

Variable capacitance diode for FM tuning
FMチューナ用電圧可変容量ダイオード

KV1770RTL-G, KV1770STL-G

FEATURES


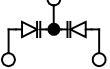

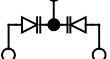
- Included Twin Element
- Very Small Tolerance of Element Being Next Device To Each Other
- Excellent Linearity of The CV Curve
- Extra Large Capacitance Ratio: A=5.00 to
- Very Small Series Resistance: R_s to 0.5 Ω
- ツインタイプ素子1組搭載
- 小さい隣接デバイス間容量偏差
- CV特性の優れた直線性
- 極めて大きな容量変化比: A=5.00~
- 小さい直列抵抗: R_s ~0.5 Ω

CLASSIFICATION

Rank		1	2	3
C	MIN	65.80	68.27	70.74
	MAX	69.25	71.72	74.20

PACKAGE OUTLINE

ORDERING INFORMATION

Part name	Package	Marking	Pin configuration	Ordering information
KV1770R-G	 SOT23C-3	C7•		KV1770RTL-G...Storage direction: TL(Left type)
KV1770S-G	 SOT23-3	C7•		KV1770STL-G...Storage direction: TL(Left 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	50	mA	
Power Dissipation	許容消費電力	P_D	100	mW	
Storage Temperature Range	保存温度範囲	T_{STG}	-55 to 150	$^{\circ}C$	
Operating Temperature Range	動作温度範囲	T_{OP}	-55 to +85	$^{\circ}C$	

ELECTRICAL CHARACTERISTICS

$T_A=25^{\circ}C$

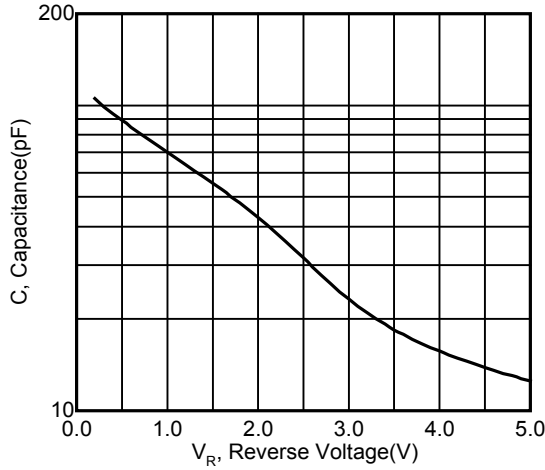
Parameter 項目	Symbol 記号	Value			Units 単位	Conditions 条件
		MIN	TYP	MAX		
Reverse Voltage 逆方向電圧	V_R	16			V	$I_R=10\mu A$
Reverse Current 逆方向電流	I_R			50.0	nA	$V_R=10V$
Diode Capacitance 容量値	C_1	65.80	70.00	74.20	pF	$V_R=1V, f=1MHz$
	$C_{4.5}$	12.00	13.40	14.80	pF	$V_R=4.5V, f=1MHz$
Series Resistance 直列抵抗	R_S		0.43	0.50	Ω	$V_R=1.5V, f=100MHz$
Capacitance Ratio 容量変化比	A	5.00				C_1/C_5

- * Capacitance measured in parallel connections.
容量値は、Back to Back Typeの2つのダイオードの平均値です。
- * 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。
- * The tolerance of element that is next to each other in same reel is within 6% at C_1 , C_3 and $C_{4.5}$.
同一リール内で隣接する素子の C_1 、 C_3 、 $C_{4.5}$ の容量偏差は6.0%以内。

TYPICAL CHARACTERISTICS

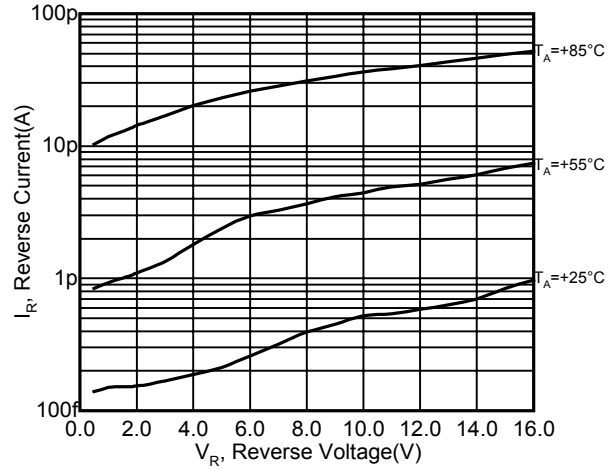
Capacitance versus Reverse Voltage
逆方向電圧対容量

f=1MHz, T_A=25°C



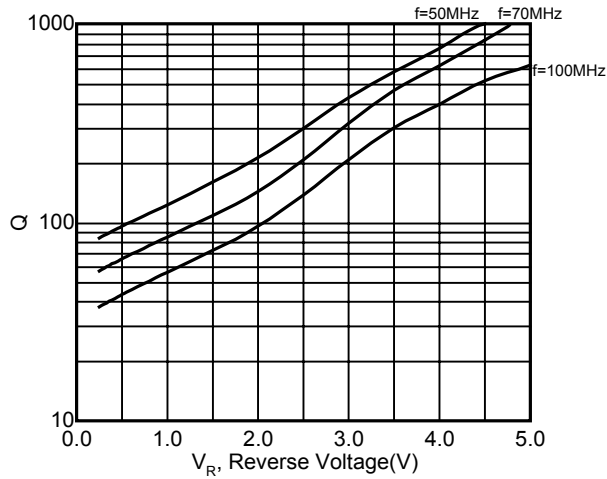
Reverse Current versus Reverse Voltage
逆方向電圧対逆電流

T_A=+25 / +55 / +85°C



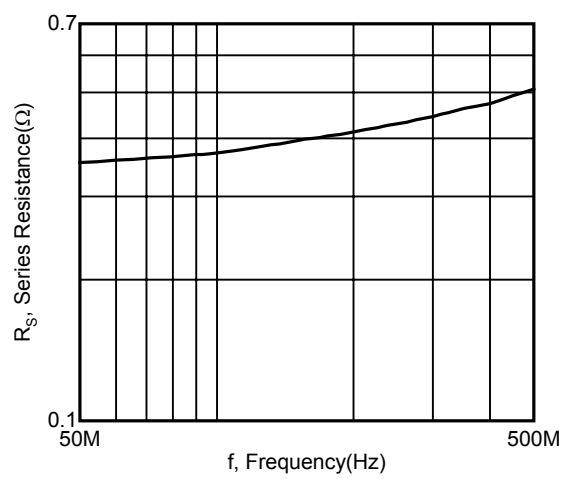
Q versus Reverse Voltage
逆方向電圧対Q

T_A=25°C



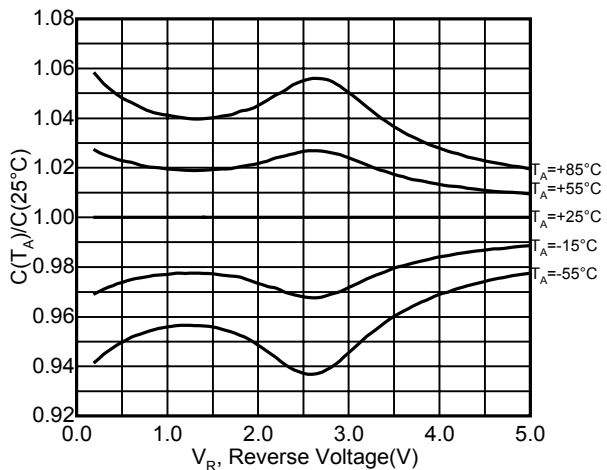
Series Resistance versus Frequency
周波数対直列抵抗

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

