Variable capacitance diode for communications equipment
通信機器用電圧可変容量ダイオード

KV1471ETR-G, KV1471KTR-G

FEATURES

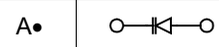
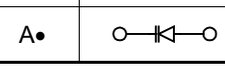
- Very Low Operating Voltage: V_{OP}=1.0 to 4.5V
- Excellent Linearity of The CV Curve
- Extra Large Capacitance Ratio: A=5.0 to
- 低電圧動作: V_{OP}=1.0~4.5V
- CV特性の優れた直線性
- 極めて大きな容量変化比: A=5.0~

CLASSIFICATION

C \ Rank		1	2	3
C_1	MIN	30.16	33.30	36.77
	MAX	33.63	37.13	40.99

PACKAGE OUTLINE

ORDERING INFORMATION

Part name	Package	Marking	Pin configuration	Ordering information
KV1471E-G	URD	A●		KV1471ETR-G…Storage direction: TR(Right type)
KV1471K-G	UFD	A●		KV1471KTR-G…Storage direction: TR(Right type)

ABSOLUTE MAXIMUM RATINGS

Parameter 項目	Symbol 記号	Rating 定格	Unit 単位	Remarks 備考
Reverse Voltage 逆方向電圧	V_R	18	V	
Forward Current 順方向電流	I_F	7	mA	
Power Dissipation 許容消費電力	P_D	25	mW	
Storage Temperature Range 保存温度範囲	T_{STG}	-55 to 150	°C	
Operating Temperature Range 動作温度範囲	T_{OP}	-55 to +85	°C	

ELECTRICAL CHARCTERISTICS

T_A=25°C

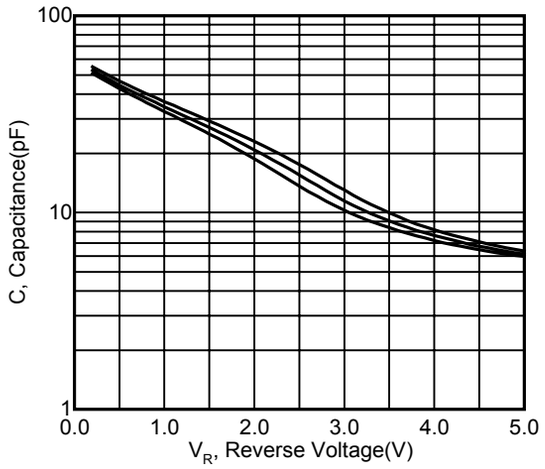
Parameter 項目	Symbol 記号	Value MIN	Value TYP	Value MAX	Units 単位	Conditions 条件
Reverse Voltage 逆方向電圧	V_R	16			V	I_R=10μA
Reverse Current 逆方向電流	I_R			50	nA	V_R=10V
Diode Capacitance 容量値	C_1	30.16	35.60	40.99	pF	V_R=1V, f=1MHz
	$C_{4.5}$	6.2	7.7	9.2	pF	V_R=4.5V, f=1MHz
Series Resistance 直列抵抗	R_S		0.8	1.0	Ω	V_R=1.5V, f=100MHz
Capacitance Ratio 容量変化比	A	5.0				C_1/C_5

* Diode Capacitance measured with Agilent 4279A or equivalent instruments (at OSC level 20±5mVrms)
容量測定器は、Agilent 4279A又は相当品。OSCレベル 20±5mVrms。

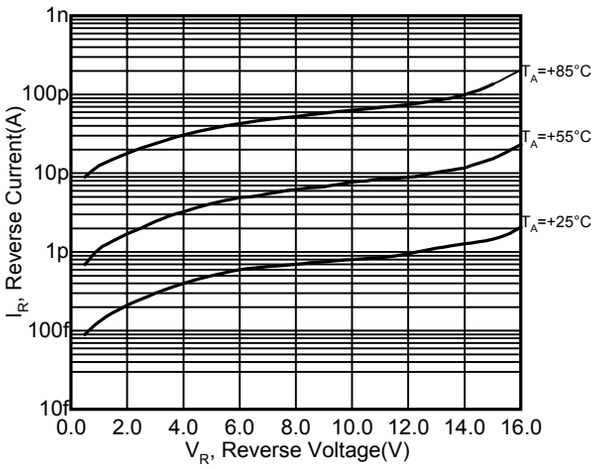
* Resistance meter is Agilent 4291B or equivalent instruments.
直列抵抗測定器は、Agilent 4291B又は相当品。

TYPICAL CHARCTERISTICS

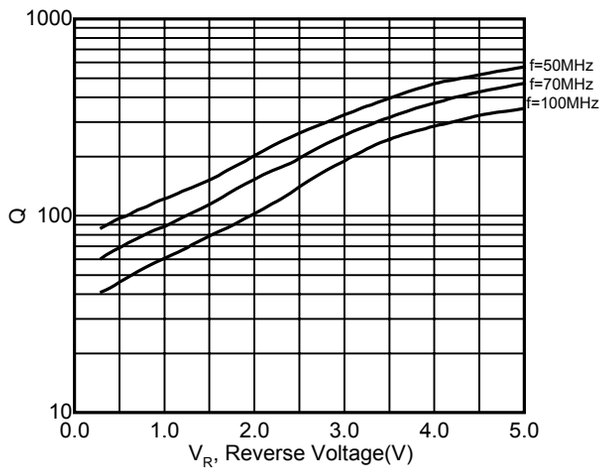
■ Capacitance versus Reverse Voltage
逆方向電圧対容量 f=1MHz, T_A=25°C



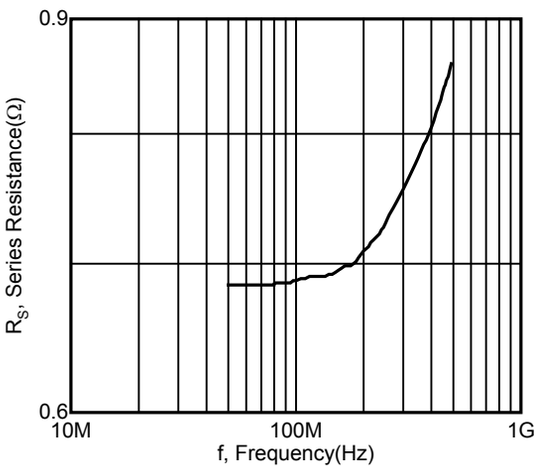
■ Reverse Current versus Reverse Voltage
逆方向電圧対逆電流 T_A=+25 / +55 / +85°C



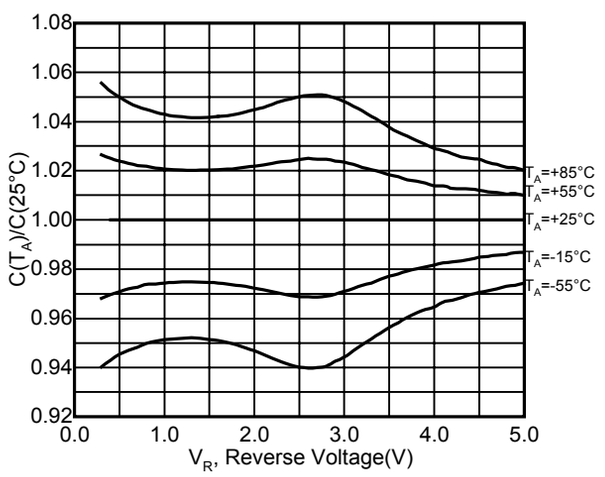
■ Q versus Reverse Voltage
逆方向電圧対Q T_A=25°C



■ Series Resistance versus Frequency
周波数対直列抵抗 V_R=1.5V, T_A=25°C



■ $C(T_A)/C(25°C)$ versus Reverse Voltage
逆方向電圧対$C(T_A)/C(25°C)$ f=1MHz T_A=-55 to +85°C



■ Capacitance Temperature Coefficient versus Reverse Voltage
逆方向電圧対温度係数 f=1MHz, T_A=25°C