

TP 5^{ème} semestre Electricité, 6^{ème} semestre Microtechnique**Composants à disposition****Composants discrets**

1N4148	Si small signal diode, $I_{F,max} = 150 \text{ mA}$, $V_{R,max} = 75 \text{ V}$, $t_{rr,max} = 8 \text{ ns}$
BAW62	Si small signal diode, $I_{F,max} = 250 \text{ mA}$, $V_{R,max} = 75 \text{ V}$, $t_{rr,max} = 4 \text{ ns}$
BP104	Si IR photodiode, $\lambda_{peak} = 950 \text{ nm}$, $I_{ra} = 45 \mu\text{A}$ at $E_e = 1 \text{ mW/cm}^2$
LD271(H)	GaAs IR LED, $\lambda_{peak} = 950 \text{ nm}$, $I_{e,typ} = 120 \text{ mW/sr}$
HLMPxxx	Red or Green LED, $I_{F,typ} = 20 \text{ mA}$
BC107B	NPN, small signal, $I_{C,max} = 100 \text{ mA}$, $V_{CE,max} = 45 \text{ V}$, $P_{max} = 300 \text{ mW}$, $\beta_{typ} = 300$
BC109C	NPN, small signal, $I_{C,max} = 100 \text{ mA}$, $V_{CE,max} = 20 \text{ V}$, $P_{max} = 300 \text{ mW}$, $\beta_{typ} = 500$
BC177B	PNP, small signal, $I_{C,max} = 100 \text{ mA}$, $V_{EC,max} = 45 \text{ V}$, $P_{max} = 300 \text{ mW}$, $\beta_{typ} = 300$
2N2219	NPN switching, $I_{C,max} = 800 \text{ mA}$, $V_{CE,max} = 30 \text{ V}$, $P_{max} = 600 \text{ mW}$
2N2905	PNP switching, $I_{C,max} = 600 \text{ mA}$, $V_{EC,max} = 40 \text{ V}$, $P_{max} = 600 \text{ mW}$
BD241	NPN power, $I_{C,max} = 3 \text{ A}$, $V_{CE,max} = 45 \text{ V}$, $P_{max} = 40 \text{ W}$
BD242	PNP power, $I_{C,max} = 3 \text{ A}$, $V_{EC,max} = 45 \text{ V}$, $P_{max} = 40 \text{ W}$
TIP120	NPN power darlington, $I_{C,max} = 5 \text{ A}$, $V_{CE,max} = 60 \text{ V}$, $P_{max} = 65 \text{ W}$, $\beta_{min} = 1000$
TIP125	PNP power darlington, $I_{C,max} = 5 \text{ A}$, $V_{EC,max} = 60 \text{ V}$, $P_{max} = 65 \text{ W}$, $\beta_{min} = 1000$
IRLU014	NMOS power, logic level gate drive, $R_{DS,ON} = 0.28 \Omega$ at $V_{GS} = 4 \text{ V}$
IRLU8259	NMOS power, logic level gate drive, $R_{DS,ON} = 11 \text{ m}\Omega$ at $V_{GS} = 4.5 \text{ V}$
IRFZ24	NMOS power, $V_{DS,max} = 55 \text{ V}$, $I_{D,max} = 17 \text{ A}$, $R_{DS,ON} = 70 \text{ m}\Omega$ at $V_{GS} = 10 \text{ V}$
IRF9Z24	PMOS power, $V_{SD,max} = 60 \text{ V}$, $I_{D,max} = 11 \text{ A}$, $R_{DS,ON} = 0.28 \Omega$ at $V_{GS} = 10 \text{ V}$

Amplificateurs opérationnels

UA741	general purpouse, bipolar, $GBW = 1 \text{ MHz}$, $SR = 1 \text{ V}/\mu\text{s}$
TL071	FET input, general purpouse, bipolar, $GBW = 4 \text{ MHz}$, $SR = 13 \text{ V}/\mu\text{s}$
TL072	dual, FET input, general purpouse, bipolar, $GBW = 4 \text{ MHz}$, $SR = 13 \text{ V}/\mu\text{s}$
LF356	FET input, general purpouse, bipolar, $GBW = 5 \text{ MHz}$, $SR = 12 \text{ V}/\mu\text{s}$
LM318	fast, bipolar, $GBW = 15 \text{ MHz}$, $SR = 50 \text{ V}/\mu\text{s}$
LM358	dual, bipolar, $V_{supply,total} = 3 \text{ to } 30 \text{ V}$, $V_{in, common-mode,min} = V_-$, $GBW = 1 \text{ MHz}$
LMC662	dual, CMOS, Rail-to-Rail Output, $V_{supply,total} = 5 \text{ to } 15 \text{ V}$, $V_{in, common-mode,min} = V_-$, $GBW = 1.1 \text{ MHz}$, $SR = 1 \text{ V}/\mu\text{s}$
MC6482	dual, CMOS, Rail-to-Rail Input and Output, $V_{supply,total} = 3 \text{ to } 16 \text{ V}$, $GBW = 1.5 \text{ MHz}$, $SR = 1.3 \text{ V}/\mu\text{s}$
MCP6292	dual, CMOS, Rail-to-Rail Input and Output, $V_{supply,total} = 2.4 \text{ to } 6 \text{ V}$, $GBW = 10 \text{ MHz}$, $SR = 7 \text{ V}/\mu\text{s}$

Comparteurs

LM311	general purpose, bipolar, $V_{\text{supply, total}} = 3.5 \text{ to } 30 \text{ V}$, $t_{\text{response}} < 200 \text{ ns}$ open Collector or open Emitter output.
LM393	dual, low power, bipolar, $V_{\text{supply, total}} = 2 \text{ to } 36 \text{ V}$, $t_{\text{response}} = 1.3 \mu\text{s}$ $V_{\text{in, common-mode, min}} = V_-$, open Collector output.

IC analogiques divers

NE555	precision timer, bipolar, $V_{\text{supply, total}} = 4.5 \text{ to } 16 \text{ V}$
TLC555	CMOS 555 timer, low power, $V_{\text{supply, total}} = 2 \text{ to } 15 \text{ V}$
CA3046	NPN array
LM2917N	F to V converter
7805	Voltage regulator, 5 V 1 A
TC1426	MOS gate driver, inverting
TC1427	MOS gate driver, non-inverting

Logique CMOS 4000

HEF4001	quadruple 2-input NOR
HEF4007	dual CMOS pair + one inverter
HEF4011	quadruple 2-input NAND
HEF4012	dual 4-input NAND
HEF4013	dual D flip-flop
HEF4017	by 10 Johnson counter, decoded output
HEF4022	by 8 Johnson counter, decoded output
HEF4027	dual JK flip-flop
HEF4040	12 stage binary counter
HEF4046	PLL
HEF4049	hex inverting buffer
HEF4050	hex non-inverting buffer
HEF4068	8-input NAND
HEF4069	hex inverter, (suffix U = non-buffered)
HEF4070	quadruple XOR
HEF4071	quadruple 2-input OR
HEF4081	quadruple 2-input AND
HEF4093	quadruple 2-input NAND with Schmitt trigger
HEF40106	hex inverter with Schmitt trigger
HEF4516	4-bit binary up/down counter
HEF4518	dual BCD counter
HEF4520	dual 4-bit binary counter
HEF4526	programmable 4-bit binary down counter
HEF4538	dual monostable