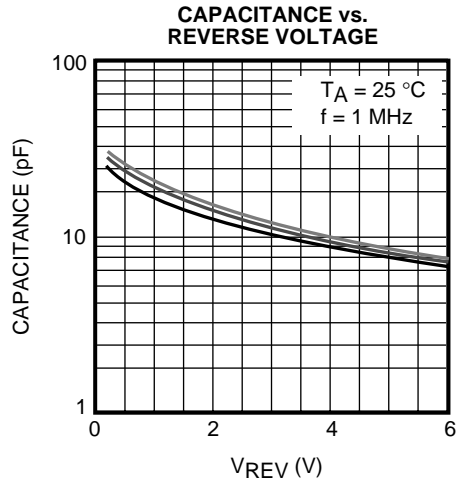
Test conditions: $T_A = 25\text{ °C}$

SYMBOL	PARAMETER	TEST CONDITIONS	MIN	TYP	MAX	UNITS
V_{REV}	Reverse Voltage	$I_{REV} = 1\ \mu\text{A}$	12			V
I_{REV}	Reverse Current	$V_{REV} = 10\ \text{V}, f = 1\ \text{MHz}$			5.0	nA
C_2	Diode Capacitance 2	$V_{REV} = 2\ \text{V}, f = 1\ \text{MHz}$	13.5	14.5	15.5	pF
C_6	Diode Capacitance 6	$V_{REV} = 6\ \text{V}, f = 1\ \text{MHz}$	6.8	7.5	8.3	pF
R_S	Series Resistance	$C = 11\ \text{pF}, f = 470\ \text{MHz}$			0.30	Ω
A	Capacitance Ratio	C_1 / C_6	2.35			

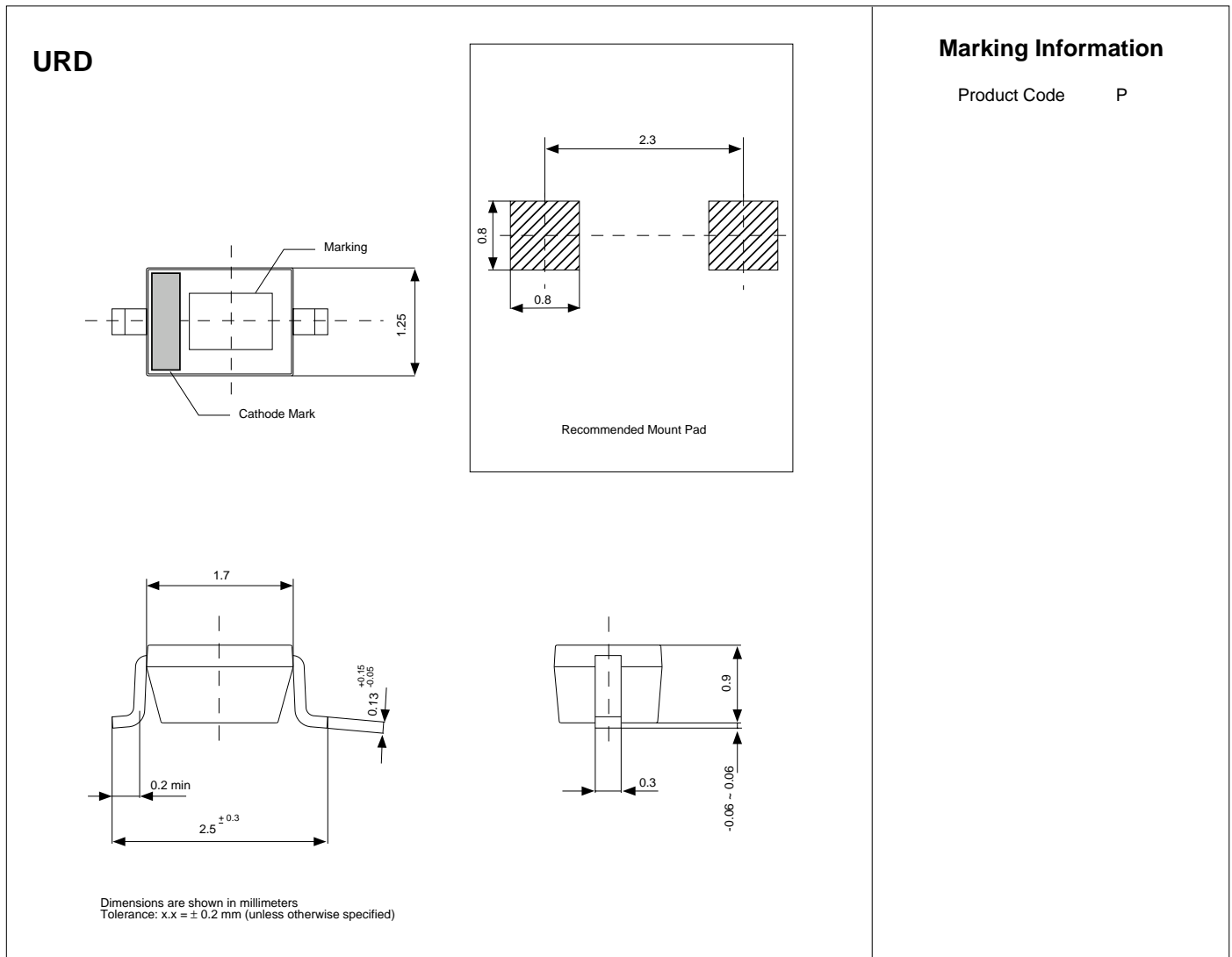
Note 1: Diode Capacitance measured with HP 4279A or equivalent instruments (at OSC level 20 mVrms, ± 5 mVrms).

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

TYPICAL PERFORMANCE CHARACTERISTICS



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