

2N 3707 through 2N 3711 2N 4058 through 2N 4062

NPN . PNP SILICON AF SMALL SIGNAL TRANSISTORS

THE 2N3707 THROUGH 2N3711 (NPN) AND 2N4058 THROUGH 2N4062 (PNP) ARE COMPLEMENTARY SILICON PLANAR EPITAXIAL TRANSISTORS FOR USE IN AF SMALL SIGNAL AMPLIFIER STAGES AND DIRECT COUPLED CIRCUITS.

CASE TO-92B



ECB

ABSOLUTE MAXIMUM RATINGS		(NPN)	(PNP)
		2N3707 thru' 2N3711	2N4058 thru' 2N4062
Collector-Base Voltage	V _{CBO}	30V	30V
Collector-Emitter Voltage	V _{CEO}	30V	30V
Emitter-Base Voltage	V _{EB0}	6V	6V
Collector Current	I _C	200mA	100mA **
Total Power Dissipation (T _A ≤ 25°C)	P _{tot}	360mW derate 2.88mW/°C above 25°C	

Operating Junction & Storage Temperature T_j, T_{stg}

-55 to 150°C

** 30mA in JEDEC registration.

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

PARAMETER	SYMBOL	NPN		PNP		UNIT	TEST CONDITIONS
		MIN	MAX	MIN	MAX		
Collector-Base Breakdown Voltage	BV _{CBO}	30		30		V	I _C =0.01mA I _E =0
Collector-Emitter Breakdown Voltage	LV _{CEO}	30		30		V	I _C =1mA I _B =0(Pulsed)
Collector Cutoff Current	I _{CBO}		100		100	nA	V _{CB} =20V I _E =0
Emitter Cutoff Current	I _{EBO}		100		100	nA	V _{EB} =6V I _C =0
Collector-Emitter Saturation Voltage	V _{CE(sat)}		1		0.7	V	I _C =10mA I _B =0.5mA
Base-Emitter Voltage	V _{BE}	0.5	1	0.5	1	V	I _C =1mA V _{CE} =5V
Noise Figure *	NF				5	dB	I _C =0.1mA V _{CE} =5V R _G =5KΩ f=30Hz-15KHz
			5			dB	I _C =0.1mA V _{CE} =5V R _G =10KΩ f=30Hz-15KHz

* For 2N3707 and 2N4058 only.

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D.C. AND SMALL SIGNAL CURRENT GAIN (H_{FE} , h_{fe}) AT $V_{CE}=5V$ $T_A=25^\circ C$

PARAMETER	NPN PNP	2N3707 2N4058	2N3708 2N4059	2N3709 2N4060	2N3710 2N4061	2N3711 2N4062
		MIN MAX	MIN MAX	MIN MAX	MIN MAX	MIN MAX
H_{FE} at $I_C=0.1mA$		100 400				
H_{FE} at $I_C=1mA$			45 660	45 165	90 330	180 660
h_{fe} at $I_C=0.1mA$ $f=1KHz$		100 550				
h_{fe} at $I_C=1mA$ $f=1KHz$			45 800	45 250	90 450	180 800

TYPICAL CHARACTERISTICS AT $T_A=25^\circ C$

