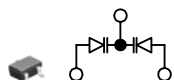
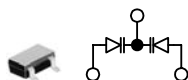


9V series variable capacitance diode for FM tuning

FM调谐用9V系列变容二极管



KV1735R
(SOT23C-3)



KV1735S
(SOT23-3)

FEATURES / 特性

- 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=3.30 to
- Very Small Series Resistance: $R_S \approx 0.3\Omega$
- 包括两个元件
- 设备元件间的微小公差
- CV特性曲线的优良线性
- 超大变容比: A=3.30~
- 超低串联电阻: $R_S \approx 0.3\Omega$

CLASSIFICATION / 分类

Rank		1	2	3	4
C ₂	MIN	68.86	70.81	72.80	74.85
	MAX	71.52	73.53	75.61	77.74

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	16	V	
Forward Current	正向电流	I_F	50	mA	
Power Dissipation	功耗	P_D	100	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

$T_A = 25^\circ\text{C}$

Parameter 参数	Symbol 符号	Value/值			Unit 单位	Conditions 条件
		MIN. 最小	TYP. 典型	MAX. 最大		
Reverse Voltage 反向电压	V_R	12			V	$I_R = 10\mu\text{A}$
Reverse Current 反向电流	I_R			10.0	nA	$V_R = 10\text{V}$
Diode Capacitance 二极管电容值	C_2	68.86		77.74	pF	$V_R = 2.0\text{V}, f = 1\text{MHz}$
	C_6	26.39		36.69	pF	$V_R = 6.0\text{V}, f = 1\text{MHz}$
	C_9	16.91		22.25	pF	$V_R = 9.0\text{V}, f = 1\text{MHz}$
Series Resistance 串联电阻	R_S			0.30	Ω	$V_R = 2.0\text{V}, f = 100\text{MHz}$
Capacitance Ratio 变容比	A	3.30		4.60		C_2/C_9

* Capacitance measured in parallel connections.
并联连接中测得的电容

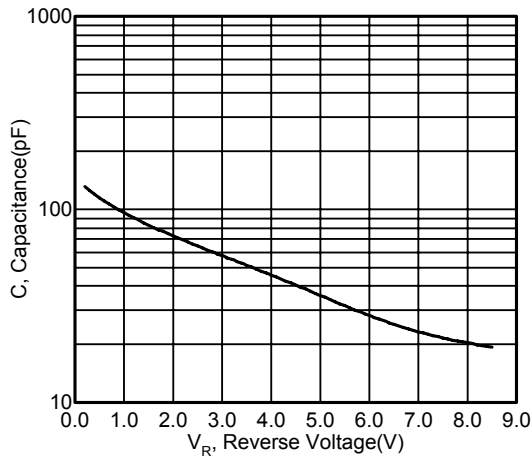
* Diode Capacitance measured with Agilent 4279A or equivalent instruments (at OSC level $20 \pm 5\text{mVrms}$)
使用Agilent 4279A或功能相同的仪器（在OSC输出电平 $20 \pm 5\text{mVrms}$ 条件下）测量二极管电容值。

* Resistance meter is Agilent 4291B or equivalent instruments.
电阻表为Agilent 4291B或功能相同的仪器。

TYPICAL CHARACTERISTICS

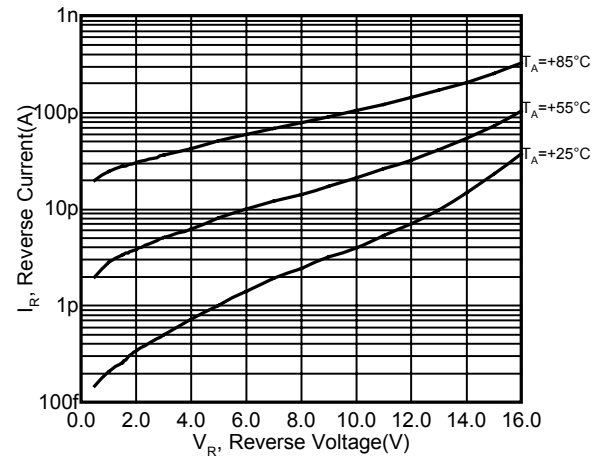
■ Capacitance versus Reverse Voltage

电容对比反向电压

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

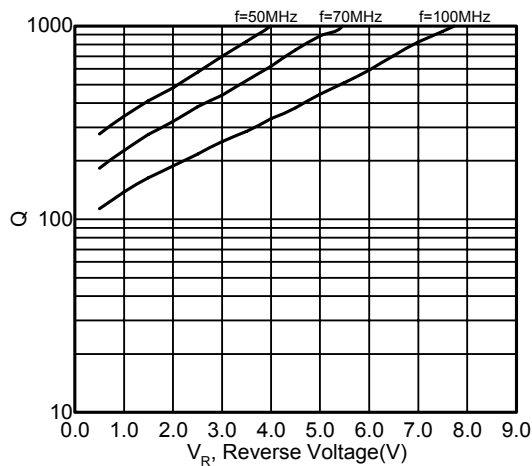
■ Reverse Current versus Reverse Voltage

反向电流对比反向电压

 $T_A=+25 / +55 / +85^\circ\text{C}$ 

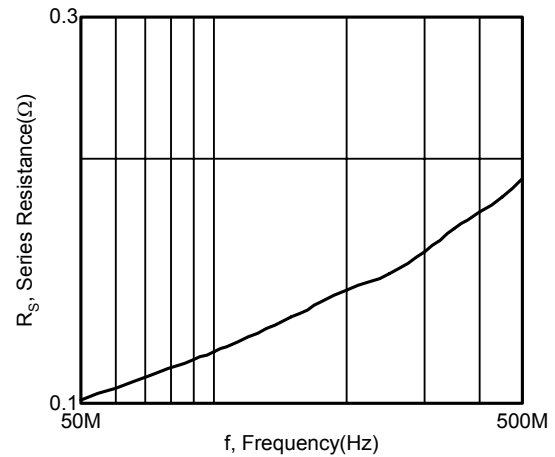
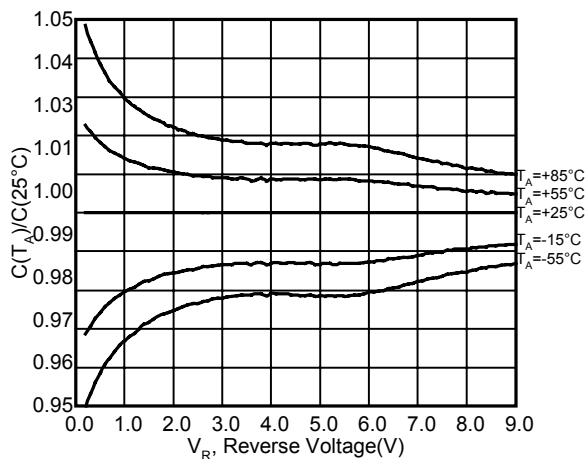
■ Q versus Reverse Voltage

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

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

■ Capacitance Temperature Coefficient versus Reverse Voltage

电容温度系数对比反向电压

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