OptiMOS® Power-Transistor

Product Summary

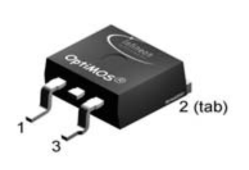
V_{DS}	30	V
$R_{DS(on),max}$	12.9	mΩ
I_D	42	A

Features

- N-channel
- Enhancement mode
- Logic level
- Excellent gate charge x $R_{DS(on)}$ product (FOM)
- Superior thermal resistance
- 175 °C operating temperature
- Avalanche rated
- d*v*/d*t* rated

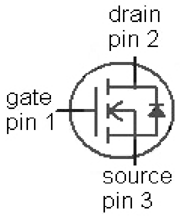
P-TO262-3-1

P-TO263-3-2



P-TO220-3-1

Type	Package	Ordering Code	Marking
SPP42N03S2L-13	P-TO220-3-1	Q67042-S4034	2N03L13
SPB42N03S2L-13	P-TO263-3-2	Q67042-S4035	2N03L13
SPI42N03S2L-13	P-TO262-3-1	Q67042-S4104	2N03L13



Maximum ratings, at T_j=25 °C, unless otherwise specified

Parameter	Symbol	Conditions	Value	Unit
Continuous drain current[1]	I_D	T_C=25 °C	42	A
		T_C=100 °C	42	
Pulsed drain current	$I_{D,pulse}$	T_C=25 °C	248	
Avalanche energy, single pulse	E_{AS}	I_D=42 A, R_{GS}=25 Ω	110	mJ
Repetitive avalanche energy	E_{AR}	limited by T_{jmax}[2]	8	mJ
Reverse diode d*v*/d*t*	d*v*/d*t*	I_D=42 A, V_{DS}=24 V, d*i*/d*t*=200 A/µs, $T_{j,max}$=175 °C	6	kV/µs
Gate source voltage	V_{GS}		±20	V
Power dissipation	P_{tot}	T_C=25 °C	83	W
Operating and storage temperature	T_j, T_{stg}		-55 ... 175	°C
IEC climatic category; DIN IEC 68-1			55/175/56	