

WXC is a 32 Volt Linear Bipolar Process featuring vertical NPN and lateral PNP transistors with diffused resistors, polysilicon resistors, Schottky diodes and nitride capacitors.

Applications

- Linear Applications
- DC to DC converters
- Switching regulators
- Power management

Key Process Feature

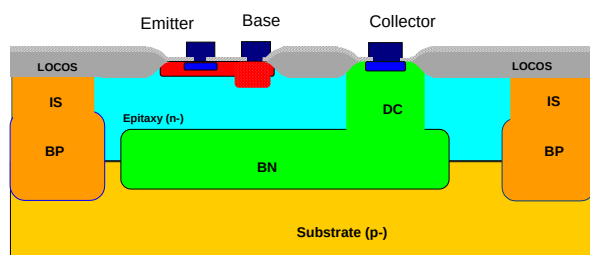
- 1.8nF/sq μm MIS capacitors
- High value polysilicon resistor
- Very low leakage currents
- Low flicker noise

Transistor parameters

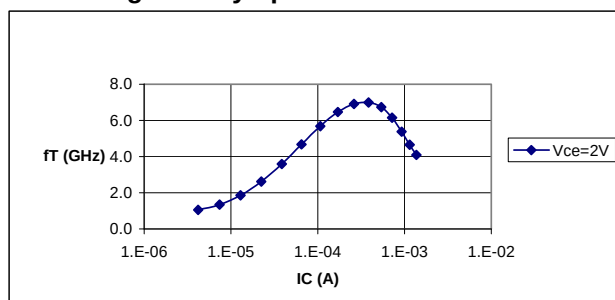
(3.5 x 3.5 μm NPN emitter, LPNP 6 μm base width, Substrate PNP)

Parameter	Condition	NPN	LPNP	SPNP
Hfe	Ic=10 μA Vcb=0	110	300	800
VAF		160V	42V	30V
BVceo	Ic=1 μA	>32V	>32V	>25V
BVcbo	Ic=1 μA	>45V	>45V	>45V
BVebo	Ib=1 μA	>5V	>32V	>45V
BVibo	Ib=1 μA	>32V		
BVcsub	Ic=1 μA	>45V		
NPN fT	Vce=2V	1.2GHz		
LPNP fT	Vce=2V		20MHz	

nnp cross section



Minimum geometry npn fT curve



Capacitors / Diodes

Type	Value	Units	Max V
MIS Cap	0.5	fF/sq μm	32V
J Cap	2.0	fF/sq μm	5V
Schottky	0.5	Volt(Vf)	32V

Resistor Values

parameter	Value	Units
PC	200	Ω
Base	600	Ω
IR	2.0	k Ω
Poly	1.2*	k Ω
* Near Zero temperature coefficient		

Design Rules

Feature	Min μm	Spacing μm
Emitter	3.5	2.0
Resistors	3.0	4.0
Contact	1.5	3.0
1st Layer metal (1 μm)	3.5	2.0
2 nd layer metal (2 μm)	6.0	3.0