

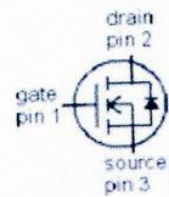
## Power-Transistor

### Features

- Fast switching MOSFET for SMPS
- Optimized technology for DC/DC converters
- Qualified according to JEDEC<sup>1)</sup> for target applications
- N-channel, logic level
- Excellent gate charge x  $R_{DS(on)}$  product (FOM)
- Very low on-resistance  $R_{DS(on)}$
- Avalanche rated
- Pb-free plating; RoHS compliant

### Product Summary

$V_{DS}$	30 V
$R_{DS(on),max}$	5 m $\Omega$
$I_D$	50 A



Type	50N03	50N03
Package	TO-252	TO-251
Marking	50N03	50N03

Maximum ratings, at  $T_J = 25^\circ\text{C}$ , unless otherwise specified

Parameter	Symbol	Conditions	Value	Unit
Continuous drain current	$I_D$	$V_{GS} = 10\text{ V}, T_C = 25^\circ\text{C}$	50	A
		$V_{GS} = 10\text{ V}, T_C = 100^\circ\text{C}$	50	
		$V_{GS} = 4.5\text{ V}, T_C = 25^\circ\text{C}$	50	
		$V_{GS} = 4.5\text{ V}, T_C = 100^\circ\text{C}$	50	
Pulsed drain current <sup>2)</sup>	$I_{D,pulse}$	$T_C = 25^\circ\text{C}$	350	
Avalanche current, single pulse <sup>3)</sup>	$I_{AS}$	$T_C = 25^\circ\text{C}$	50	
Avalanche energy, single pulse	$E_{AS}$	$I_D = 35\text{ A}, R_{GS} = 25\ \Omega$	60	mJ
Reverse diode $dv/dt$	$dv/dt$	$I_D = 50\text{ A}, V_{DS} = 24\text{ V}, di/dt = 200\text{ A}/\mu\text{s}, T_{J,max} = 175^\circ\text{C}$	6	kV/ $\mu\text{s}$
Gate source voltage	$V_{GS}$		$\pm 20$	V