

VARIABLE CAPACITANCE DIODE

FEATURES

- Very Small URD Surface Mount Package
- Very Low Operating Voltage (1 to 8 V)
- Large Capacitance Ratio (A = 7.0 minimum)
- 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 KV1811E is a variable capacitance diode designed for UHF applications.

The KV1811E is available in a very small URD Surface Mount Package.


CLASSIFICATION

(Unit: pF)

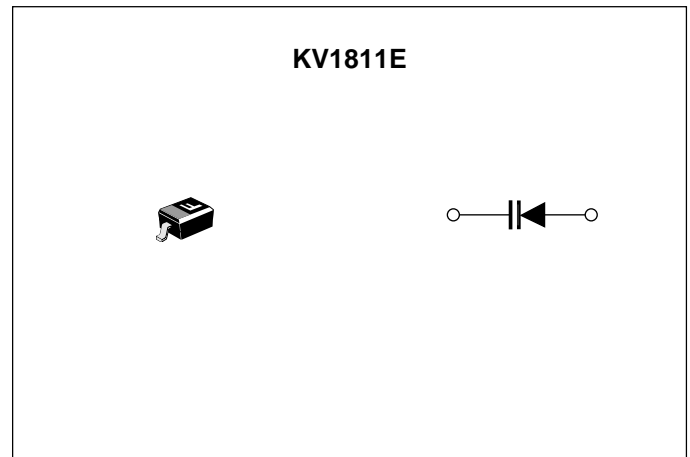
C		RANK				
		3	4	5	6	7
C ₁	MIN	19.51	20.22	21.03	21.83	22.64
	MAX	20.42	21.23	22.03	22.84	23.55

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

KV1811E  Tape/Reel Code

TAPE/REEL CODE
TR: Tape Right



KV1811E

ABSOLUTE MAXIMUM RATINGS

Reverse Voltage 25 V Storage Temperature Range -55 to +150 °C
Forward Current 10 mA Operating Temperature Range -55 to +85 °C
Power Dissipation 50 mW

ELECTRICAL CHARACTERISTICS

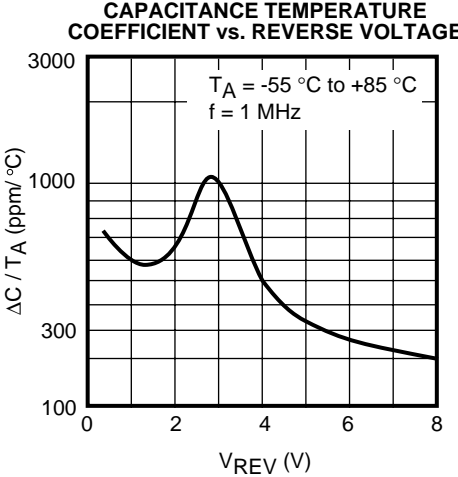
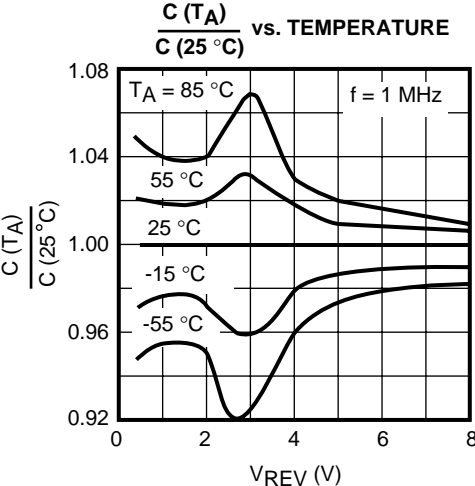
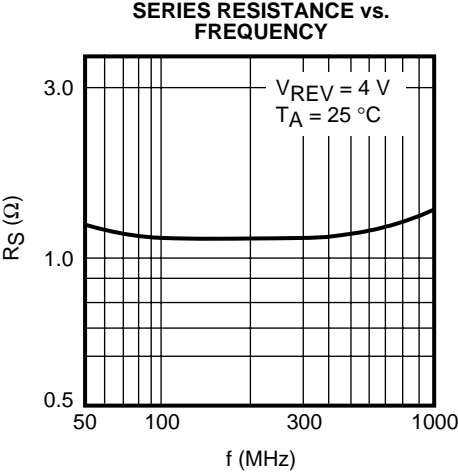
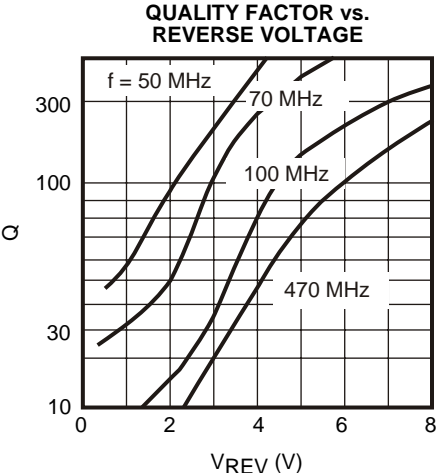
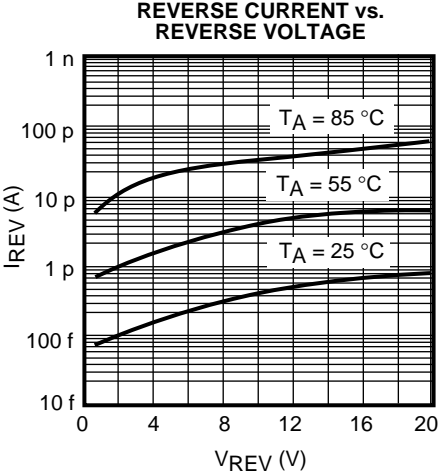
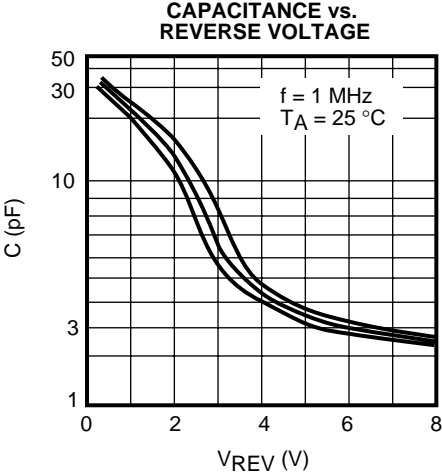
Test conditions: $T_A = 25\text{ °C}$

SYMBOL	PARAMETER	TEST CONDITIONS	MIN	TYP	MAX	UNITS
V_{REV}	Reverse Voltage	$I_{REV} = 10\ \mu\text{A}$	20			V
I_{REV}	Reverse Current	$V_{REV} = 16\ \text{V}$			5.0	nA
C_1	Diode Capacitance 1	$V_{REV} = 1\ \text{V}, f = 1\ \text{MHz}$	19.51	21.50	23.55	pF
C_8	Diode Capacitance 8	$V_{REV} = 8\ \text{V}, f = 1\ \text{MHz}$	2.14	2.50	2.92	pF
R_S	Series Resistance	$C = 8\ \text{pF}, f = 470\ \text{MHz}$			1.8	Ω
A	Capacitance Ratio	C_1 / C_8	7.0			

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

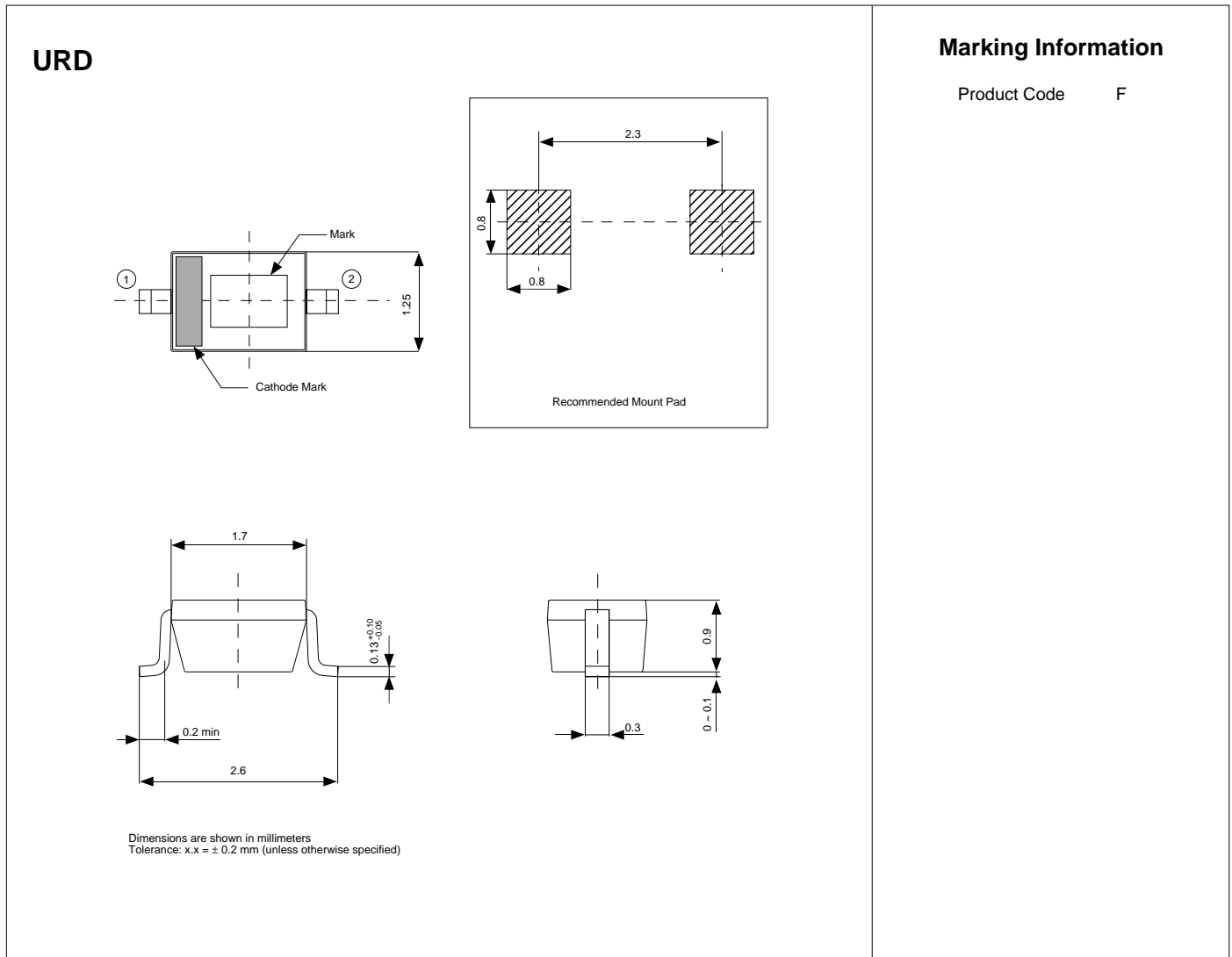
Note 2: Series Resistance measured with HP 4191A or equivalent instruments.

TYPICAL PERFORMANCE CHARACTERISTICS



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