

## Variable capacitance diode for AM tuning

### AMチューナ用電圧可変容量ダイオード

# KV1560, KV1560NT, KV1562M, KV1563M, KV1563BM

## FEATURES

- Excellent Matching Between Elements
- Excellent Linearity of The CV Curve
- High Q: Q=200 to
- Extra Large Capacitance Ratio: A=17.0 to
- 優れた素子間マッチング
- CV特性の優れた直線性
- 高いQ値: Q=200~
- 極めて大きな容量変化比: A=17.0~


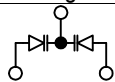

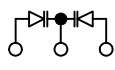

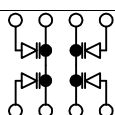

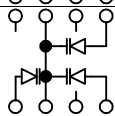

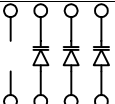
## CLASSIFICATION

Rank		1	2	3	4
		C	MIN	428	446
C <sub>1</sub>	MAX	452	470	488	506

## ORDERING INFORMATION

- KV1560NT
  - KV1560TL...Storage direction: TL(Left type)
  - KV1562MTL...Storage direction: TL(Left type)
  - KV1563MTL...Storage direction: TL(Left type)
  - KV1563BMTL...Storage direction: TL(Left type)
- \* Part name + Storage direction

## PACKAGE OUTLINE

Part name	Package	Marking	Pin configuration
KV1560	 SOT23L-3	A6	
KV1560NT	 TO92-3	560	
KV1562M	 SOP-8	562	
KV1563M	 SOP-8	563	
KV1563BM	 SOP-8	63B	

## ELECTRICAL CHARACTERISTICS

T<sub>A</sub>=25°C

Parameter 項目	Symbol 記号	Value 規格			Units 単位	Conditions 条件
		MIN	TYP	MAX		
Reverse Voltage 逆方向電圧	V <sub>R</sub>	16			V	I <sub>R</sub> =10μA
Reverse Current 逆方向電流	I <sub>R</sub>			100	nA	V <sub>R</sub> =10V
Diode Capacitance 容量値	C <sub>1</sub>	428.0		506.0	pF	V <sub>R</sub> =1V, f=1MHz
	C <sub>4.5</sub>		100		pF	V <sub>R</sub> =4.5V, f=1MHz
	C <sub>8</sub>	20.0		27.5	pF	V <sub>R</sub> =8V, f=1MHz
Capacitance Tolerance 容量偏差	ΔC <sub>1</sub>			1.0	%	KV1560, KV1560NT V <sub>R</sub> =1V, f=1MHz*1
				1.2		
				1.1		
				2		
	ΔC <sub>4.5</sub>			2.0	%	KV1560, KV1560NT KV1562M KV1563M KV1563BM V <sub>R</sub> =4.5V, f=1MHz*1
				2.2		
				2.1		
				3		
	ΔC <sub>8</sub>			2.0	%	KV1560, KV1560NT KV1562M KV1563M KV1563BM V <sub>R</sub> =8V, f=1MHz*1
				2.2		
				2.1		
				3		
Q	Q	200				V <sub>R</sub> =1V, f=1MHz
Capacitance Ratio 容量変化比	A	17.0				C <sub>1</sub> /C <sub>8</sub>

\* 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。

\*1 (C<sub>MAX</sub>-C<sub>MIN</sub>)/C<sub>MIN</sub>×100

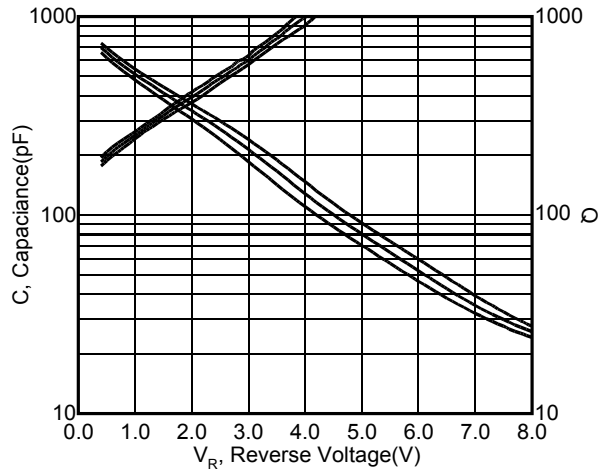
## ABSOLUTE MAXIMUM RATINGS

Parameter	項目	Symbol 記号	Rating 定格	Unit 単位	Remarks 備考
Reverse Voltage	逆方向電圧	$V_R$	20	V	KV1560, KV1560NT KV1562M, KV1563M, KV1563BM
			16		
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	°C	
Operating Temperature Range	動作温度範囲	$T_{OP}$	-55 to +85	°C	

## TYPICAL PREFORMNCE CHARACTERISTICS

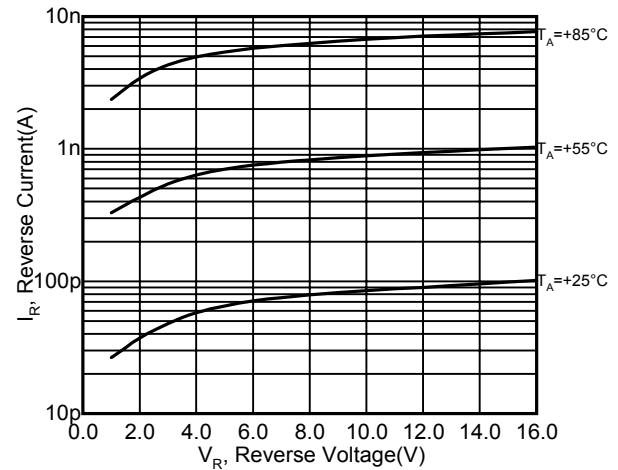
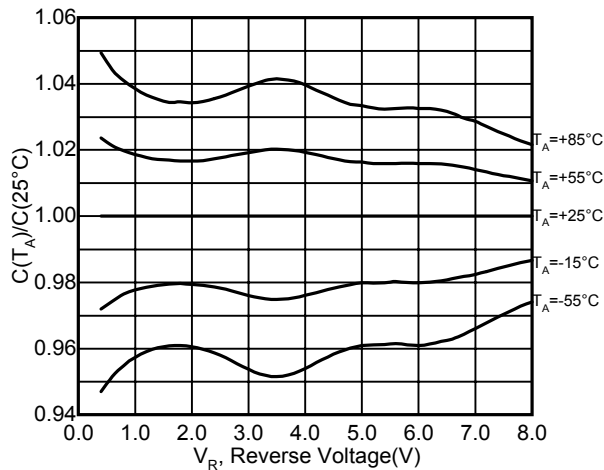
## ■ Capacitance, Q versus Reverse Voltage

逆方向電圧対容量、Q

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

## ■ Reverse Current versus Reverse Voltage

逆方向電圧対逆電流

 $T_A=+25 / +55 / +85^\circ\text{C}$ ■  $C(T_A)/C(25^\circ\text{C})$  versus Reverse Voltage逆方向電圧対 $C(T_A)/C(25^\circ\text{C})$  f=1MHz  $T_A=-55$  to  $+85^\circ\text{C}$ 

## ■ Capacitance Temperature Coefficient versus Reverse Voltage

逆方向電圧対温度係数

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