

CoolMOS™ Power Transistor

Features

- New revolutionary high voltage technology
- Extreme dv/dt rated
- High peak current capability
- Qualified according to JEDEC¹⁾ for target applications
- Pb-free lead plating; RoHS compliant
- Ultra low gate charge
- Ultra low effective capacitances
- Fully isolated package (2500 VAC; 1 minute)

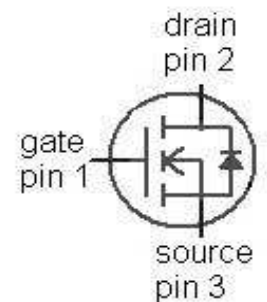
CoolMOS™ 800V designed for:

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

Product Summary

V_{DS}	800	V
$R_{DS(on)max} @ T_j = 25\text{ °C}$	1.3	Ω
$Q_{g,typ}$	23	nC

PG-TO220-3 (fully isolated)



Type	Package	Marking
SPA04N80C3	PG-TO220-3	04N80C3

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

Parameter	Symbol	Conditions	Value	Unit
Continuous drain current ²⁾	I_D	$T_C=25\text{ °C}$	4	A
		$T_C=100\text{ °C}$	2.5	
Pulsed drain current ³⁾	$I_{D,pulse}$	$T_C=25\text{ °C}$	12	
Avalanche energy, single pulse	E_{AS}	$I_D=0.8\text{ A}, V_{DD}=50\text{ V}$	170	mJ
Avalanche energy, repetitive t_{AR} ^{3),4)}	E_{AR}	$I_D=4\text{ A}, V_{DD}=50\text{ V}$	0.1	
Avalanche current, repetitive t_{AR} ^{3),4)}	I_{AR}		4	A
MOSFET dv/dt ruggedness	dv/dt	$V_{DS}=0\dots640\text{ V}$	50	V/ns
Gate source voltage	V_{GS}	static	± 20	V
		AC ($f>1\text{ Hz}$)	± 30	
Power dissipation	P_{tot}	$T_C=25\text{ °C}$	38	W
Operating and storage temperature	T_j, T_{stg}		-55 ... 150	$^{\circ}\text{C}$
Mounting torque		M2.5 screws	50	Ncm