KVX1905 - KVX1975 / KVX1401 / KVX1501

SURFACE MOUNT VARACTOR DIODES
SOT-23 SUPER-HYPERABRUPT JUNCTION
RoHS Compliant

GENERAL DESCRIPTION

Designed for the demands of today's commercial surface mount products, these devices offer the high quality and reliability of our military microwave devices in a cost effective SOT-23 plastic package. Capacitance values are available for VCO's from VHF thru 1.5 GHz. High C_T ratios provide excellent bandwidth and straight line mid-range sensitivities in a low voltage varactor. Our proprietary grown junction epitaxy provides the highest Q values in the industry.

This series of diodes meets RoHS requirements per EU Directive 2002/95/EC.

APPLICATIONS

These devices are the ideal choice for wireless fixed, mobile, or portable applications. Devices are available in package style 23-0 (single die) or 23-4 (common cathode, 2 die). Some limitations apply. Consult factory for availability.

KEY FEATURES

- Silicon Mesa Geometry
- High Reliability Dense SiO_2 Passivation
- Lower Parasitics
- Widest Tuning Ratios
- Highest Q Available
- Mil Spec Performance/Economy Price
- Tape & Reel Available for Pick & Place Assembly
- RoHS Compliant [1]

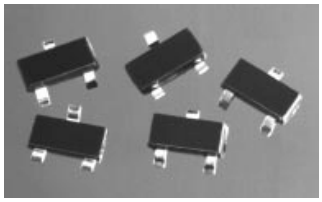
APPLICATION/BENEFITS

- Low Voltage Wireless Open Loop VCO's
- Low Voltage Wireless PLL VCO's
- TCXO's, VCXO's, VVF's
- Phase Shifter

[1] These devices are supplied with a matte tin finish suitable for RoHS compliant assembly.

ABSOLUTE MAXIMUM RATINGS @ 25°C

Rating	Symbol	Value	Unit
Power Dissipation (De-rated linearly to 0 at T_J (max)	P_D	250	mW
Leakage Current @ 10 V	I_R	50	nA
Storage Temperature	T_{STG}	-55 to +125	ºC
Operating Temperature	T_{OP}	-55 to +125	ºC



For the most current data, consult MICROSEMI's website: ***www.MICROSEMI.com***
Specifications are subject to change, consult the RFIS factory at (978) 442-5600 *for the latest information.*

Microsemi

KVX1905 - KVX1975 / KVX1401 / KVX1501
SURFACE MOUNT VARACTOR DIODES
SOT-23 SUPER-HYPERABRUPT JUNCTION
RoHS Compliant

DEVICE ELECTRICAL PARAMETERS AT 25°C

(4V & 8V) UHF SUPER HYPERABRUPT VARACTORS

Model Number	V_B (V) IR=10µA (Min)	C_T (pF) @1V (Min)	C_T (pF) @2.5V	C_T (pF) @4V (Max)	C_T (pF) @8V (Max)	Q @4V, 50 MHz (Min)
KVX1975	12	9.0	4.5 – 6.5	3.0	- -	400
KVX1932A	12	13	6.5 – 10.0	- -	2.7	750
KVX1922A	12	17	8.5 – 13.0	- -	3.2	600
KVX1952A	12	26	13.0 – 20.0	- -	4.7	500
KVX1912A	12	36	18.0 – 27.0	- -	6.2	400

(6V) UHF SUPER HYPERABRUPT VARACTORS

Model Number	V_B(V) IR=10µA (Min)	C_T(pF) @1V	Ratio C_{T1} / C_{T3}	Ratio C_{T1} / C_{T6}	Q @4V,50 MHz (Min)
KVX1965A	12	3.0 – 3.6	1.4 – 1.9	2.6 – 3.3	1500
KVX1945A	12	5.85 – 7.15	1.6 – 2.0	2.8 – 3.4	1200
KVX1935A	12	10.35 – 12.65	1.6 – 2.0	2.9 – 3.4	1000
KVX1925A	12	15.5 – 18.5	1.6 – 2.0	3.0 – 3.5	900
KVX1905A	12	45 - 54	1.6 – 2.0	3.0 – 3.5	750

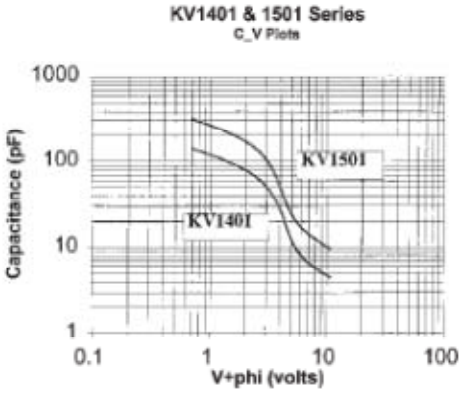
(10V) UHF SUPER HYPERABRUPT VARACTORS

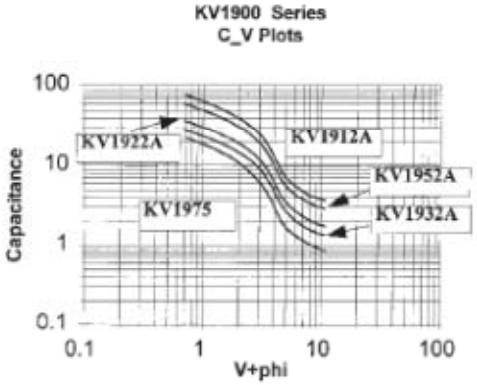
Model Number	V_B(V) IR=10µA (Min)	C_T(pF) @2V (Min - Max)	C_T(pF) @7V (Typ)	C_T(pF) @10V (Min - Max)	Q @2V,10 MHz (Min)
KVX1401	12	46 – 68	6.1	4.2 – 5.2	75
KVX1501	12	100 – 150	13.0	8.6 – 10.6	50

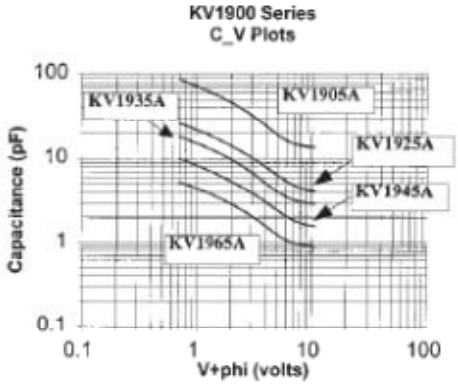
For the most current data, consult MICROSEMI's website: ***www.MICROSEMI.com***
Specifications are subject to change, consult the RFIS factory at (978) 442-5600 *for the latest information.*

KVX1905 - KVX1975 / KVX1401 / KVX1501

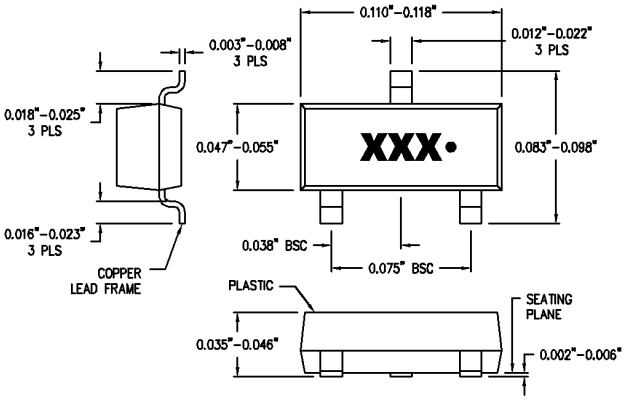
SURFACE MOUNT VARACTOR DIODES
SOT-23 SUPER-HYPERABRUPT JUNCTION
RoHS Compliant



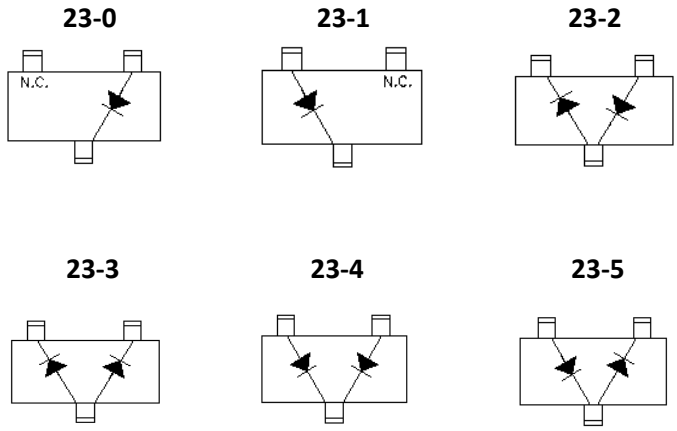




PACKAGE STYLE 23



CONFIGURATIONS



Revision History

Revision Level / Date	Para. Affected	Description
2009-02-02 1 / 12 November 2013	- -	Initial Release Reformat

For the most current data, consult MICROSEMI's website: ***www.MICROSEMI.com***
Specifications are subject to change, consult the RFIS factory at (978) 442-5600 *for the latest information.*