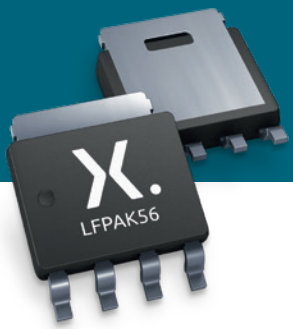
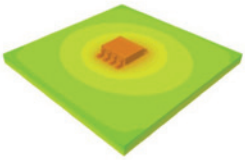


LFPAK56

The automotive Power-SO8 that packs a punch

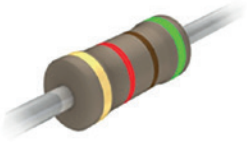
Providing a true alternative to DPAK and D²PAK, Nexperia's LFPAK56 portfolio gives industry leading performance in a truly innovative automotive grade package. Saving a considerable amount of space compared to traditional D²PAK and DPAK solutions, the LFPAK56 offers designers flexibility and reliability without compromising thermal performance.

Thermal Performance

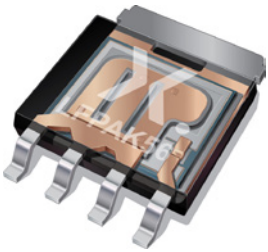


- Copper clip technology
- High power density
- Small footprint

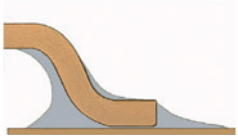
Ultra Low On-Resistance



- 0.9mOhm @ 40V
- No internal wire bonds
- Best-in-class performance

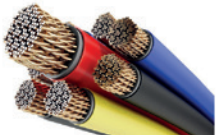


Reliable & Manufacturable



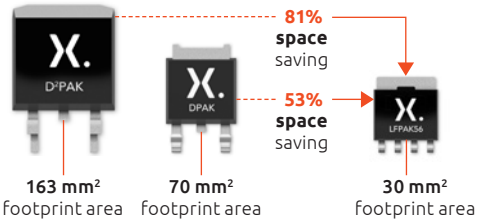
- Best-in-class board level reliability
- Easy optical inspection
- Robust solder joints

High Current Rating



- Up to 220 A current rating
- High transient robustness
- High-current, short-circuit capability

LFPAK56 Footprint Comparison



nexperia

LFPAK56 Product Range (AEC-Q101 qualified)

40 V range Type number	R_{DSon} [max]@ V_{GS} = 10 V (mΩ)	R_{DSon} [max]@ V_{GS} = 5 V (mΩ)	I_D [max] (A)	$R_{th(j-mb)}$ [max] (K/W)
BUK9J0R9-40H	***0.9***	***1.2***	***220***	***0.3***
****BUK7J1R0-40H***	***1***		***220***	***0.3***
BUK9Y1R3-40H	***1.3***	***1.8***	***190***	***0.38***
****BUK7J1R4-40H***	***1.4***		***190***	***0.38***
BUK7Y1R4-40H	***1.4***		***190***	***0.38***
BUK9Y1R6-40H	***1.6***	***2.2***	***150***	***0.51***
BUK7Y1R7-40H	***1.7***		***150***	***0.51***
BUK9Y1R9-40H	***1.9***	***2.6***	***120***	***0.69***
BUK7Y2R0-40H	***2***		***120***	***0.69***
BUK9Y2R4-40H	***2.4***	***3.2***	***120***	***0.79***
BUK7Y2R5-40H	***2.5***		***120***	***0.92***
BUK9Y3R0-40E	2.5	3	120	1.13
BUK9Y2R8-40H	***2.8***	***3.9***	***120***	***0.87***
BUK7Y3R0-40H	***3***		***120***	***1.13***
BUK7Y3R5-40H	***3.5***		***120***	***1.3***
BUK7Y3R5-40E	3.5		100	0.9
BUK9Y3R5-40E	3.6	3.8	100	0.9
BUK9Y4R4-40E	3.7	4.4	100	1.02
BUK7Y4R4-40E	4.4		100	1.02
BUK9Y7R6-40E	6	7.6	79	1.58
BUK7Y7R6-40E	7.6		79	1.58
BUK9Y12-40E	10	12	52	2.31
BUK7Y12-40E	12		52	2.31
BUK9Y21-40E	17	21	33	3.33
BUK7Y21-40E	21		33	3.33
BUK9Y29-40E	25	29	25	4.03
BUK7Y29-40E	29		26	4.03

60 V range Type number	R_{DSon} [max]@ V_{GS} = 10 V (mΩ)	R_{DSon} [max]@ V_{GS} = 5 V (mΩ)	I_D [max] (A)	$R_{th(j-mb)}$ [max] (K/W)
BUK9Y4R8-60E	4.1	4.8	100	0.63
BUK7Y4R8-60E	4.8		100	0.63
BUK9Y6R0-60E	5.2	6	100	0.77
BUK9Y7R2-60E	5.6	7.2	100	0.9
BUK7Y6R0-60E	6		100	0.77
BUK7Y7R2-60E	7.2		100	0.9
BUK9Y8R7-60E	7.5	8.7	86	1.02
BUK7Y8R7-60E	8.7		87	1.02
BUK9Y15-60E	13	15	53	1.58
BUK7Y15-60E	15		53	1.59
BUK9Y25-60E	21	25	34	2.31
BUK7Y25-60E	25		34	2.31
BUK9Y43-60E	38	43	22	3.33
BUK7Y43-60E	43		22	3.33
BUK9Y59-60E	52	59	16	4.03
BUK7Y59-60E	59		17	4.03

80 V range Type number	R_{DSon} [max]@ V_{GS} = 10 V (mΩ)	R_{DSon} [max]@ V_{GS} = 5 V (mΩ)	I_D [max] (A)	$R_{th(j-mb)}$ [max] (K/W)
BUK7Y7R8-80E	7.8		100	0.63
BUK9Y8R5-80E	8	8.5	100	0.63
BUK7Y9R9-80E	9.9		89	0.77
BUK9Y11-80E	10	11	84	0.77
BUK7Y14-80E	14		65	1.02
BUK9Y14-80E	14	15	62	1.02
BUK7Y25-80E	25		39	1.58
BUK9Y25-80E	25	27	37	1.58
BUK7Y41-80E	41		25	2.31
BUK9Y41-80E	41	45	24	2.33
BUK7Y72-80E	72		16	3.33
BUK9Y72-80E	72	78	15	3.33
BUK7Y98-80E	98		12	4.03
BUK9Y107-80E	98	107	11	4.03

100 V range Type number	R_{DSon} [max]@ V_{GS} = 10 V (mΩ)	R_{DSon} [max]@ V_{GS} = 5 V (mΩ)	I_D [max] (A)	$R_{th(j-mb)}$ [max] (K/W)
BUK9Y12-100E	11	12	85	0.63
BUK7Y12-100E	12		85	0.63
BUK9Y15-100E	14	15	69	0.77
BUK7Y15-100E	15		68	0.77
BUK9Y19-100E	18	19	56	0.9
BUK7Y19-100E	19		56	0.9
BUK9Y22-100E	21	22	49	1.02
BUK7Y22-100E	22		49	1.02
BUK9Y38-100E	37	38	30	1.58
BUK7Y38-100E	38		30	1.58
BUK9Y65-100E	63	65	19	2.31
BUK7Y65-100E	65		19	2.31
BUK9Y113-100E	110	113	12	3.33
BUK7Y113-100E	113		12	3.33
BUK9Y153-100E	146	153	9.4	4.03
BUK7Y153-100E	153		9.4	4.03

Products in italic and bold are the latest Trench 9 silicon technology
***New enhanced LFPAK56E package**

Date of release:
May 2018