

E3M0045065K

Transition Guide

 **Wolfspeed**® SEPTEMBER 2024

SUGGESTED REPLACEMENT

	E3M0045065K	E4M0045075K1	Notes
Status	EOL issued Oct 2024	Active	200mm samples September 2025.
$V_{DS\ max}$ (V)	650	750	Higher voltage rating for increased margin or higher bus voltages
V_{GS} (V)	-4/+15	-4/+15	Compatible gate voltage levels
I_D (A)	46	42	
$R_{DS(on)}$ (m Ω)	45	45	
C_{oss} (pF)	99	95	
C_{iss}/C_{rss}	228	201	
Q_G (nC)	64	65	Increased gate drive power
$R_{G(int)}$ (Ω)	3	2.9	
$R_{\theta JC}$ (C/W)	0.79	0.83	Reduced thermal impedance
Package	TO-247-4	TO-247-4 LP	E4M utilizes low-profile package. Fully compatible footprint.
Pricing			Similar Price

This replacement option is suitable for most designs and provides similar performance with increased voltage margin.

All parameters are typical values at 25 °C unless noted

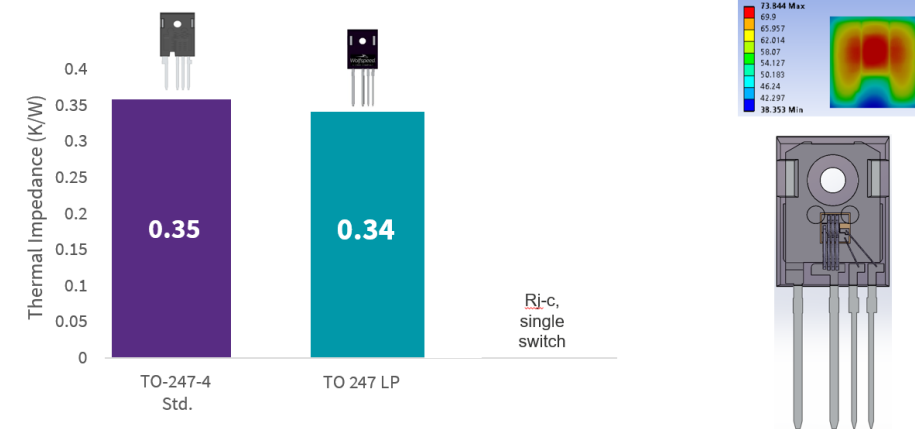
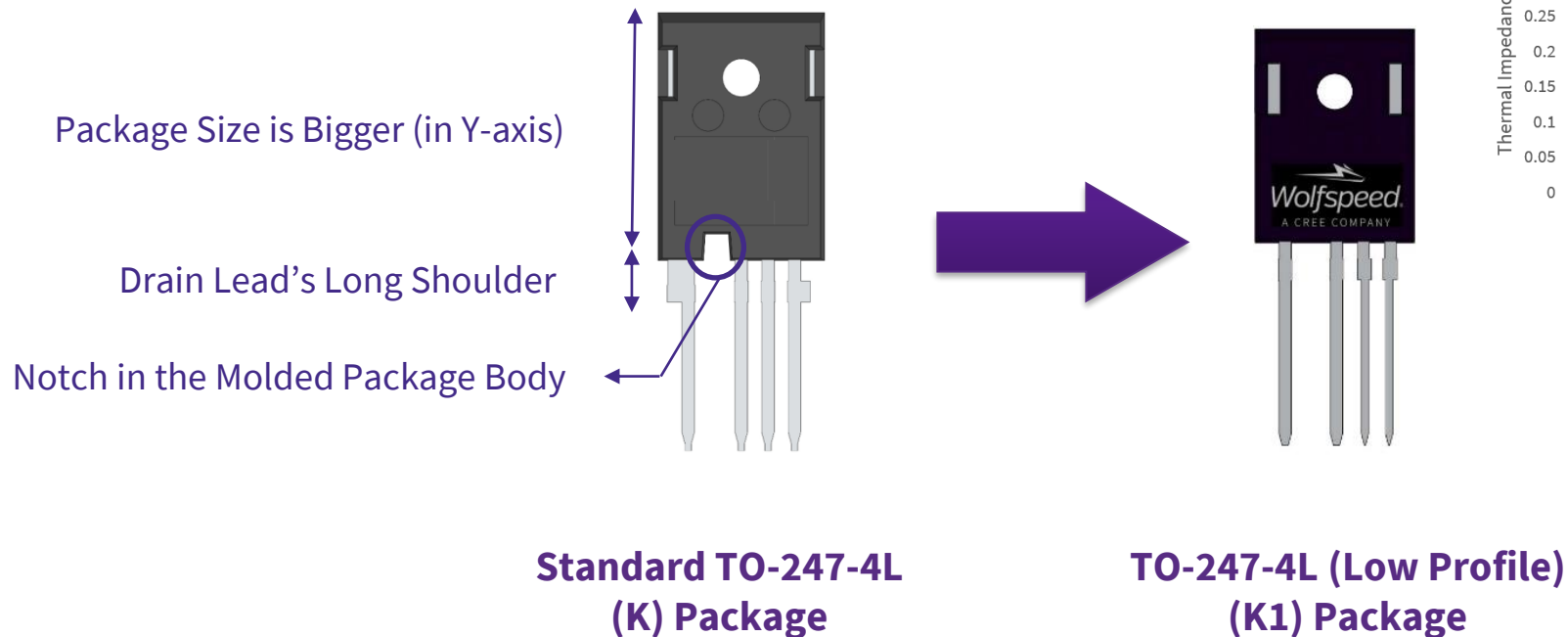
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TO-247-4 LP (K1) VS TO-247-4L (K)

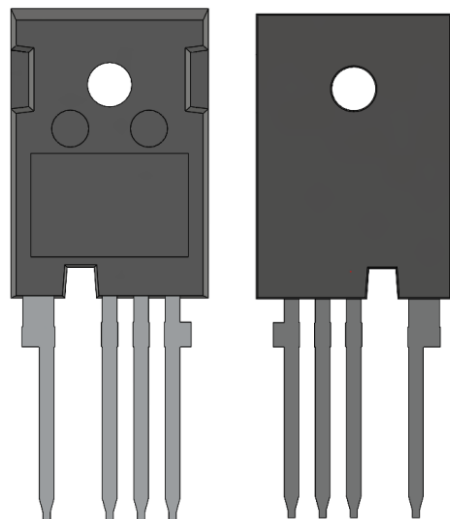
3

- Differences between standard TO-247-4 (K) Package and TO-247-4L (Low Profile) (K1) Package:

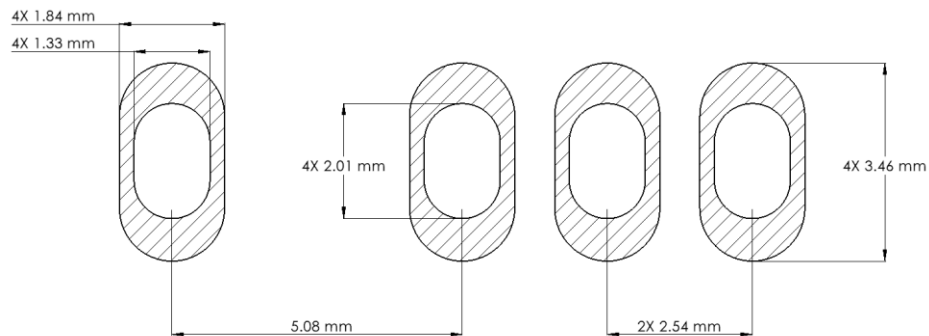
- Molded area of TO-247-4L (K) Package is bigger (in Y-axis)
- Drain lead of the TO-247-4L (K) package has long Shoulder
- TO-247-4L (K) package has a notch in the molded package body



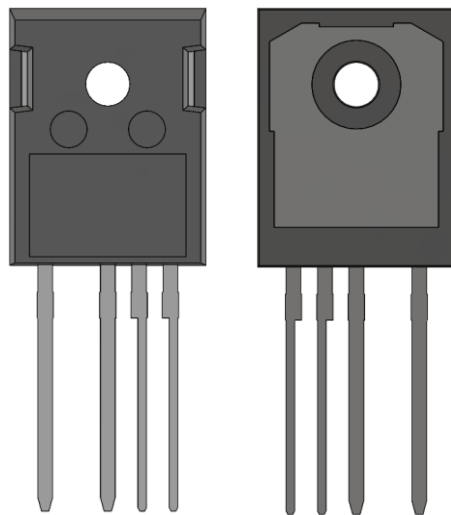
DIMENSIONS OF TO-247-4L (K) VS. TO-247-4L LP (K1)



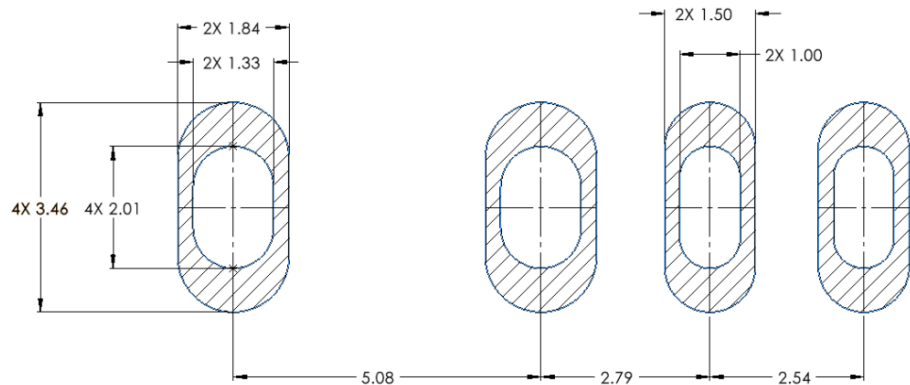
K Package



K1 package will fit on K solder pad



K1 Package



Package Creepage Distance All dimensions in mm	K	K1
Pin-to-Pin	10	3.80
Drain-Source	6.70	5.60

Item All dimensions in mm	K	K1
Device Length	41.00	41.00
Device Width	16.00	16.00
Device Height	5.00	5.00
Lead Length	17.60	20.00
Lead Thickness	0.62	0.62
Drain-Source Lead Spacing	5.08	5.08
Source-Kelvin Lead Spacing	2.54	2.79
Kelvin-Gate Lead Spacing	2.54	2.54

NEXT STEPS

- Samples of recommended replacements available through your [Wolfspeed sales team](#), or at our online [Sample Center](#)
- Ask any technical questions to your Wolfspeed FAE or through our [Power Applications Forum](#)
- Utilize [SpeedFit™](#) to simulate the performance of the recommended replacement devices
 - Keep in mind, dynamic behavior may be different, requiring a different gate resistor value
- The [SpeedVal™ Kit](#) evaluation platform may be utilized to compare the performance and switching behavior



THANK YOU