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Transistors

Manufacturers

https://www.panjit.com.tw/en	PANJIT	China	
http://www.unisonic.com.tw/english/index.asp	UTC	China	
http://www.sinopowersemi.com/	Sinopower	China	
https://www.21yangjie.com/eng/	Yangjie	China	https://www.electronshik.ru/brand/YJ
https://way-on.com/en_index.html	WAYON	China	https://www.electronshik.ru/brand/WAYON
http://www.goford.cn/products.php?CateId=3	Goford	China	
http://www.vbsemi.com/	VBSemi		

MOSFET driver

link	ext	description	manufacturer	version	date	lang
ADP3121-D.PDF	PDF	**ADP3121** Onsemi Dual Bootstrapped, 12 V MOSFET Driver with Output Disable	Onsemi	rev.1	2010.02	EN
ADP3110A-D.PDF	PDF	**ADP3110A** Onsemi Dual Bootstrapped, 12 V MOSFET Driver with Output Disable	Onsemi	rev.4	2008.08	EN
ADP3120A-D.PDF	PDF	**ADP3120A** Onsemi Dual Bootstrapped, 12 V MOSFET Driver with Output Disable	Onsemi	rev.5	2018.08	EN

MOSFET

Question:

Two conditions are described for the total dissipation parameter in the power ratings of a power transistor or a power MOS FET: **Ta** = 25°C and **Tc** = 25°C. What is the difference between these conditions?

Answer:

The specification at **Ta** = 25°C in the power ratings refers to the total power dissipation of a discrete semiconductor element in an environment with an ambient temperature of 25°C. In this case, the thermal resistance from the heat source to the ambient air is expressed as **Rth(j-a)**.

The specification at **Tc** = 25°C in the power ratings refers to the total power dissipation when the semiconductor element (case) itself has been forcibly cooled, i.e., when temperature of the package surface is kept at 25°C. Note that the ratings may include the note «with infinite heat sink». However, in actual use, it is very difficult to make the package surface temperature exactly 25°C, and if you also take derating into account, the allowable power will in fact be somewhere in between **Ta** = 25°C and **Tc** = 25°C.

Ta = Ambient temperature. This is a still air temperature reading for the environment that the semiconductor is in.

Tc = Case temperature. This is the temperature reading of the case of the semiconductor device.

> **Ta** would normally mean the environment is cooled and kept at 25°C whereas Tc would mean the device is forcibly cooled through a directly attached heatsink and cooled to the 25°C.

Tj = Operating Junction temperature. This is the temperature of the device circuit itself under given conditions. **Tj** must be calculated from the **Tc** and/or **Ta**.

TJmax = Maximum Junction temperature. This is the maximum temperature that the device tolerate.

MOSFET N-CHANNEL

link	ext	description	manufacturer	version	date	lang
Infineon_BSC034N03LS_G_DataSheet_v02_00_EN-1731101.pdf	pdf	**BSC034N03LSG ATMA1** INFINEON Транзистор: N-MOSFET; полевой; 30В; 100А; 57Вт; PG-TDSON-8	Infineon	rev. 2.0	2021.06	EN
NTMFS4834N-D.PDF	PDF	**NTMFS4834N** Onsemi MOSFET – Power, Single, N-Channel, SO-8FL 30 V, 130 A Применяется с ADP3121 на плате Intel DX58S0	Onsemi	rev. 6	2019.05	EN

Для 1.8В

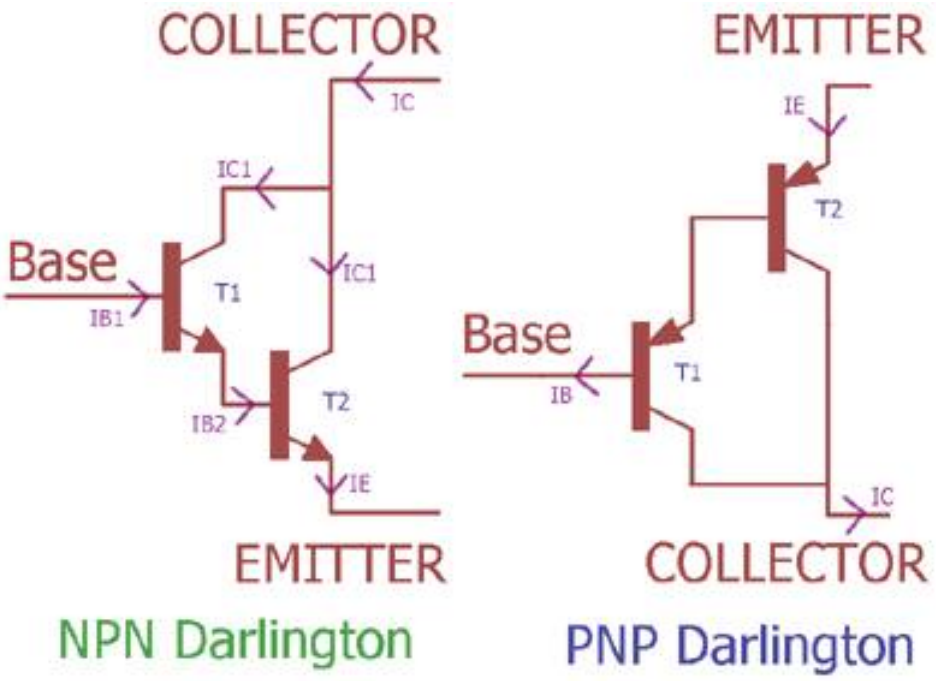
BSS138, FDV301N, WM02N20G (большая ёмкость), WM02N08G (получше, но большая ёмкость)

FDV301N лучше BSS138

FDV303N хороший, ёмкость больше, чем FDV301N

Darlington

https://ru.wikipedia.org/wiki/составной транзистор


COLLECTOR
IC
IC1
Base
IB1
T1
IC1
T2
IB2
IE
EMITTER
NPN Darlington
EMITTER
IE
T2
Base
IB
T1
IC
COLLECTOR
PNP Darlington