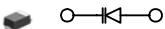
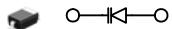


4.5V series variable capacitance diode for communications equipment

通信设备用4.5V系列变容二极管

KV1471E
(URD)KV1471K
(UFD)

FEATURES / 特性

- Very Low Operating Voltage: $V_{OP}=1.0$ to $4.5V$
- Excellent Linearity of The CV Curve
- Extra Large Capacitance Ratio: $A=5.0$ to

- 超低运行电压: $V_{OP}=1.0\sim4.5V$
- CV特性曲线的优良线性
- 超大变容比: $A=5.0\sim$

CLASSIFICATION/分类

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

ABSOLUTE MAXIMUM RATINGS / 绝对最大额定值

Parameter	参数	Symbol	符号	Rating	额定值	Unit	单位	Remarks	备注
Reverse Voltage	反向电压	V_R		18		V			
Forward Current	正向电流	I_F		7		mA			
Power Dissipation	功耗	P_D		25		mW			
Storage Temperature Range	存储温度范围	T_{STG}		-55 to 150		°C			
Operating Temperature Range	工作温度范围	T_{OP}		-55 to +85		°C			

ELECTRICAL CHARACTERISTICS / 电气特性

 $T_A=25^\circ C$

Parameter 参数	Symbol 符号	Value/值			Units 单位	Conditions 条件
		MIN 最小	TYP 典型	MAX 最大		
Reverse Voltage 反向电压	V_R	16			V	$I_R=10\mu A$
Reverse Current 反向电流	I_R			50	nA	$V_R=10V$
Diode Capacitance 二极管电容值	C_1	30.16	35.60	40.99	pF	$V_R=1V, f=1MHz$
	$C_{4.5}$	6.2	7.7	9.2	pF	$V_R=4.5V, f=1MHz$
Series Resistance 串联电阻	R_s		0.8	1.0	Ω	$V_R=1.5V, f=100MHz$
Capacitance Ratio 变容比	A	5.0				C_1/C_5

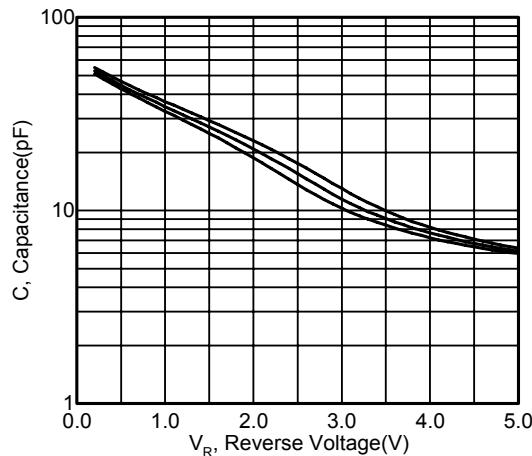
* Diode Capacitance measured with Agilent 4279A or equivalent instruments (at OSC level $20\pm5mVrms$)使用Agilent 4279A或功能相同的仪器（在OSC输出电平 $20\pm5mVrms$ 条件下）测量二极管电容值。

* Resistance meter is Agilent 4291B or equivalent instruments.

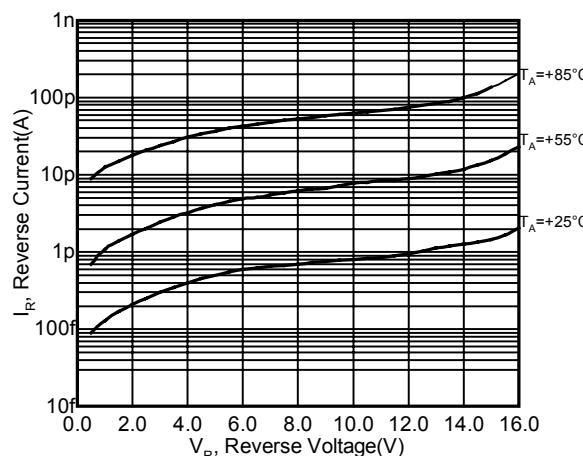
电阻计为Agilent 4291B或功能相同的仪器。

TYPICAL CHARACTERISTICS/典型特征**■ Capacitance versus Reverse Voltage**

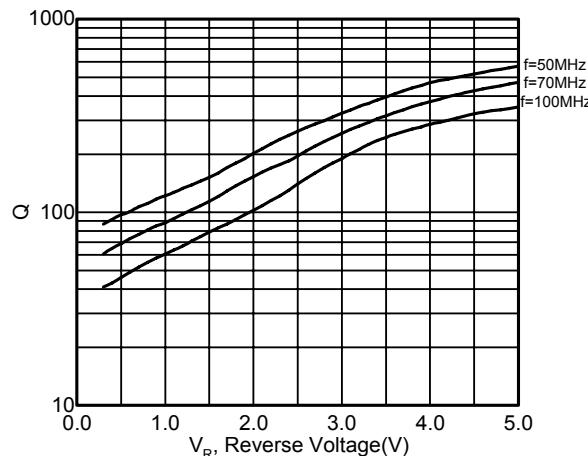
电容对比反向电压

 $f=1\text{MHz}, T_A=25^\circ\text{C}$ **■ Reverse Current versus Reverse Voltage**

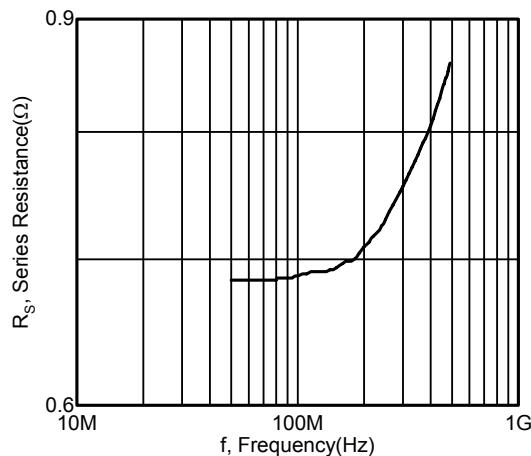
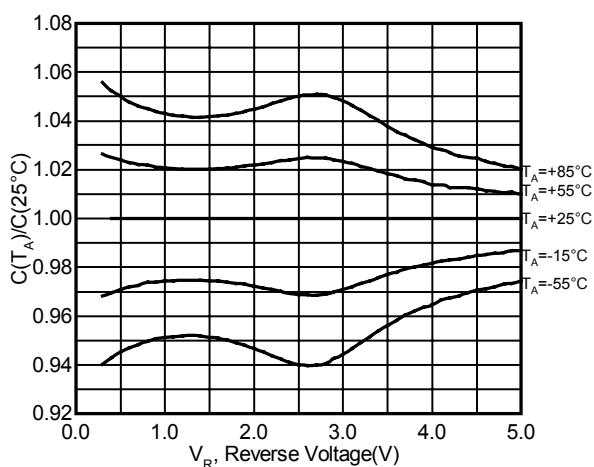
反向电流对比反向电压

 $T_A=+25 / +55 / +85^\circ\text{C}$ **■ Q versus Reverse Voltage**

Q值对比反向电压

 $T_A=25^\circ\text{C}$ **■ Series Resistance versus Frequency**

串联电阻对比频率

 $V_R=1.5\text{V}, T_A=25^\circ\text{C}$ **■ C(T_A)/C(25°C) versus Reverse Voltage**C(T_A)/C(25°C)对比反向电压 $f=1\text{MHz} T_A=-55 \text{ to } +85^\circ\text{C}$ **■ Capacitance Temperature Coefficient versus Reverse Voltage**

电容温度系数对比反向电压

 $f=1\text{MHz}, T_A=25^\circ\text{C}$ 