

## Isc N-Channel MOSFET Transistor

**WFD5N65L**

### • FEATURES

- With To-252(DPAK) package
- Low input capacitance and gate charge
- Low gate input resistance
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

### • APPLICATIONS

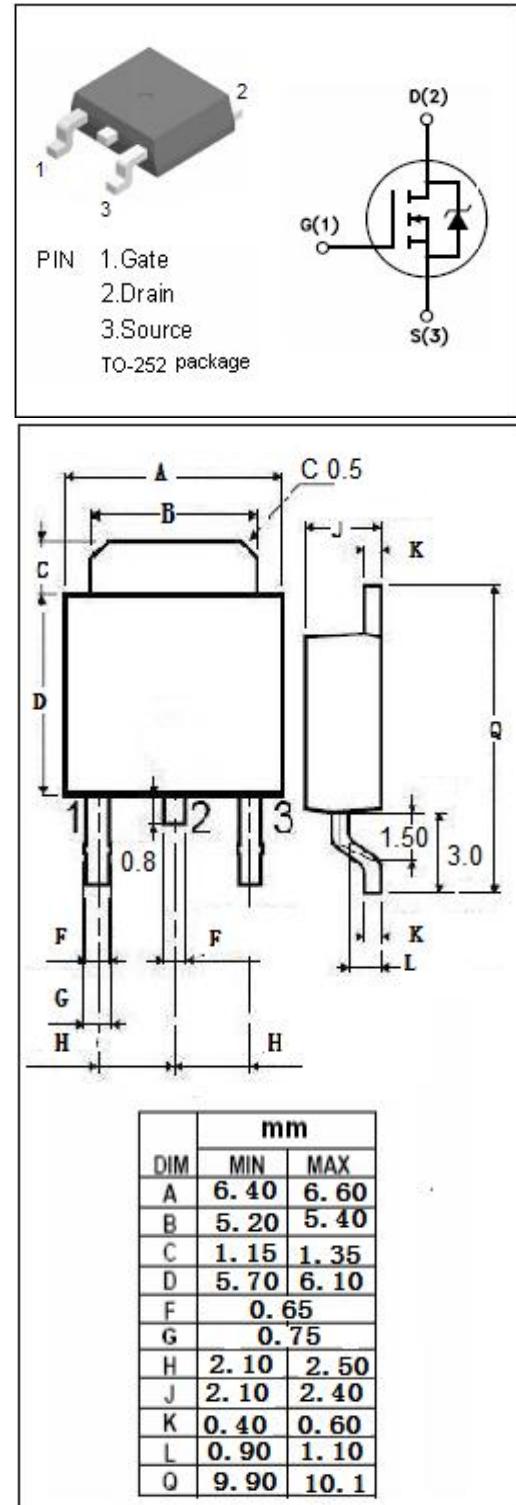
- Switching applications

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{DSS}$	Drain-Source Voltage	650	V
$V_{GSS}$	Gate-Source Voltage	$\pm 30$	V
$I_D$	Drain Current-Continuous@ $T_c=25^\circ\text{C}$ $T_c=100^\circ\text{C}$	4.5 2.5	A
$I_{DM}$	Drain Current-Single Pulsed	16	A
$P_D$	Total Dissipation @ $T_c=25^\circ\text{C}$	33	W
$T_{ch}$	Max. Operating Junction Temperature	150	°C
$T_{stg}$	Storage Temperature	-55~150	°C

### • THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th(ch-c)}$	Channel-to-case thermal resistance	83	°C/W
$R_{th(ch-a)}$	Channel-to-ambient thermal resistance	2.5	°C/W



**Isc N-Channel MOSFET Transistor****WFD5N65L****ELECTRICAL CHARACTERISTICS** $T_c=25^\circ\text{C}$  unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
$\text{BV}_{\text{DSS}}$	Drain-Source Breakdown Voltage	$\text{V}_{\text{GS}}=0\text{V}; \text{I}_D= 0.25\text{mA}$	650			V
$\text{V}_{\text{GS}(\text{th})}$	Gate Threshold Voltage	$\text{V}_{\text{DS}}=\text{V}_{\text{GS}}; \text{I}_D=0.25\text{mA}$	2.0		4.0	V
$\text{R}_{\text{DS}(\text{on})}$	Drain-Source On-Resistance	$\text{V}_{\text{GS}}= 10\text{V}; \text{I}_D=2\text{A}$		2.1	2.5	$\Omega$
$\text{I}_{\text{GSS}}$	Gate-Source Leakage Current	$\text{V}_{\text{GS}}=\pm 30\text{V}; \text{V}_{\text{DS}}= 0\text{V}$			$\pm 0.1$	$\mu\text{ A}$
$\text{I}_{\text{DSS}}$	Drain-Source Leakage Current	$\text{V}_{\text{DS}}=650\text{V}; \text{V}_{\text{GS}}= 0\text{V}$			10	$\mu\text{ A}$
$\text{V}_{\text{SDF}}$	Diode forward voltage	$\text{I}_{\text{SD}}=4.5\text{A}, \text{V}_{\text{GS}} = 0 \text{ V}$			1.4	V