

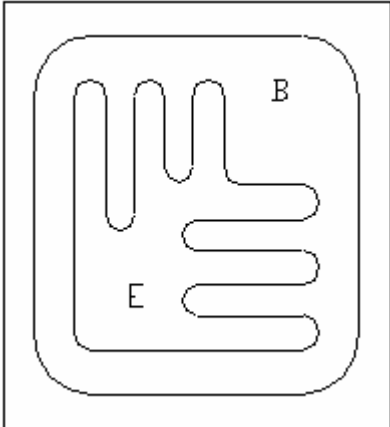
9013A Silicon NPN Epitaxial Transistor

Description: The 9013A is designed for audio frequency general amplifier applications

Features: ●Excellent h_{FE} Linearity

●Complementary to 9012A

Chip Appearance

	Chip Size		440um × 440um
	Chip Thickness		210 ± 20um
	Bonding Pad Size	Base	110um × 110um
		Emitter	110um × 110um
	Front Metal		Al
	Backside Metal		Au(As)
	Scribe line width		50um
	Wafer Size		6 inch

Electrical Characteristics(Ta=25°C)

Characteristic	Symbol	Test Condition	Min	Max	Unit
Collector Cutoff Current	I_{CBO}	$V_{CB}=35V, I_E=0$		0.1	uA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=5V, I_C=0$		0.1	uA
Collector-Base Breakdown Voltage	BV_{CBO}	$I_C=0.1mA$	40		V
Collector-Emitter Breakdown Voltage	BV_{CEO}	$I_C=1mA$	25		V
Emitter-Base Breakdown Voltage	BV_{EBO}	$I_E=0.1mA$	5.0		V
DC Current Gain	h_{FE}	$V_{CE}=1V, I_C=50mA$	150	400	
Collector Saturation Voltage	$V_{CE(sat)}$	$I_C=500mA, I_B=50mA$		0.5	V