

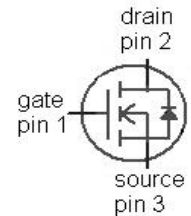
## OptiMOS™ 3 Power-Transistor

### Features

- N-channel, normal level
- Excellent gate charge x  $R_{DS(on)}$  product (FOM)
- Very low on-resistance  $R_{DS(on)}$
- 175 °C operating temperature
- Pb-free lead plating; RoHS compliant
- Qualified according to JEDEC<sup>1)</sup> for target application
- Ideal for high-frequency switching and synchronous rectification
- Halogen-free according to IEC61249-2-21

### Product Summary

$V_{DS}$	150	V
$R_{DS(on),max}$	20	mΩ
$I_D$	50	A



Type	IPB200N15N3 G	IPD200N15N3 G	IPI200N15N3 G	IPP200N15N3 G
Package	PG-TO263-3	PG-TO252-3	PG-TO262-3	PG-TO220-3
Marking	200N15N	200N15N	200N15N	200N15N

Maximum ratings, at  $T_j=25\text{ °C}$ , unless otherwise specified

Parameter	Symbol	Conditions	Value	Unit
Continuous drain current	$I_D$	$T_C=25\text{ °C}$	50	A
		$T_C=100\text{ °C}$	40	
Pulsed drain current <sup>2)</sup>	$I_{D,pulse}$	$T_C=25\text{ °C}$	200	
Avalanche energy, single pulse	$E_{AS}$	$I_D=50\text{ A}$ , $R_{GS}=25\text{ Ω}$	170	mJ
Reverse diode $dv/dt$	$dv/dt$	$I_D=50\text{ A}$ , $V_{DS}=120\text{ V}$ , $di/dt=100\text{ A/μs}$ , $T_{j,max}=175\text{ °C}$	6	kV/μs
Gate source voltage	$V_{GS}$		±20	V
Power dissipation	$P_{tot}$	$T_C=25\text{ °C}$	150	W
Operating and storage temperature	$T_j$ , $T_{stg}$		-55 ... 175	°C
IEC climatic category; DIN IEC 68-1			55/175/56	

<sup>1)</sup>J-STD20 and JESD22

<sup>2)</sup> See figure 3