

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

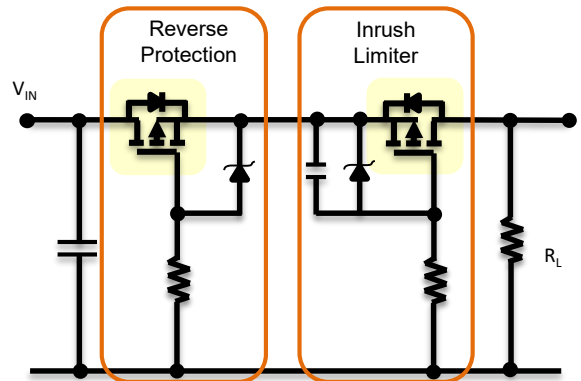
AEC-Q101 qualified with 175°C junction temperature

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 a high junction temperature of 175°C, they are the optimal choices for automotive design engineers who wish to simplify circuitry while optimizing performance. PANJIT's P-channel MOSFETs can reduce the circuit complexity of power design. They are available in various packages, including DFN3333-8L, DFN5060-8L, and TO-252AA.

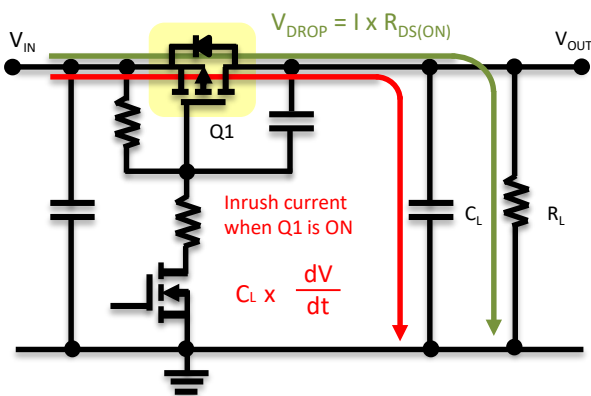
## ► Features

- 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

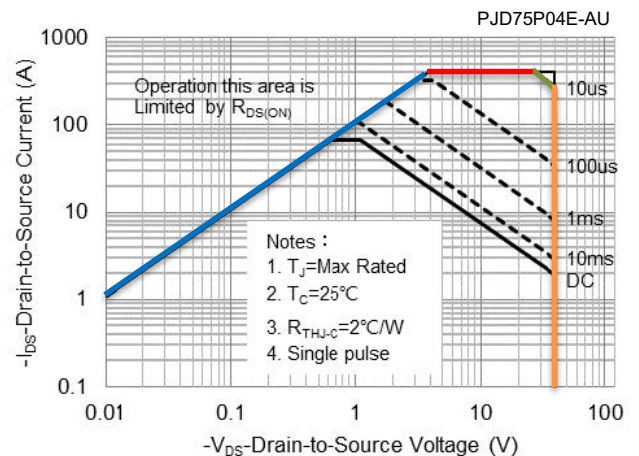
## ► Protection Circuits



## ► Typical Load Switch



## ► Maximum Safe Operating Area



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






## ➤ Applications

### Automotive



- Power management function
- Reverse polarity protection
- Battery power equipment
- Primary 12 V 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.	$R_{DS(ON)}$ @10 V Typ.	DFN3333-8L	DFN5060-8L	TO-252AA
	(V)	(V)	(V)	(m $\Omega$ )			
-30 V with ESD Logic Level	-30	$\pm 25$	-2.5	15	PJQ4439EP-AU	PJQ5439E-AU	PJD40P03E-AU
				12	PJQ4437EP-AU	PJQ5437E-AU	PJD45P03E-AU
				10	PJQ4435EP-AU	PJQ5435E-AU	PJD55P03E-AU
				7.0	PJQ4433EP-AU	PJQ5433E-AU	PJD70P03E-AU
				5.6	PJQ4431EP-AU	PJQ5431E-AU	PJD90P03E-AU
-40 V Logic Level	-40	$\pm 25$	-2.5	34	PJQ4459EP-AU*	PJQ5459E-AU*	PJD20P04E-AU*
				21	PJQ4457P-AU*	PJQ5457-AU*	PJD25P04-AU*
				14	PJQ4455P-AU*	PJQ5455-AU*	PJD46P04-AU*
				9.3	PJQ4453EP-AU	PJQ5453E-AU	PJD60P04E-AU
				7.8	PJQ4451EP-AU	PJQ5451E-AU	PJD75P04E-AU
				4.8		PJQ5449E-AU	PJD95P04E-AU
				3.9		PJQ5447E-AU	PJD100P04E-AU

\* Under development with samples available