

PN2483, PN2484

LOW LEVEL, LOW NOISE NPN SILICON PLANAR TRANSISTORS



FEATURES

- High Breakdown Voltage $V_{CB0} \dots 60V$
- High Gain $h_{FE} \dots 200 @ 500\mu A$
- Low Noise N.F. $\dots 3 \text{ dB}$

APPLICATIONS

- Low Level, Low Noise Amplifier
- Audio Through High Frequency Ranges
- Operational Amplifier

MECHANICAL OUTLINE

TO-92A



EBC

ABSOLUTE MAXIMUM RATINGS

Total Dissipation 25°C free air	0.4 Watt	Operating Collector Junction Temperature	175°C
Total Dissipation 25°C case	1.8 Watt	Storage Temperature Range	- 65°C to + 300°C

ELECTRICAL CHARACTERISTICS AT 25°C

CHARACTERISTICS	SYMBOL	PN2483		PN2484		UNITS	TEST CONDITIONS	
		Min.	Typ. Max.	Min.	Typ. Max.			
Collector-Base Breakdown Voltage	V_{CB0}	60		60		V	$I_C = 10\mu A$,	$I_E = 0$
Collector-Emitter Breakdown Voltage*	V_{CEO}	60		60		V	$I_C = 10\text{mA}$,	$I_B = 0$
Emitter-Base Breakdown Voltage	V_{EBO}	6		6		V	$I_C = 0$,	$I_E = 10\mu A$
Collector-Base Cutoff Current	I_{CBO}		0.01		0.01	μA	$I_E = 0$,	$V_{CB} = 45V$
Collector-Emitter Cutoff Current	I_{CEO}		0.002		0.002	μA	$I_B = 0$,	$V_{CE} = 5V$
Collector-Emitter Saturation Voltage*	$V_{CE(sat)}$	0.2	0.35	0.2	0.35	V	$I_C = 1\text{mA}$,	$I_B = 0.1\text{mA}$
Emitter-Base On Voltage	$V_{BE(on)}$	0.57	0.7	0.57	0.7	V	$I_C = 0.1\text{mA}$,	$V_{CE} = 5V$
Forward Current Transfer Ratio	h_{FE}			30			$I_C = 1\mu A$,	$V_{CE} = 5V$
Forward Current Transfer Ratio	h_{FE}	40	120	100	500		$I_C = 10\mu A$,	$V_{CE} = 5V$
Forward Current Transfer Ratio*	h_{FE}	100		200			$I_C = 500\mu A$,	$V_{CE} = 5V$
High Frequency Current Gain	h_{fe}	12		15			$I_C = 50\mu A$,	$V_{CE} = 5V$
High Frequency Current Gain	h_{fe}	2		2			$I_C = 500\mu A$,	$V_{CE} = 5V$
Output Capacitance	C_{ob}	3.5	6	3.5	6	pF	$I_E = 0$,	$V_{CB} = 5V$
Noise Figure (Wide Band)	NF	2	4	1.8	3	dB	$I_C = 10\mu A$,	$V_{CE} = 5V$
Noise Figure (Narrow Band)	NF	2	4	1.8	3	dB	$I_C = 10\mu A$,	$V_{CE} = 5V$

*Pulse Test

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