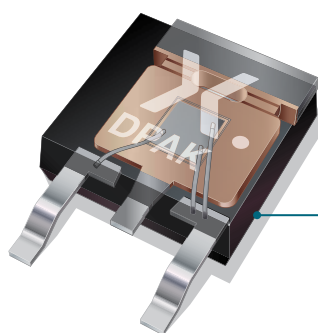


Bipolar power transistors

In DPAK and LFPAK – ensure the best fit for your power circuitry

Nexperia's bipolar power transistors deliver high thermal and electrical performance. Available in DPAK and LFPAK56 packages they offer the choice between a standard power solution – the well known MJD series – and a high-performance power solution for applications where highest reliability is required and space is at premium.

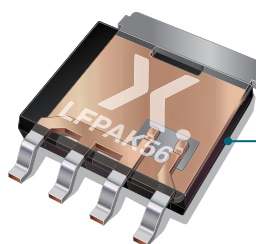
Standard power solution: DPAK



75 mm²
occupied PCB area

- › MJD series, multi-sourcing capable
- › High power dissipation
- › Industry standard package
- › Automotive AEC-Q101 and industrial / consumer grades

High-performance power solution: LFPAK56



35 mm²
occupied PCB area

- › PHPT series, space-saving single and double transistors
- › High power density on a small footprint
- › High reliability & mechanical ruggedness through solid copper clip design
- › Low VCEsat technology enables an electrical efficient design
- › AEC-Q101 qualified, specified up to 175°C
- › For space sensitive applications

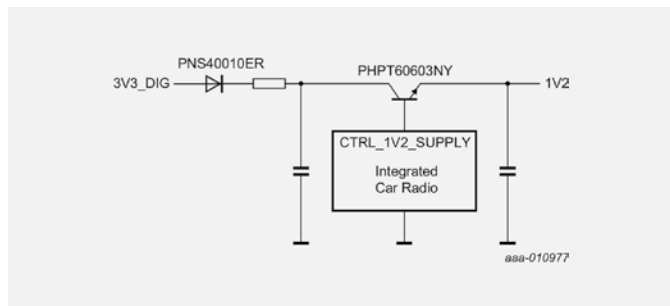
Applications

- › LED automotive lighting
- › Backlight dimming in LCD displays
- › Linear voltage regulator
- › Relay replacement
- › Motor drive
- › Laser Printer
- › MOSFET driver

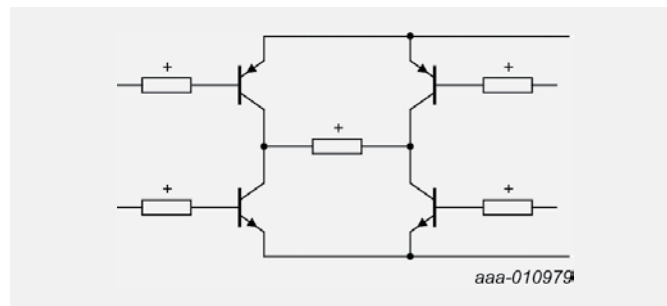
Application examples

Car radio (PHPT60603NY)

External pass transistor, linear regulator

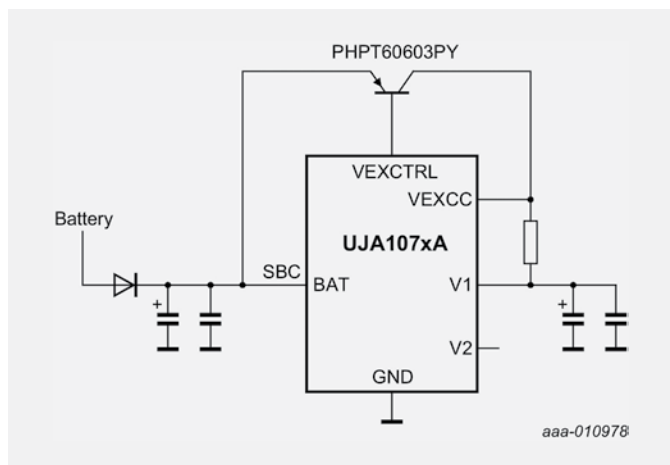


Motor drive (2x PHPT60603NY/PY) or a double LPAK56D (PHPT610030NK/PK)

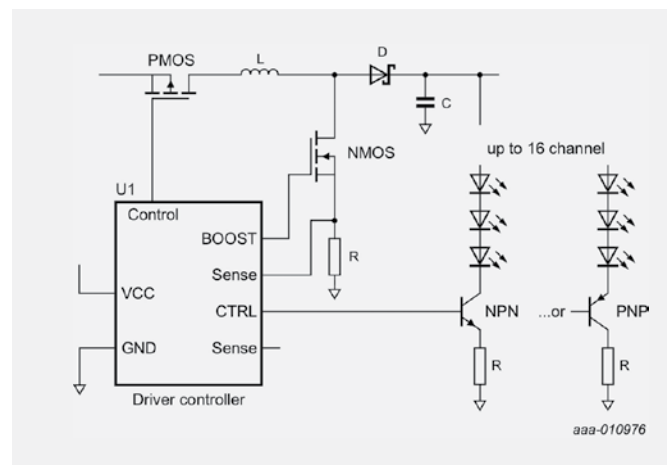


IVN – System Basis Chip (PHPT60603PY)

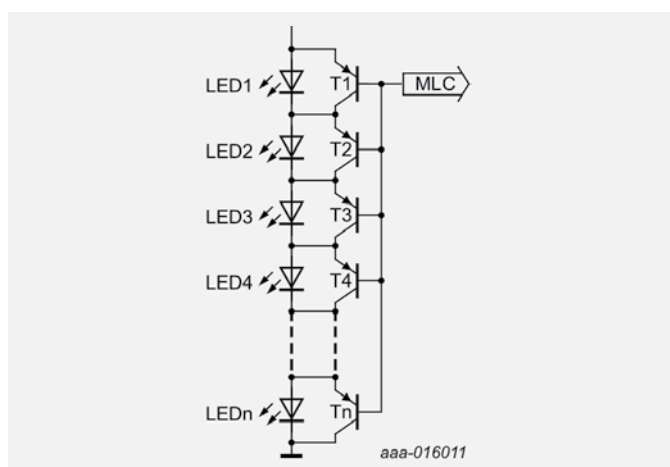
External pass transistor, linear regulator



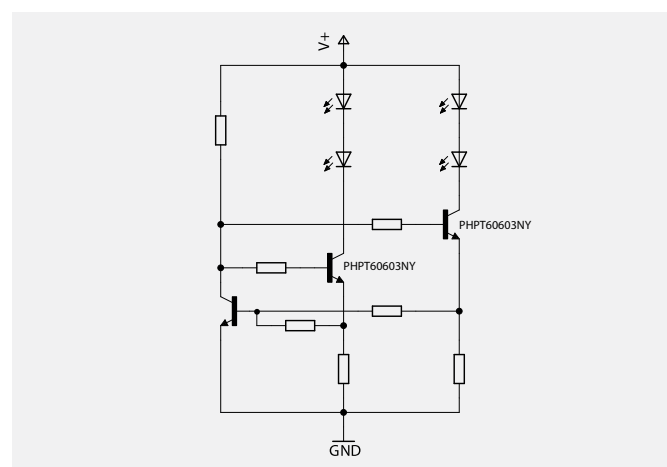
Backlight unit (PHPT61002NYC/PYC)



Dimming transistor in matrix headlamp (PHPT60603PY)



Daytime running light (PHPT60603NY)



LFPAK bipolar power transistors (Low V_{CEsat})

Single transistors

NPN	2A	3A	6A	10A	15A
40 V			PHPT60406NY	PHPT60410NY	PHPT60415NY
60 V		PHPT60603NY	PHPT60606NY	PHPT60610NY	
100 V	PHPT61002NYC, PHPT61002NYCLH*	PHPT61003NY	PHPT61006NY	PHPT61010NY	

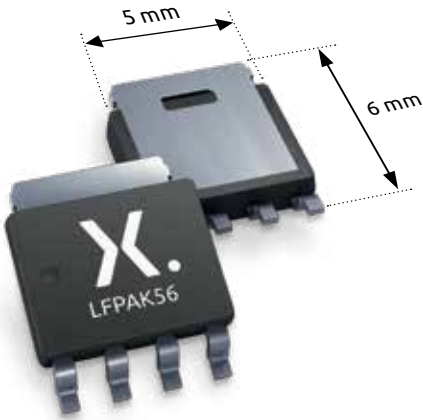
PNP	2A	3A	6A	10A	15A
40 V			PHPT60406PY	PHPT60410PY	PHPT60415PY
60 V		PHPT60603PY	PHPT60606PY	PHPT60610PY	
100 V	PHPT61002PYC, PHPT61002PYCLH*	PHPT61003PY	PHPT61006PY	PHPT61010PY	

* Low hFE

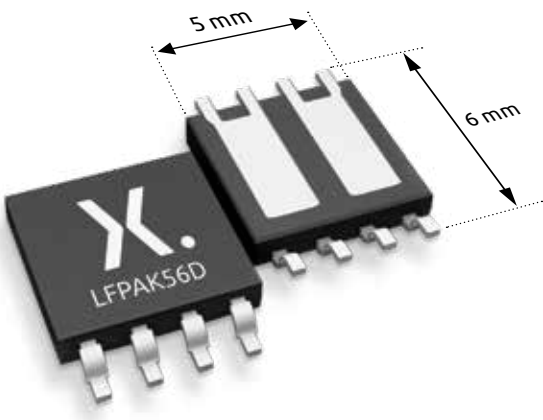
Double transistors

Device	Polarity	VCE (V)	IC(A)
PHPT610030NK	2 x NPN	100	3
PHPT610030PK	2 x PNP		
PHPT61003NPK	NPN/PNP		
PHPT610035NK	2 x NPN		
PHPT610035PK	2 x PNP		

Package details



LFPAK56 (SOT669)



LFPAK56D (SOT1205)

DPAK bipolar power transistors

Automotive AEC-Q101 qualified

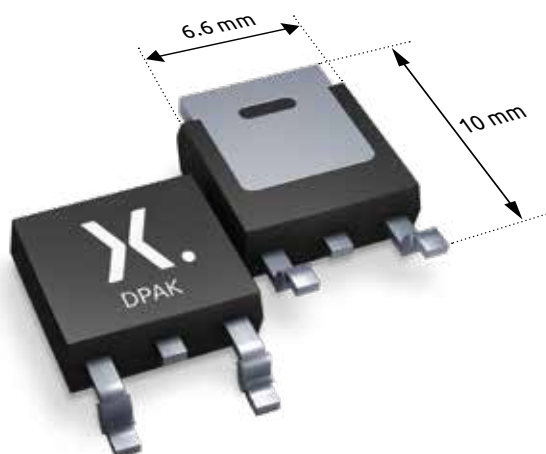
NPN	3A	8A
80 V		MJD44H11-A
100 V	MJD31C-A	

PNP	3A	8A
80 V		MJD45H11-A
100 V	MJD32C-A	

Consumer and industrial grades

NPN	3A	8A
80 V		MJD44H11
100 V	MJD31C	

PNP	3A	8A
80 V		MJD45H11
100 V	MJD32C	



DPAK (TO-252)
Package outline: SOT428C

Find out more at www.nexperia.com/bipolar-transistors

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