

isc N-Channel MOSFET Transistor SPD08N50C3, ISPD08N50C3

• FEATURES

- Static drain-source on-resistance: $R_{DS(on)} \leq 600\text{m}\Omega$
- Enhancement mode:
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

• DESCRIPTION

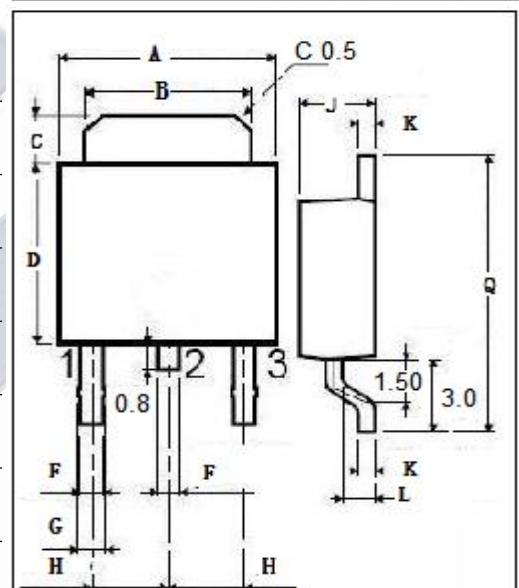
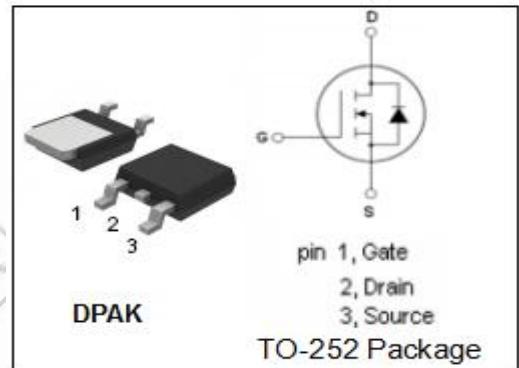
- Improved transconductance

• ABSOLUTE MAXIMUM RATINGS($T_a=25^\circ\text{C}$)

SYMBOL	PARAMETER	VALUE	UNIT
V_{DSS}	Drain-Source Voltage	500	V
V_{GS}	Gate-Source Voltage	± 20	V
I_D	Drain Current-Continuous	7.6	A
I_{DM}	Drain Current-Single Pulsed	22.8	A
P_D	Total Dissipation @ $T_c=25^\circ\text{C}$	83	W
T_j	Max. Operating Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature	-55~150	$^\circ\text{C}$

• THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th(j-c)}$	Channel-to-case thermal resistance	1.5	$^\circ\text{C}/\text{W}$
$R_{th(j-a)}$	Channel-to-ambient thermal resistance	75	$^\circ\text{C}/\text{W}$



DIM	mm	
	MIN	MAX
A	6.40	6.60
B	5.20	5.40
C	1.15	1.35
D	5.70	6.10
F	0.65	
G	0.75	
H	2.10	2.50
J	2.10	2.40
K	0.40	0.60
L	0.90	1.10
O	9.90	10.1

isc N-Channel MOSFET Transistor SPD08N50C3,ISPD08N50C3**ELECTRICAL CHARACTERISTICS** $T_c=25^\circ\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
BV_{DSS}	Drain-Source Breakdown Voltage	$\text{V}_{\text{GS}}=0\text{V}; \text{I}_D=250 \mu\text{A}$	500			V
$\text{V}_{\text{GS(th)}}$	Gate Threshold Voltage	$\text{V}_{\text{DS}}=\text{V}_{\text{GS}}; \text{I}_D=350 \mu\text{A}$	2.1		3.9	V
$\text{R}_{\text{DS(on)}}$	Drain-Source On-Resistance	$\text{V}_{\text{GS}}=10\text{V}; \text{I}_D=4.6\text{A}$			600	$\text{m}\Omega$
I_{GSS}	Gate-Source Leakage Current	$\text{V}_{\text{GS}}= 20\text{V}$			0.1	μA
I_{DSS}	Drain-Source Leakage Current	$\text{V}_{\text{DS}}=500\text{V}; \text{V}_{\text{GS}}= 0\text{V}$			1	μA
V_{SD}	Diode forward voltage	$\text{I}_F=\text{I}_S, \text{V}_{\text{GS}} = 0\text{V}$			1.2	V