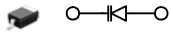
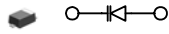


4.5V series variable capacitance diode for communications equipment
通信设备用4.5V系列变容二极管



KV1471E
(URD)



KV1471K
(UFD)

FEATURES / 特性

- Very Low Operating Voltage: $V_{OP}=1.0$ to $4.5V$ ■ 超低运行电压: $V_{OP}=1.0\sim 4.5V$
- Excellent Linearity of The CV Curve ■ CV特性曲线的优良线性
- Extra Large Capacitance Ratio: $A=5.0$ to ■ 超大变容比: $A=5.0\sim$

CLASSIFICATION/分类

Rank		1	2	3
		30.16	33.30	36.77
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

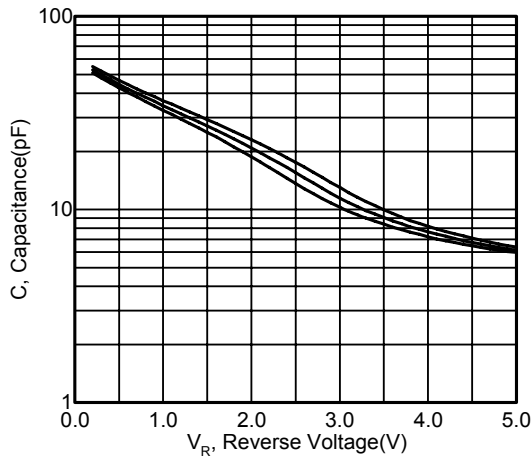
* Diode Capacitance measured with Agilent 4279A or equivalent instruments (at OSC level $20\pm 5mV_{rms}$)
 使用Agilent 4279A或功能相同的仪器（在OSC输出电平 $20\pm 5mV_{rms}$ 条件下）测量二极管电容值。

* 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

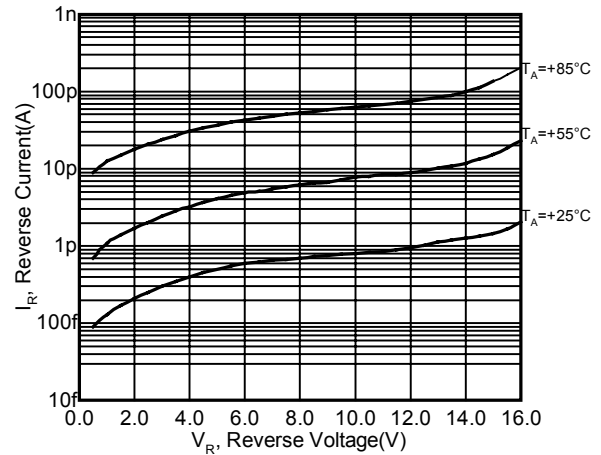
■ Capacitance versus Reverse Voltage
电容对比反向电压

f=1MHz, T_A=25°C



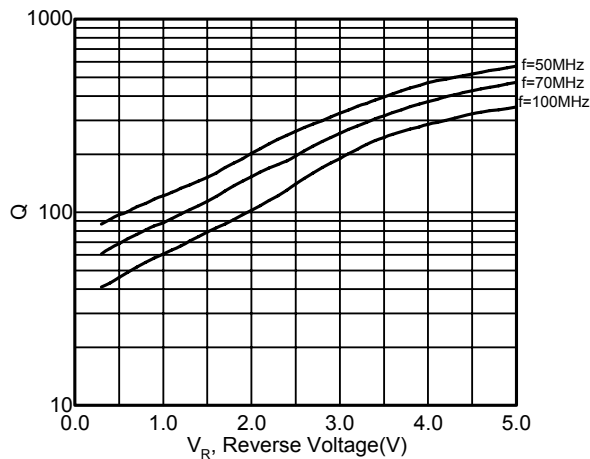
■ Reverse Current versus Reverse Voltage
反向电流对比反向电压

T_A=+25 / +55 / +85°C



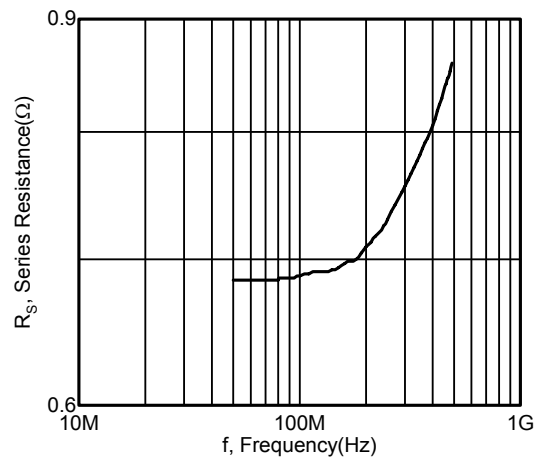
■ Q versus Reverse Voltage
Q值对比反向电压

T_A=25°C



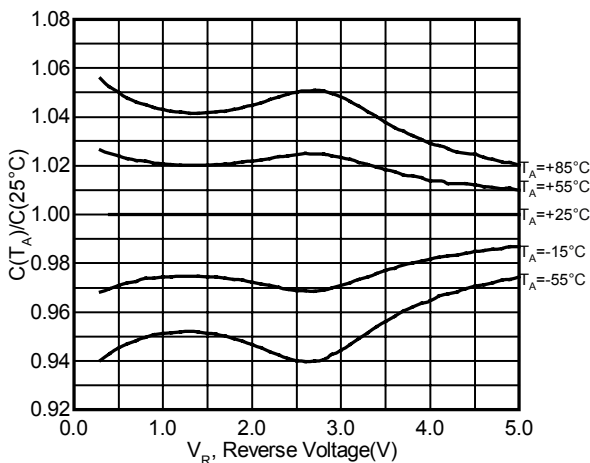
■ Series Resistance versus Frequency
串联电阻对比频率

V_R=1.5V, T_A=25°C



■ C(T_A)/C(25°C) versus Reverse Voltage
C(T_A)/C(25°C)对比反向电压

f=1MHz T_A=-55 to +85°C



■ Capacitance Temperature Coefficient versus Reverse Voltage
电容温度系数对比反向电压

f=1MHz, T_A=25°C

