

NPN 4 GHz wideband transistor crystal

T-31-90
X3A-BFQ34

PHILIPS INTERNATIONAL

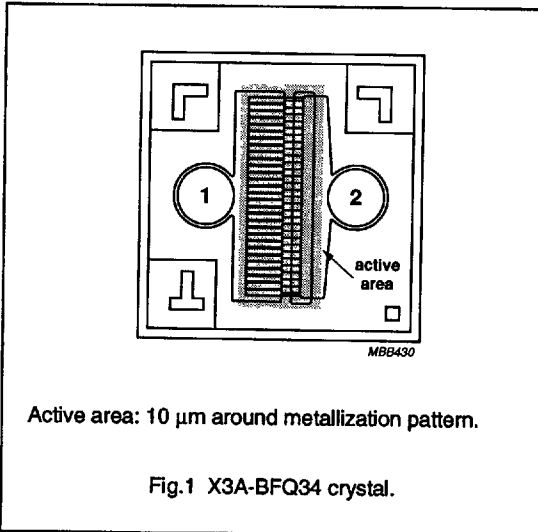
56E D

7110826 0046095 65T PHIN

DESCRIPTION

NPN crystal used in BFQ34T (SOT37), BFQ34 (SOT172) and BFG35 (SOT223). Crystals are supplied as whole wafer, fully tested but unsawn.

ELEMENT LAYOUT



MECHANICAL DATA

Crystal	
Top metallization	Au 1.15 μm
Back metallization	AuAs 0.35 μm
Passivation	Si_3N_4 0.5 μm
Base bond pad 1	dia. 75 μm
Emitter bond pad 2	dia. 75 μm
Collector contact	on underside of crystal
Wafer	
Diameter	76.1 mm (3 inches)
Crystal pitch	400 x 400 μm
Separation lane	70 μm
Sawing lane	50 μm
Slice thickness	160 \pm 15 μm
Average number of good elements per wafer	10 000
Faulty devices	inked out
Visual inspection	to URV-3-5-52/733

LIMITING VALUES

In accordance with the Absolute Maximum System (IEC 134).

SYMBOL	PARAMETER	CONDITIONS	MAX.	UNIT
V_{CBO}	collector-base voltage	open emitter	25	V
V_{CEO}	collector-emitter voltage	open base	18	V
V_{EBO}	emitter-base voltage	open collector	2	V
I_{C}	DC collector current		150	mA
T_{J}	junction temperature		150	$^{\circ}\text{C}$

CHARACTERISTICS

SYMBOL	PARAMETER	CONDITIONS	MIN.	TYP.	MAX.	UNIT
I_{CBO}	collector cut-off current		-	-	100	μA
h_{FE}	DC current gain		25	90	-	
f_{T}	transition frequency	$I_{\text{C}} = 100 \text{ mA}$; $V_{\text{CE}} = 10 \text{ V}$; $f = 500 \text{ MHz}$	-	4	-	GHz