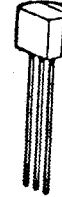


PN4248, PN4249, PN4250

PNP SILICON AF LOW NOISE SMALL SIGNAL TRANSISTORS

PN42248, PN4249, PN4250 are PNP silicon planar transistors for AF low noise preamplifier applications.

CASE TO-92A



ABSOLUTE MAXIMUM RATINGS

		PN4248	PN4250	PN4249
Collector-Base Voltage	-V _{CB0}	40V	40V	60V
Collector-Emitter Voltage	-V _{CEO}	40V	40V	60V
Emitter-Base Voltage	-V _{EB0}	5V	5V	5V
Collector Current	-I _C		50mA	
Total Power Dissipation (T _C ≤ 65°C)	P _{tot}		300mW	
(T _A ≤ 25°C)			200mW	
Operating Junction & Storage Temperature	T _j , T _{stg}	-55 to 125°C		

ELECTRICAL CHARACTERISTICS (T_A=25°C unless otherwise noted)

PARAMETER	SYMBOL	PN4248		PN4249		PN4250		UNIT	TEST CONDITIONS
		MIN	MAX	MIN	MAX	MIN	MAX		
Collector-Base Breakdown Voltage	-V _{CB0}	40		60		40		V	-I _C =0.01mA I _E =0
Collector-Emitter Breakdown Voltage	-V _{CE0}	40		60		40		V	-I _C =0.01mA V _{BE} =0
Collector-Emitter Breakdown Voltage	-LV _{CEO}	40		60		40		V	-I _C =5mA (Pulsed) I _B =0
Emitter-Base Breakdown Voltage	-V _{EB0}	5		5		5		V	-I _E =0.01mA I _C =0
Collector Cutoff Current	-I _{CBO}	10		10		10		nA	-V _{CB} =40V I _E =0
		3		3		3		μA	-V _{CB} =40V I _E =0 T _A =65°C
Emitter Cutoff Current	-I _{EB0}	20		20		20		nA	-V _{EB} =3V I _C =0
Collector-Emitter Saturation Voltage	-V _{CE(sat)}	0.25		0.25		0.25		V	-I _C =10mA -I _B =0.5mA
Base-Emitter Saturation Voltage	-V _{BE(sat)}	0.9		0.9		0.9		V	-I _C =10mA -I _B =0.5mA
D.C. Current Gain	H _{FE}	50		100	300	250	700		-I _C =100μA -V _{CE} =5V
		50		100		250			-I _C =1mA -V _{CE} =5V
		50		100		250			-I _C =10mA -V _{CE} =5V

MICRO ELECTRONICS LTD.

38 HUNG TO ROAD, KWUN TONG, HONG KONG. TELEX 43510
 KWUN TONG P. O. BOX 69477 CABLE ADDRESS "MICROTRON" FAX: 3-410321
 TELEPHONE: 3-430181-6 3-893363 3-892423

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PARAMETER	SYMBOL	PN4248		PN4249		PN4250		UNIT	TEST CONDITIONS
		MIN	MAX	MIN	MAX	MIN	MAX		
Small Signal Current Gain	h_{fe}	50	1000	100	550	250	800		$-I_C=1mA$ $-V_{CE}=5V$ $f=1kHz$
Input Impedance	h_{ie}			2.5	17	6	20	$K\Omega$	$-I_C=1mA$ $-V_{CE}=5V$ $f=1kHz$
Output Admittance	h_{oe}			5	40	5	50	μS	$-I_C=1mA$ $-V_{CE}=5V$ $f=1kHz$
Voltage Feedback Ratio	h_{re}			10		10		$\times 10^{-4}$	$-I_C=1mA$ $-V_{CE}=5V$ $f=1kHz$
Current Gain-Bandwidth Product	f_T	40		40		50		MHz	$-I_C=0.5mA$ $-V_{CE}=5V$
Collector-Base Capacitance	C_{ob}		6		6		6	pF	$-V_{CB}=5V$ $I_E=0$ $f=1MHz$
Emitter-Base Capacitance	C_{ib}		16		16		16	pF	$-V_{EB}=0.5V$ $I_C=0$ $f=1MHz$
Noise Figure	NF				3		2	dB	$-I_C=20\mu A$ $-V_{CE}=5V$ $R_G=10K\Omega$ $f=1kHz$
					3		2	dB	$-I_C=20\mu A$ $-V_{CE}=5V$ $R_G=10K\Omega$ $f=10Hz-10kHz$
					3		2	dB	$-I_C=250\mu A$ $-V_{CE}=5V$ $R_G=1K\Omega$ $f=1kHz$