

# 30V & 40V Automotive-Grade P-Channel MOSFET

AEC-Q101 qualified with 175°C junction temperature

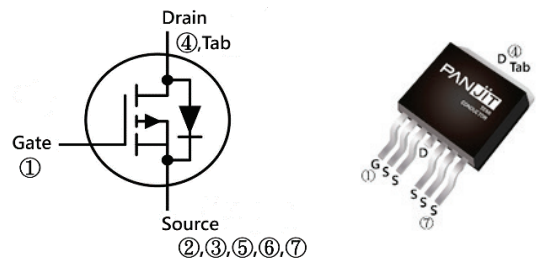
PANJIT's advanced P-channel MOSFETs are designed to minimize  $R_{DS(ON)}$  while maximizing avalanche ruggedness and space usage. With AEC-Q101 qualification and high junction temperature of 175°C, they are the optimal choices for automotive design engineers who wish to simplify circuitry while optimizing performances. PANJIT's P-channel MOSFETs can reduce circuit complexity of power design. They are available in various packages, including DFN3333-8L, DFN5060-8L, DFN5060B-8L, TO-252AA, TO-263, and TO-263-7L.

## ► Features

- P-channel enhancement mode logic level MOSFETs
- Low  $R_{DS(ON)}$  to minimize conduction losses
- Package with low thermal resistance
- 100% unclamped inductive switching (UIS) tested
- Electrostatic sensitive device (ESD) capable
- AEC-Q101 qualified and PPAP capable
- 175°C operating junction temperature

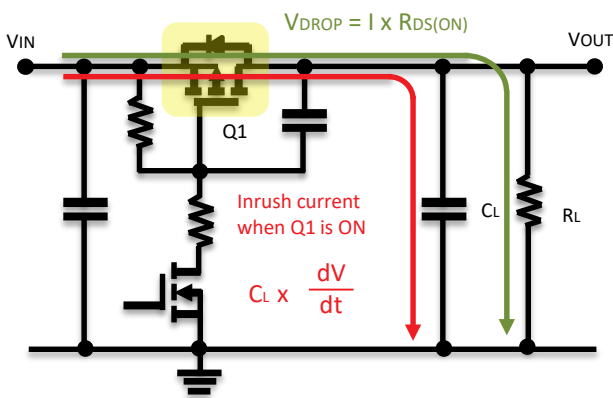
## ► New TO-263-7L Package

High current / power application

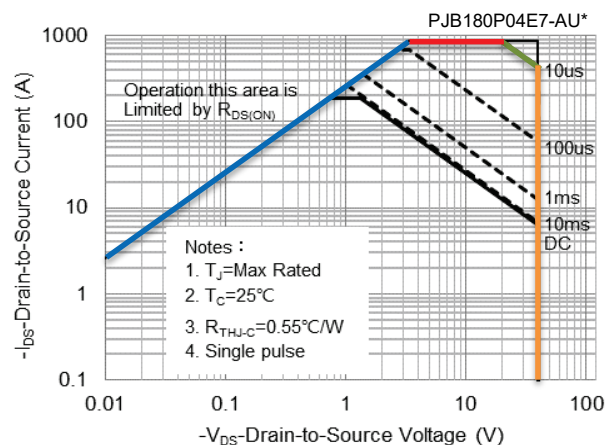


Dimension: 10mm x 15mm x 4.6mm

## ► Typical Load Switch Application



## ► Maximum Safe Operating Area



- On-state resistance limited
- Pulse current limited
- Thermal stability limited
- Drain-source voltage limited



## ➤ Target Applications

### Automotive



- Power management function
- Reverse polarity protection
- Battery power equipment
- Primary 12V system
- LED lighting
- Infotainment
- Telematics
- ADAS
- Solenoid and motor drivers
- Brushed DC motors
- Electronic steering
- DC fan

## ➤ Products

Series	$V_{DS}$	$V_{GS}$	$V_{GS(th)}$ Max.	DFN3333-8L	DFN5060-8L	DFN5060B-8L	TO-252AA	TO-263	TO-263-7L
	(V)	(V)	(V)						
-30V with ESD Logic Level	-30	±25	-2.5	PJQ4439EP-AU	PJQ5439E-AU	PJQ5839E-AU	PJD40P03E-AU		
				PJQ4437EP-AU	PJQ5437E-AU		PJD45P03E-AU		
				PJQ4435EP-AU	PJQ5435E-AU		PJD55P03E-AU		
				PJQ4433EP-AU	PJQ5433E-AU		PJD70P03E-AU		
				PJQ4431EP-AU	PJQ5431E-AU		PJD90P03E-AU		
-40V Logic Level	-40	±25	-2.5	PJQ4453EP-AU	PJQ5453E-AU		PJD60P04E-AU		
				PJQ4451EP-AU	PJQ5451E-AU		PJD75P04E-AU		
					PJQ5449E-AU		PJD95P04E-AU	PJB120P04E-AU*	PJB140P04E7-AU*
					PJQ5447E-AU*		PJD100P04E-AU*	PJB160P04E-AU*	PJB180P04E7-AU*

\* Under development with samples available