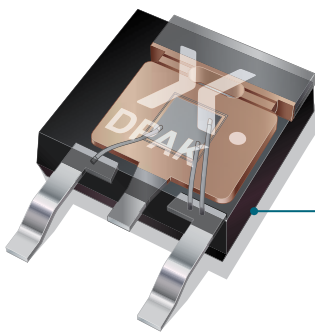


Bipolar power transistors

In DPAK and LFAK56 – ensure the best fit for your power circuitry

Nexperia's bipolar power transistors deliver high thermal and electrical performance. Available in DPAK and LFAK56 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.

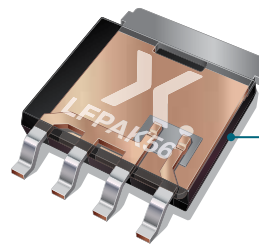
Standard power solution: DPAK



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: LFAK56



35 mm²
occupied PCB area

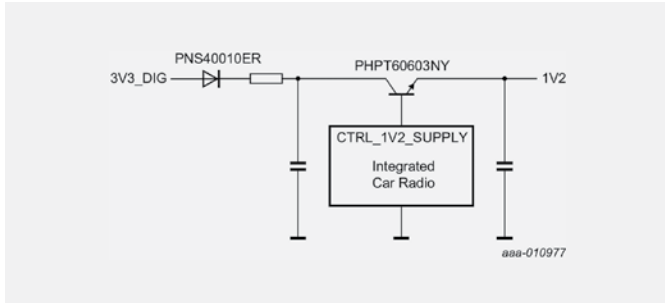
- › PHPT series, space-saving single and double transistors
- › High power density on a small footprint
- › High reliability & mechanical ruggedness through solid copper clip design
- › Low VCEsat technology enables an electrical efficient design
- › AEC-Q101 qualified, specified up to 175°C
- › For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

Applications

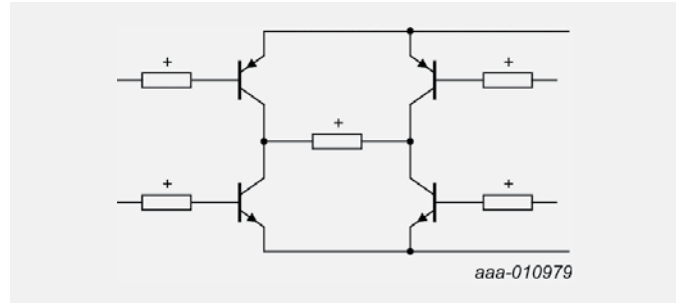
- › LED automotive lighting
- › Backlight dimming in LCD displays
- › Linear voltage regulator
- › Relay replacement
- › Motor drive
- › Laser Printer
- › MOSFET driver

Application examples

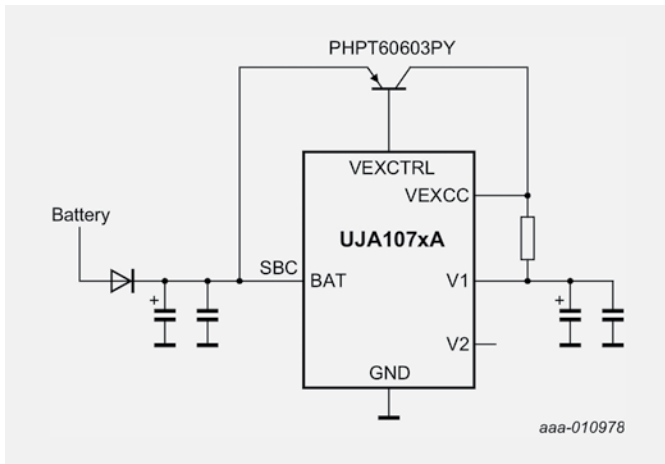
Car radio (PHPT60603NY)
External pass transistor, linear regulator



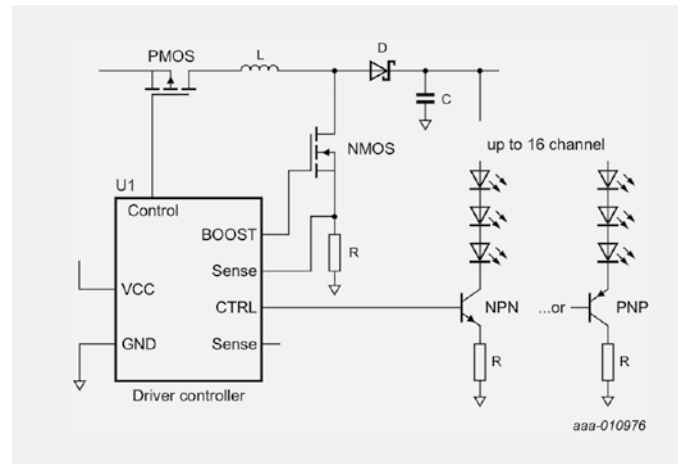
Motor drive (2x PHPT60603NY/PY) or a double LFPAK56D (PHPT610030NK/PK)



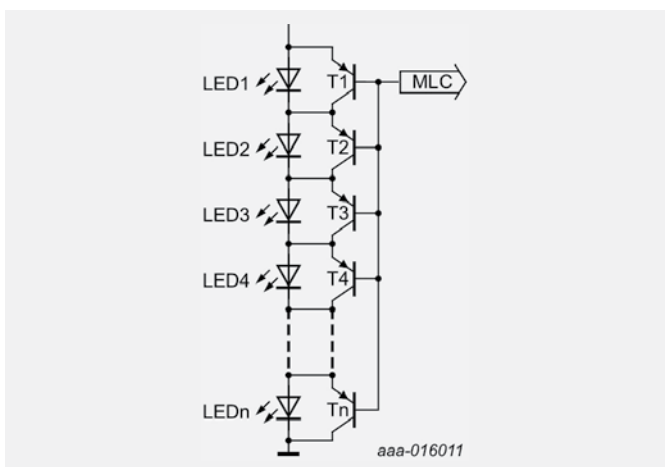
IVN – System Basis Chip (PHPT60603PY)
External pass transistor, linear regulator



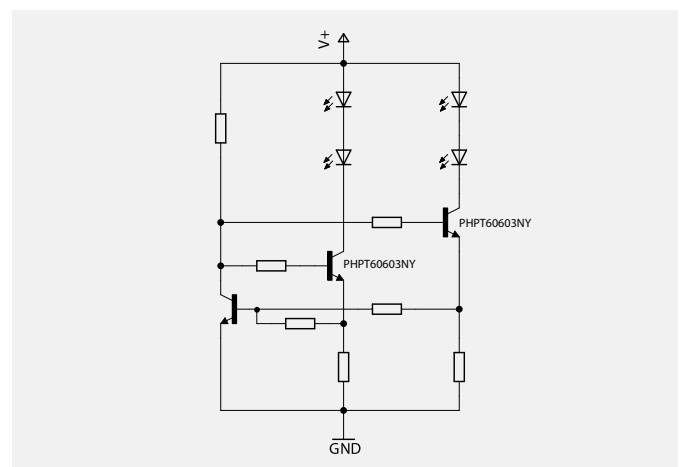
Backlight unit (PHPT61002NYC/PYC)



Dimming transistor in matrix headlamp (PHPT60603PY)



Daytime running light (PHPT60603NY)



LPAK 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	

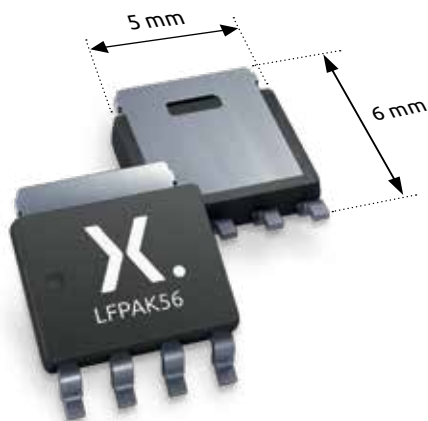
PNP	2A	3A	6A	10A	15A
40 V			PHPT60406PY	PHPT60410PY	PHPT60415PY
60 V		PHPT60603PY	PHPT60606PY	PHPT60610PY	
100 V	PHPT61002PYC, PHPT61002PYCLH*	PHPT61003PY	PHPT61006PY	PHPT61010PY	

* Low hFE

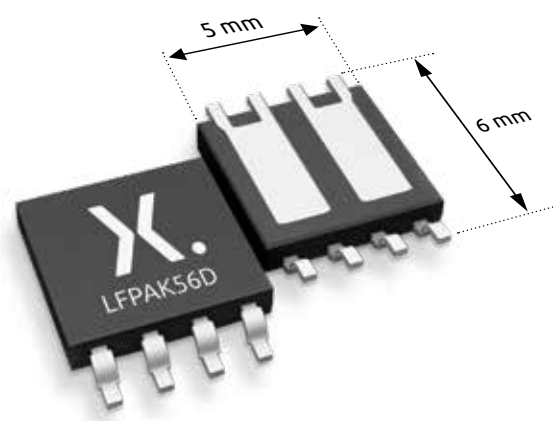
Double transistors

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



LPAK56 (SOT669)



LPAK56D (SOT1205)

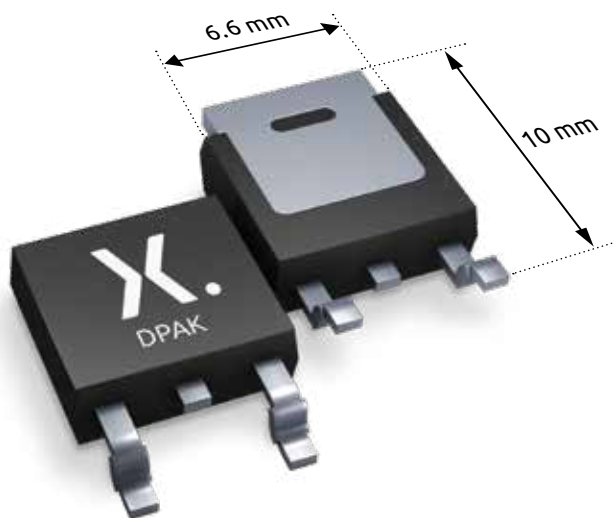
DPAK bipolar power transistors

AEC-Q101 qualified Parts xxxA xxx-Q

NPN	2A	3A	4A	6A	8A
45 V			MJD148-Q MJD148		
50 V	MJD2873-Q, MJD2873				
80 V					MJD44H11A, MJD44H11
100 V		MJD31CA, MJD31C MJD31CH-Q*		MJD41C-Q MJD41C	

*High Gain

PNP	3A	6A	8A
80 V			MJD45H11A MJD45H11
100 V	MJD32CA MJD32C	MJD42C-Q MJD42C	



DPAK (TO-252)
Package outline: SOT428C

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

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