

## isc N-Channel MOSFET Transistor

## NTHL040N65S3F

### • FEATURES

- With TO-247 packaging
- Low  $R_{DS(on)}$  <40m $\Omega$
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

### • APPLICATIONS

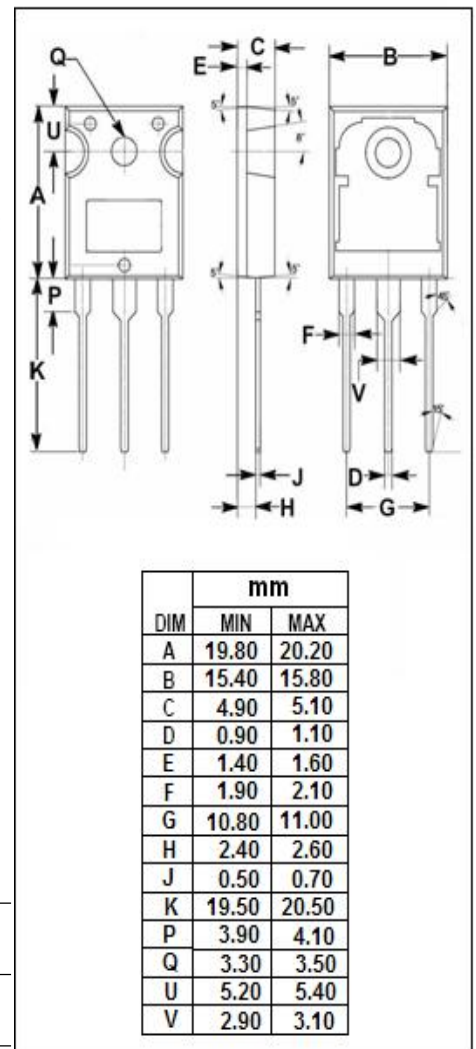
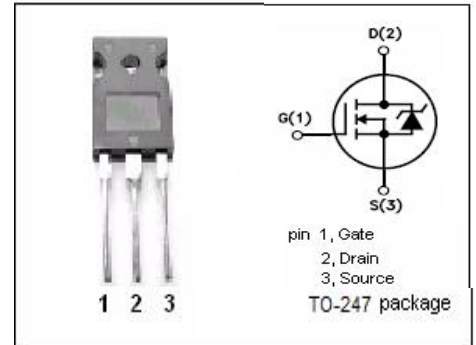
- Telecom / Server Power Supplies
- Industrial Power Supplies

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{DS}$	Drain-Source Voltage	650	V
$V_{GS}$	Gate-Source Voltage	$\pm 30$	V
$I_D$	Drain Current-Continuous@ $T_c=25^\circ\text{C}$	65	A
$I_{DM}$	Drain Current-Single Pulsed	162	A
$P_D$	Total Dissipation	446	W
$T_j$	Operating Junction Temperature	-55~150	$^\circ\text{C}$
$T_{stg}$	Storage Temperature	-55~150	$^\circ\text{C}$

### • THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th(ch-c)}$	Channel-to-case thermal resistance	0.28	$^\circ\text{C/W}$



**isc N-Channel MOSFET Transistor****NTHL040N65S3F****ELECTRICAL CHARACTERISTICS** $T_C=25^{\circ}\text{C}$  unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
$BV_{DSS}$	Drain-Source Breakdown Voltage	$V_{GS}=0V; I_D=1mA$	650			V
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS}=V_{GS}; I_D=6.5mA$	3		5	V
$R_{DS(on)}$	Drain-Source On-Resistance	$V_{GS}=10V; I_D=32.5A$			40	$m\Omega$
$I_{GSS}$	Gate-Source Leakage Current	$V_{GS}= \pm 30V; V_{DS}=0V$			$\pm 100$	nA
$I_{DSS}$	Drain-Source Leakage Current	$V_{DS}=650V; V_{GS}=0V$			10	$\mu A$
$V_{SDF}$	Diode forward voltage	$I_{SD}=32.5A, V_{GS}=0V$			1.3	V

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