SILICON 12V HYPERABRUPT VARACTOR DIODES

Device Description

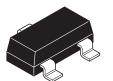
A range of silicon varactor diodes for use in frequency control and filtering. Featuring closely controlled CV characteristics and high Q. Low reverse current ensures very low phase noise performance. Available in single or dual common cathode format in a wide rage of miniature surface mount packages.

Features

- Close tolerance C-V characteristics
- Octave tuning from 0 to 6V
- Low IR (typically 200pA)
- Excellent phase noise performance
- High Q

Applications

- VCXO and TCXO
- Wireless communications
- Pagers
- Mobile radio





SOT23

SOD323



С



ABSOLUTE MAXIMUM RATINGS

PARAMETER	SYMBOL	MAX.	UNIT
Reverse voltage	V _R	12	V
Forward current	I _F	100	mA
Power dissipation at T _{amb} = 25°C SOT23	P _{tot}	330	mW
Power dissipation at T _{amb} = 25°C SOD323	P _{tot}	330	mW
Junction temperature	Тj	125	°C
Storage temperature range	T _{stg}	-55 to +150	°C

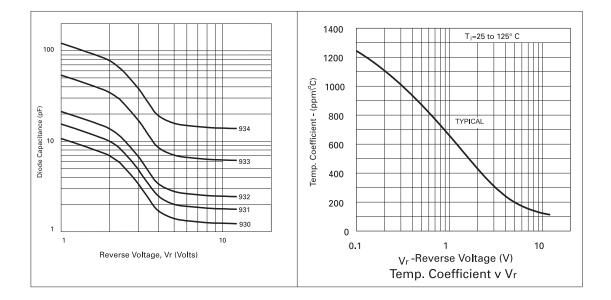
TUNING CHARACTERISTICS at $T_{amb} = 25^{\circ}C$

PART	Capacitance V _R =1V	Capacitance V _R =2.5V		Capacitance V _R =4V	Minimum Q V _R =4V f=50MHz
	MIN. pF	MIN. pF	MAX. pF	MAX. pF	
930	8.70	4.30	5.50	2.90	200
931	13.50	6.50	7.80	4.00	300
932	17.00	8.50	10.50	5.50	200
933	42.00	18.00	27.00	12.00	150
933A	42.00	20.25	24.75	12.00	150
934	95.00	40.00	65.00	25.00	80
934A	95.00	47.25	57.75	25.00	80

ELECTRICAL CHARACTERISTICS at $T_{amb} = 25^{\circ}C$

PARAMETER	CONDITIONS	MIN.	TYP.	MAX.	UNIT
Reverse breakdown voltage	$I_R = 10 u A$	12			V
Reverse voltage leakage	$V_{R} = 8V$		0.2	100	nA
Temperature coefficient of capacitance	$V_R = 3V, f = 1MHz$		300	400	ppCm/°C





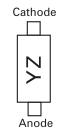
TYPICAL CHARACTERISTICS



ORDER CODES AND PART MARKING

SOT23		SOD323		
ORDER CODE	PART MARK	ORDER CODE	PART MARK	
ZC930TA	V15	ZMV930TA	AH	
ZC931TA	V14	ZMV931TA	AJ	
ZC932TA	V13	ZMV932TA	AK	
ZC933TA	V17	ZMV933TA	AL	
ZC933ATA	A17	ZMV933ATA	AM	
ZC934TA	V16	ZMV934TA	AN	
ZC934ATA	A16	ZMV934ATA	AO	

SOD323 - PART MARK ORIENTATION



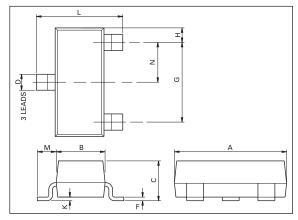
Partmarking shown is for example only

TAPE AND REEL INFORMATION

REEL CODE	REEL SIZE	TAPE WIDTH	QUANTITY PER REEL	
ТА	7 inch (180mm)	8mm	3,000	



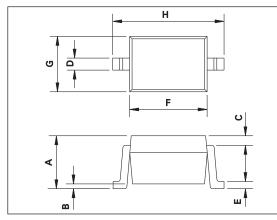
SOT23 PACKAGE OUTLINE



PACKAGE DIMENSIONS

	Millimeters		Inc	hes		Millin	neters	Inc	hes
DIM	Min.	Max.	Min.	Max.	DIM	Min.	Max.	Max.	Max.
А	2.67	3.05	0.105	0.120	Н	0.33	0.51	0.013	0.020
В	1.20	1.40	0.047	0.055	К	0.01	0.10	0.0004	0.004
С	_	1.10	—	0.043	L	2.10	2.50	0.083	0.0985
D	0.37	0.53	0.015	0.021	М	0.45	0.64	0.018	0.025
F	0.085	0.15	0.0034	0.0059	Ν	0.95 NOM		0.0375 NOM	
G	1.90	NOM	0.075	NOM	-		-		-

SOD323 PACKAGE OUTLINE



PACKAGE DIMENSIONS

DIM	Millimeters		Inches		
	Min.	Min. Max.		Max.	
А	0.91	1.16	0.036	0.046	
В	0.0	0.1	0.0	0.004	
С	-	-	-	-	
D	0.33	0.4	0.013	0.016	
E	0.12	0.2	0.005	0.008	
F	1.52	1.77	0.060	0.070	
G	1.11	1.37	0.044	0.054	
Н	2.46	2.71	0.097	0.107	

EMICONDUCTORS

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"Obsolete"Production has been discontinued

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