

Process Introduction

2um / 36V Bipolar Process Technology

Process features

- Up-down isolation
- Deep N+ collector plug
- N-channel stop
- NPN transistor
- Lateral PNP transistor
- Implant resistor (optional)
- MOS capacitor
- Double metal (optional)
- Applications: Analog, Power Linear

Key Design Rules

10 Masks	Min. Width/Space(um)
Diffusion	4
Contact	2
Metal	3/2

Electrical Specification

Device	Parameter	Specification			
		Min	Typ	Max	Unit
NPN (LV) (5x7 um ² emitter)	Hfe(Ic=100uA)	80	140	250	-
	BVceo(Ic=10uA)	18	-	-	V
NPN (HV) (5x7 um ² emitter)	Hfe(Ic=100uA)	80	140	250	-
	BVceo(Ic=10uA)	36	-	-	V
PBASE-LPNP(LV) (Wb=12um without emitter guarding)	Hfe(Ic=10uA)	100	350	600	-
	BVceo(Ic=10uA)	18	-	-	V
PBASE-LPNP(HV) (Wb=12um with emitter guarding)	Hfe(Ic=10uA)	100	350	600	-
	BVceo(Ic=10uA)	36	-	-	V
XBASE-LPNP(LV) (Wb=14um without emitter guarding)	Hfe(Ic=10uA)	150	500	900	-
	BVceo(Ic=10uA)	18	-	-	V
XBASE-LPNP(HV) (Wb=16um with emitter guarding)	Hfe(Ic=10uA)	150	500	900	-
	BVceo(Ic=10uA)	36	-	-	V
Sheet Resistance	PBASE-R	-	215	-	Ω/□
	Implant-R	-	2.3	-	kΩ/□
Capacitance (Si ₃ N ₄)	C(100x100um ²)	-	9.3	-	pF