

VARIABLE CAPACITANCE SMD DIODES

DESCRIPTION

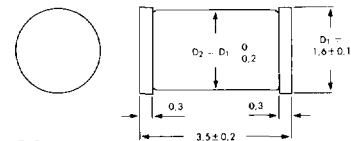
■ Philips Components variable capacitance (varicap) diodes are optimized to exhibit linear, highly dependable dynamic capacitance characteristics over the entire rated range of reverse voltage values. The devices also have very low series resistance and can be used in all AM, FM, VHF and UHF circuits where tuning is required. They are offered in a choice of surface mount packages, providing the designer with alternatives for different power requirements, circuit board substrate materials, and assembly processing techniques.

FEATURES

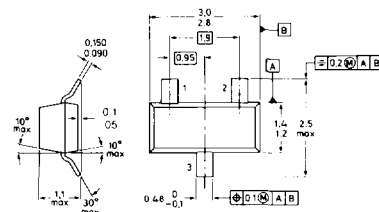
- Guaranteed minimum and maximum capacitance ratio over working voltage range
- Operating reverse voltage ranges from 0.5V to 28V
- Typical series resistance as low as 0.2Ω
- Dual diodes in SOT-23 and SOT-143
- SOD-80 for low-cost, hermetic glass packaging

MECHANICAL DATA

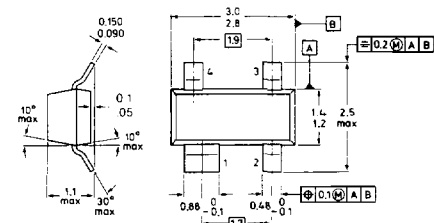
(Dimensions in mm)



SOD-80



SOT-23 TOP VIEW



SOT-143 TOP VIEW

VARIABLE CAPACITANCE SMD DIODES

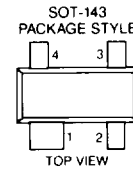
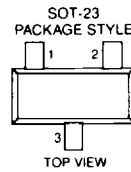
ELECTRICAL SPECIFICATIONS

TYPE	PACKAGE	RATINGS		C _d at V _R		C _d RATIO f=1 MHz				r _s max Ω	PINOUT
		V _R V	I _F mA	pF	V	min	typ.	max	@V ₁ /V ₂		
BB215	SOD-80	30	20	18 min.	1	7.6	—	—	1/28	—	—
BB219	SOD-80	30	20	31 min.	1	12	—	—	1/28	—	—
BB804	SOT-23	18	50	44.5 typ.	2	1.65	—	1.75	2/8	0.2	L
BBY31	SOT-23	28	20	1.8-2.8	25	—	5	—	3/25	1.2	H
BBY39*	SOT-23	30	20	1.8-2.0	28	7.6	—	—	1/28	0.8	M
BBY40	SOT-23	28	20	4.3-6	25	5	—	5.6	3/25	0.6	H
BBY42	SOT-23	32	50	31 min.	1	12	—	16	1/28	1.2	H
BBY62*	SOT-143	30	50	17.5 typ.	1	—	5	—	3/25	1.0	J

*Dual diode

PINOUT DIAGRAMS

PINOUT H: SOT-23	PIN 1	PIN 2	PIN 3	PIN 4
PINOUT J: SOT-143	N.C.	A	K	—
PINOUT L: SOT-23	K ₁	K ₂	A ₂	A ₁
PINOUT M: SOT-23	K ₁	K ₂	K ₁ K ₂	—
	A ₁	A ₂	K ₁ K ₂	—



MARKING CODES

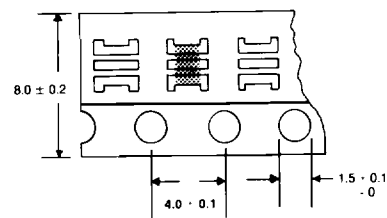
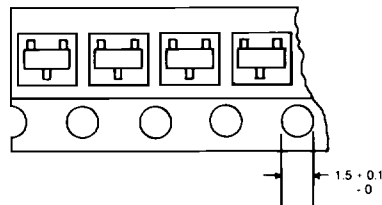
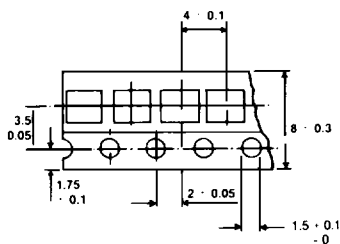
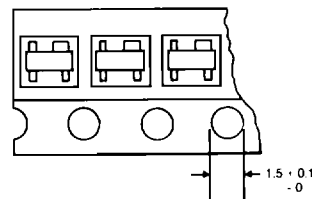
Type No.	Code or Stripe Color	Type No.	Code or Stripe Color	Type No.	Code or Stripe Color
BB215	Green and White	BBY31	S1	BBY42	*
BB219	White	BBY39	*	BBY62	S4
BB804	S3	BBY40	S2		

*See individual device data sheet

TAPE AND REEL SPECIFICATIONS

(Dimensions in mm)

SM Package	Devices per reel	Reel Size (in)	Tape Width (mm)	Ordering Suffix
SOT-23	3K	7	8	TRL
	10K	13	8	TRL 13
SOT-143	3K	7	8	TRL
	10K	13	8	TRL 13
SOD-80	2.5K	7	8	TRL
	10K	13	8	TRL 13



(STANDARD DIODE ORIENTATION IS
CATHODE BAND AT SPROCKET HOLE SIDE)