

# Wide SOA MOSFET Solutions

## U Series MOSFETs for AI Infrastructure & Automotive



PANJIT's new U Series MOSFETs feature an expanded Safe Operating Area (SOA), enabling up to twice the current capability of conventional MOSFETs under linear operation. Available in Power DFN5060XC-8L, PDFN8080-8L, and TOLL packages, the U Series delivers a robust solution for AI infrastructure and automotive applications, including hot-swap, airbags, 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. V	Typ. mΩ	Max. mΩ		
12/24 $V_{in}$	40	±20	2.8	2.1	2.7	PJQ54406VU-AU*	PJQ64404VUC-AU*
				1.1	1.4	PJQ54404VUC-AU	
	30		1.6	1.1	1.4	PJQ54306U-AU*	PJQ64304UC-AU*
				0.58	0.73	PJQ54304UC-AU	

#### • U3 series: MV MOSFET

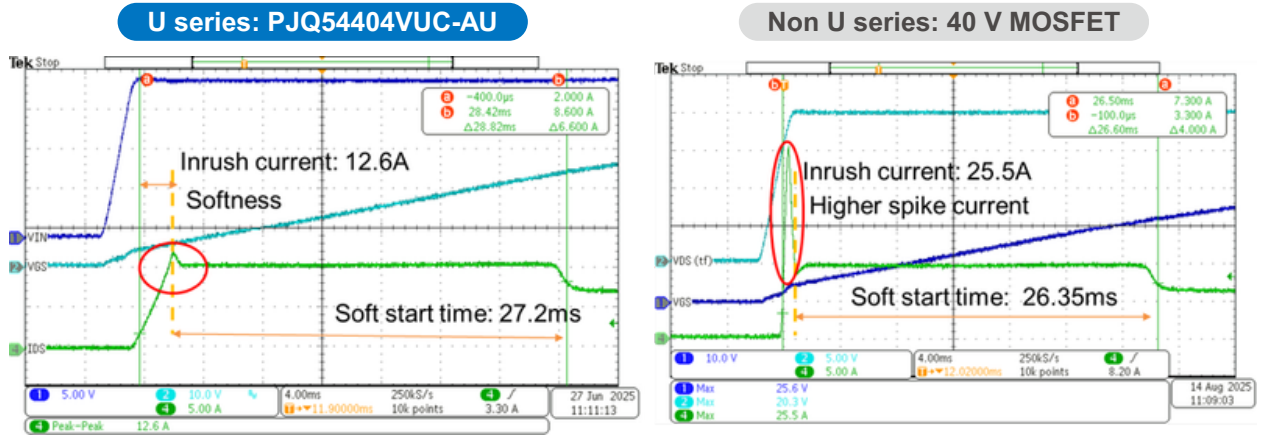
System	$B_V$	$V_{GS}$	$V_{GS(th)}$	$R_{DS(on)}$ @10 V		PDFN8080-8L	TOLL
	V	V	Typ. V	Typ. mΩ	Max. mΩ		
48/54 $V_{in}$	100	±20	2.5	1.6	2	PJQ65704U3-AU*	PJN300N10U3-AU*
				1.3	1.65	PJQ65702U3-AU*	PJN340N10U3-AU*
				1.15	1.4		PJN400N10U3-AU*

\*Under development with specifications to be determined

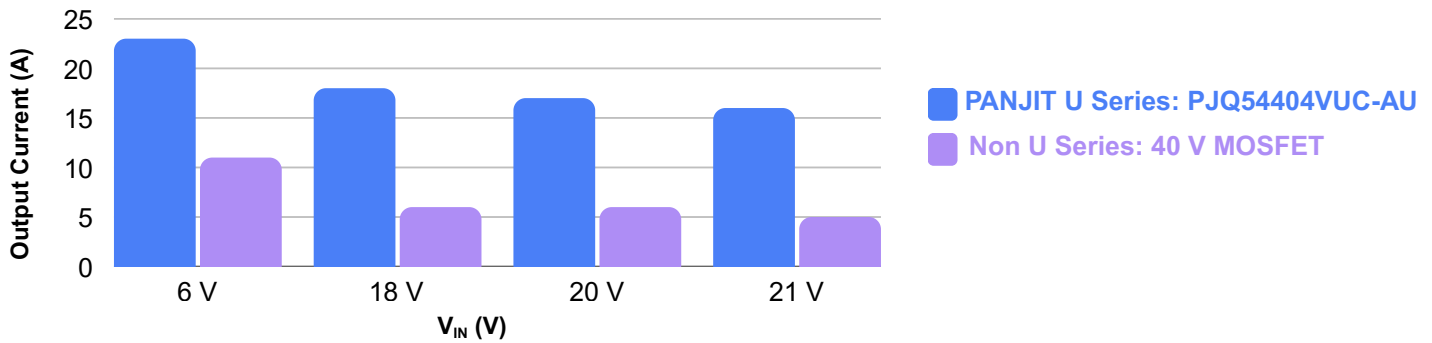


# SOA Capability comparison

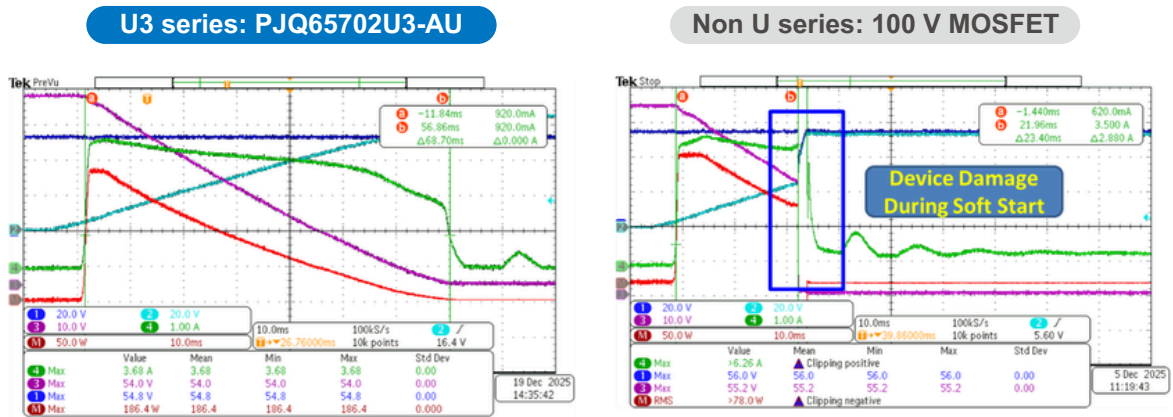
## Automotive Airbag Applications



## Current Limit in Linear-Mode Applications



## AI Hot-Swap Application



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

