

MICROWAVE MIXER DIODE

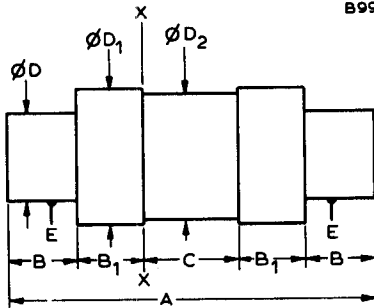
AA Y34

Subminiature germanium point-contact mixer diode for use at Q band.

QUICK REFERENCE DATA

Frequency range	26 to 40	GHz
Typ. noise figure	8.5	dB

OUTLINE AND DIMENSIONS



B9924

Millimetres



	Min.	Max.
A	6.65	7.16
B	1.17	1.42
B ₁	1.22	1.32
C	1.70	1.80
ØD	1.65	1.80
ØD ₁	2.527	2.565
ØD ₂	-	2.51

XX - Reference plane

E, concentricity tolerance
= ±0.15

TERMINAL IDENTIFICATION

The positive end (cathode) is marked red.

The positive end indicates the electrode which becomes positive in an a.c. rectifier circuit.

ACCESSORIES

Holders to fit these diodes are available in the U.K. from M.O.V. Co. Ltd., Brook Green Works, Hammersmith, London, W.6.

RATINGS (ABSOLUTE MAXIMUM SYSTEM)

Electrical

Max. burn-out (R.F. spike)	0.03	erg
Max. burn-out pulse peak power (pulse duration 0.2 μ s)	0.5	W

Temperature

T _{stg} max.	100	$^{\circ}$ C
T _{stg} min.	-55	$^{\circ}$ C
T _{amb} max.	100	$^{\circ}$ C
T _{amb} min.	-55	$^{\circ}$ C

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

		Min.	Typ.	Max.	
Static					
I _R	Reverse current V _R = 0.5V	-	10	-	μ A
I _F	Forward current V _F = 0.5V	-	2.0	-	mA
Dynamic					
*N _O	Noise figure	-	8.5	10.5	dB
L _c	Conversion loss	-	5.5	-	dB
**N _r	Noise temperature ratio	-	1.6	-	
†v.s.w.r.	Voltage standing wave ratio	-	1.4	1.8	
z _{if}	Intermediate frequency impedance	500	750	1000	Ω
f	Operating frequency range	26	-	40	GHz

*Measured at 34.86GHz with V_{bias} = +150 \pm 10mV, 0.5mA total rectified current. N_O included N_{if} = 1.5dB. K1007 Issue 3 Section 8B 3.3.1/2.

**Intermediate frequency = 45MHz.

†With respect to standard test holder.

