

# Isc N-Channel MOSFET Transistor

# STD18N65M5

### • FEATURES

- Higher  $V_{DSS}$  rating
- Excellent switching performance
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

### • APPLICATIONS

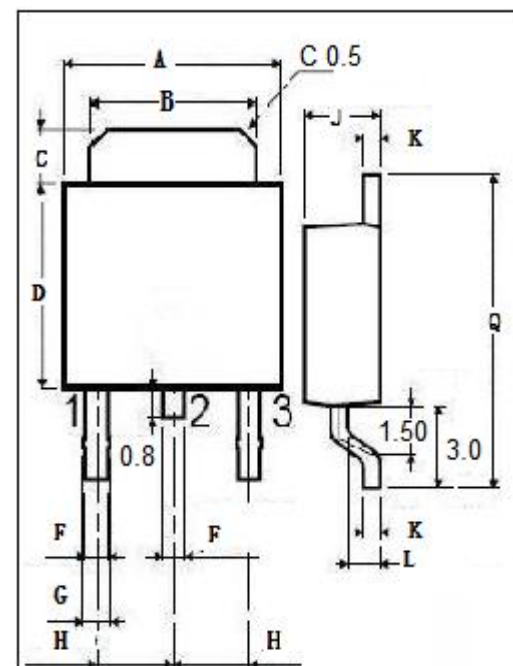
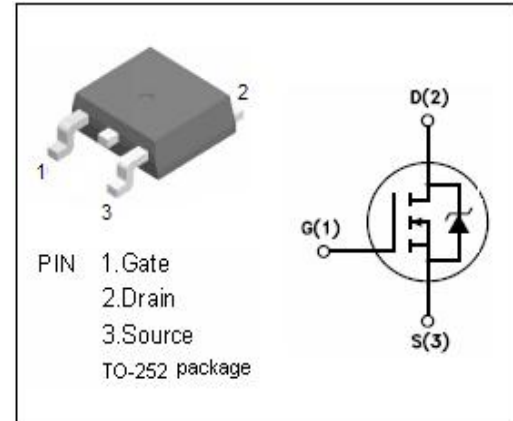
- Switching applications

### • 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	$\pm 25$	V
$I_D$	Drain Current-Continuous@ $T_c=25^\circ\text{C}$ ( $T_j=175^\circ\text{C}$ )	15 9.4	A
$I_{DM}$	Drain Current-Single Pulsed	60	A
$P_D$	Total Dissipation @ $T_c=25^\circ\text{C}$	110	W
$T_{ch}$	Max. Operating Junction Temperature	150	$^\circ\text{C}$
$T_{stg}$	Storage Temperature	-55~150	$^\circ\text{C}$

### • THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th(ch-c)}$	Channel-to-case thermal resistance	1.14	$^\circ\text{C/W}$
$R_{th(ch-a)}$	Channel-to-ambient thermal resistance	50	$^\circ\text{C/W}$



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
Q	9.90	10.1

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## ELECTRICAL CHARACTERISTICS

T<sub>C</sub>=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
BV <sub>DSS</sub>	Drain-Source Breakdown Voltage	V <sub>GS</sub> =0V; I <sub>D</sub> = 1mA	650			V
V <sub>GS(th)</sub>	Gate Threshold Voltage	V <sub>DS</sub> = ±25V; I <sub>D</sub> =0.25mA	3		5	V
R <sub>DS(on)</sub>	Drain-Source On-Resistance	V <sub>GS</sub> = 10V; I <sub>D</sub> =7.5A		198	220	mΩ
I <sub>GSS</sub>	Gate-Source Leakage Current	V <sub>GS</sub> = ±25V; V <sub>DS</sub> = 0V			±0.1	μA
I <sub>DSS</sub>	Drain-Source Leakage Current	V <sub>DS</sub> = 650V; V <sub>GS</sub> = 0V; T <sub>J</sub> =25°C T <sub>J</sub> =125°C			1 100	μA
V <sub>SDF</sub>	Diode forward voltage	I <sub>SD</sub> =15A, V <sub>GS</sub> = 0 V			1.5	V

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