

Wide SOA MOSFET Solutions

Wide SOA MOSFETs for AI Infrastructure & Automotive



PANJIT's new MOSFET series feature an expanded safe operating area (SOA), enabling up to twice the current capability of conventional MOSFETs in linear operation. Available in DFN5060XC-8L, PDFN8080-8L, and TOLL packages, these devices provide robust solutions for AI infrastructure and automotive applications, including hot-swap, airbag systems, audio amplifiers, and eFuses.

► Key Features

- Wide SOA capability
- Rugged linear operation
- Low $R_{DS(on)}$ for reduced conduction losses
- AEC-Q101 qualified

► Target Applications

- Hot-swap
- Audio power amplifiers
- Airbag systems
- eFuses

► U series Product Portfolio

• U series: LV MOSFET

System	B _V	V _{GS}	V _{GS(th)}	R _{DS(ON)} @10 V		DFN5060XC-8L	PDFN8080-8L
	V	V	Typ.	Typ.	Max.		
			V	mΩ	mΩ		
12/24 V _{in}	40	±20	2.8	2.1	2.7	PJQ54406VU-AU*	
				1.1	1.4	PJQ54404VUC-AU	PJQ64404VUC-AU*
	30		1.6	1.1	1.4	PJQ54306U-AU*	
				0.58	0.73	PJQ54304UC-AU	PJQ64304UC-AU*

• U3 series: MV MOSFET

System	B_V	V_{GS}	$V_{GS(th)}$	$R_{DS(on)}$ @10 V		PDFN8080-8L	TOLL
	V	V	Typ. V	Typ. mΩ	Max. mΩ		
48/54 V_{in}	100	± 20	2.5	1.6	2	PJQ65704U3-AU*	PJN300N10U3-AU*
				1.3	1.65	PJQ65702U3-AU*	PJN340N10U3-AU*
				1.15	1.4		PJN400N10U3-AU*

*Under development with specifications to be determined



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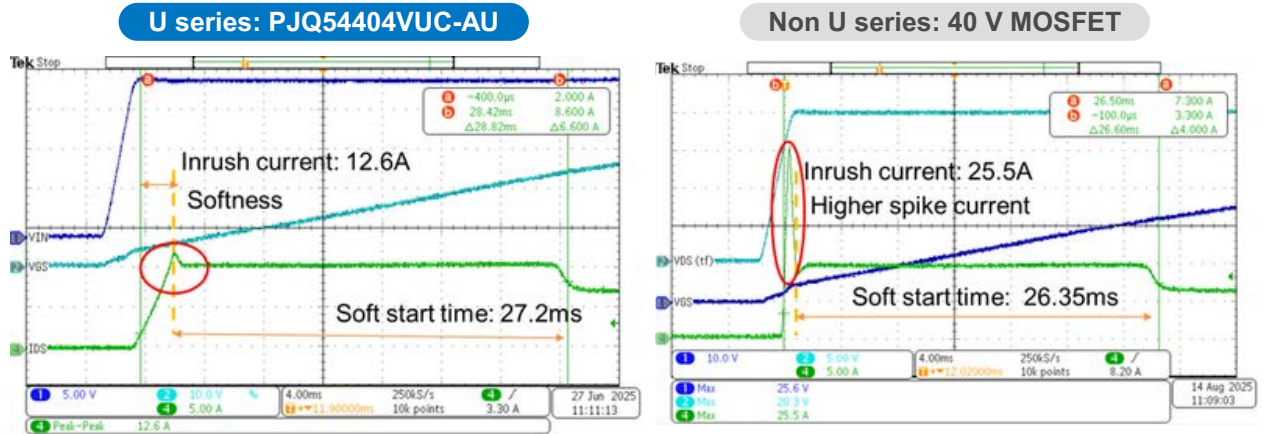


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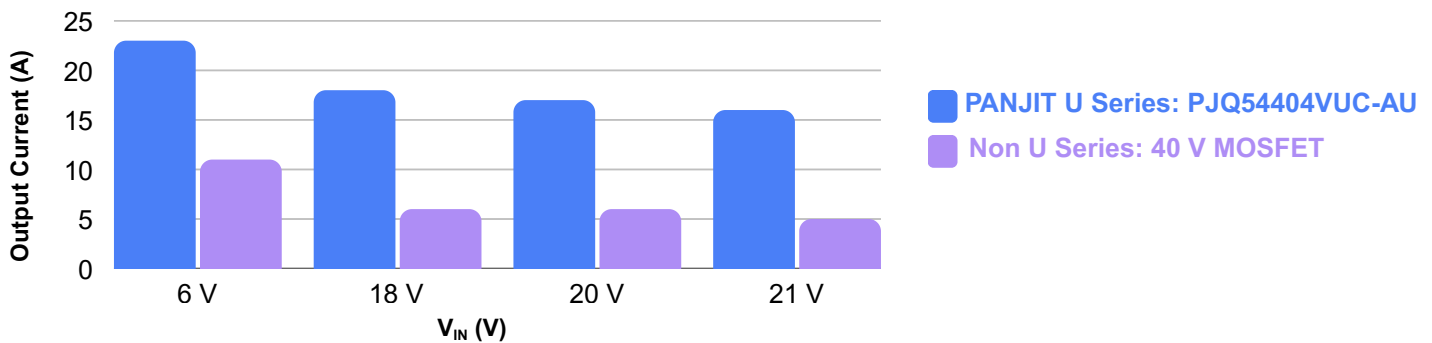
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➤ SOA Capability comparison

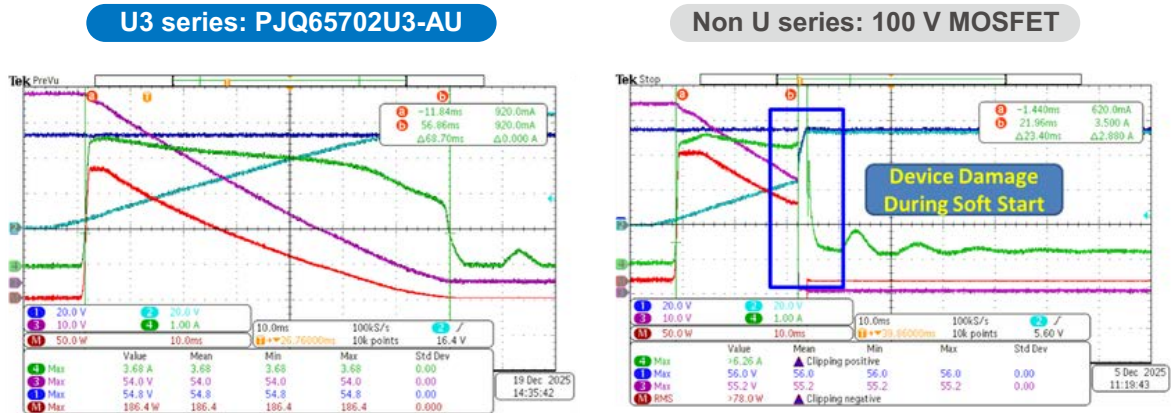
Automotive Airbag Applications



Current Limit in Linear-Mode Applications



AI Hot-Swap Application



SOA Performance @ 50 V / 1 ms U Series vs. Competitors

