

## CoolMOS™ Power Transistor

### Features

- New revolutionary high voltage technology
- Extreme dv/dt rated
- High peak current capability
- Qualified according to JEDEC<sup>1)</sup> for target applications
- Pb-free lead plating; RoHS compliant
- Ultra low gate charge
- Ultra low effective capacitances

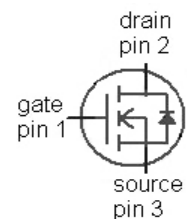
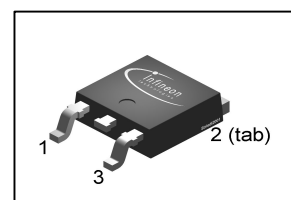
### CoolMOS™ 800V designed for:

- Industrial application with high DC bulk voltage
- Switching Application ( i.e. active clamp forward )

### Product Summary

$V_{DS}$	800	V
$R_{DS(on)max}$ @ $T_j = 25\text{ °C}$	0.9	$\Omega$
$Q_{g,typ}$	31	nC

PG-TO252-3



Type	Package	Marking
SPD06N80C3	PG-TO252-3	06N80C3

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

Parameter	Symbol	Conditions	Value	Unit
Continuous drain current	$I_D$	$T_A=25\text{ °C}$	6	A
		$T_A=100\text{ °C}$	3.8	
Pulsed drain current <sup>2)</sup>	$I_{D,pulse}$	$T_A=25\text{ °C}$	18	
Avalanche energy, single pulse	$E_{AS}$	$I_D=1.2\text{ A}$ , $V_{DD}=50\text{ V}$	230	mJ
Avalanche energy, repetitive $t_{AR}$ <sup>2),3)</sup>	$E_{AR}$	$I_D=6\text{ A}$ , $V_{DD}=50\text{ V}$	0.2	
Avalanche current, repetitive $t_{AR}$ <sup>2),3)</sup>	$I_{AR}$		6	A
MOSFET dv/dt ruggedness	dv/dt	$V_{DS}=0\dots640\text{ V}$	50	V/ns
Gate source voltage	$V_{GS}$	static	$\pm 20$	V
		AC ( $f>1\text{ Hz}$ )	$\pm 30$	
Power dissipation	$P_{tot}$	$T_A=25\text{ °C}$	83	W
Operating and storage temperature	$T_j$ , $T_{stg}$		-55 ... 150	$^{\circ}\text{C}$