

## isc N-Channel MOSFET Transistor

## STHV102

## • FEATURES

- With TO-3PN packaging
- High speed switching
- Standard level gate drive
- Easy to use
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

## • APPLICATIONS

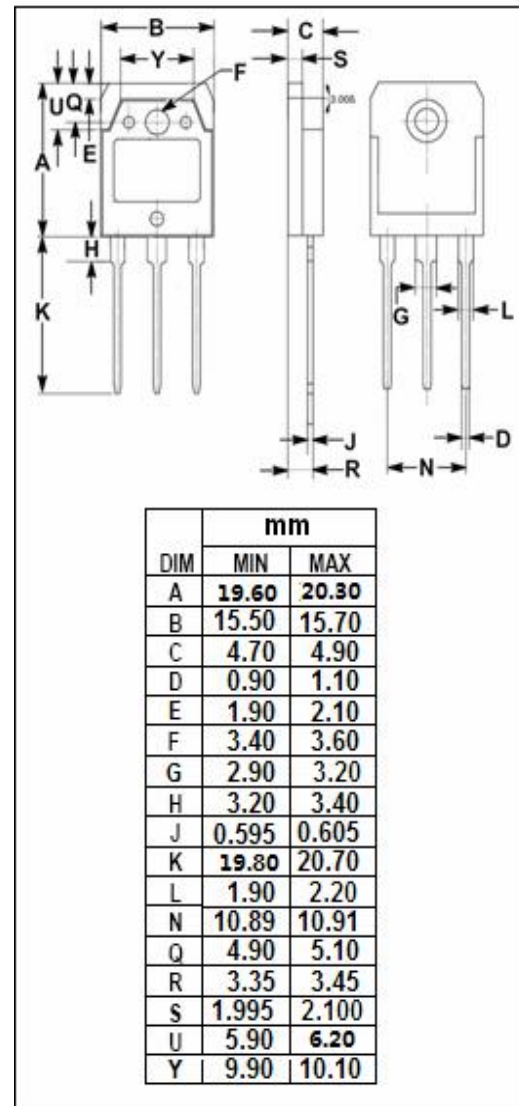
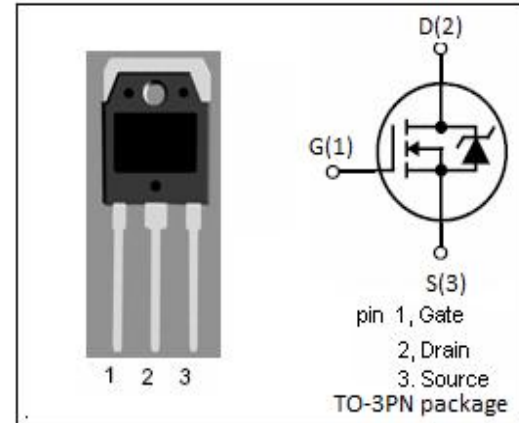
- Power supply
- Switching applications

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{DS}$	Drain-Source Voltage	1000	V
$V_{GS}$	Gate-Source Voltage	$\pm 20$	V
$I_D$	Drain Current-Continuous @ $T_c=25^\circ\text{C}$ $T_c=100^\circ\text{C}$	4.2 2.6	A
$I_{DM}$	Drain Current-Single Pulsed	16	A
$P_D$	Total Dissipation	150	W
$T_j$	Operating Junction Temperature	-65~150	$^\circ\text{C}$
$T_{stg}$	Storage Temperature	-65~150	$^\circ\text{C}$

## • THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th(ch-c)}$	Channel-to-case thermal resistance	0.83	$^\circ\text{C/W}$
$R_{th(ch-a)}$	Channel-to-ambient thermal resistance	30	$^\circ\text{C/W}$



**isc N-Channel MOSFET Transistor****STHV102****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> = 0.25mA	1000			V
V <sub>GS(th)</sub>	Gate Threshold Voltage	V <sub>DS</sub> =V <sub>GS</sub> ; I <sub>D</sub> =0.25mA	2.0		4.0	V
R <sub>DS(on)</sub>	Drain-Source On-Resistance	V <sub>GS</sub> = 10V; I <sub>D</sub> =2A		3.1	3.5	Ω
I <sub>GSS</sub>	Gate-Source Leakage Current	V <sub>GS</sub> = ±20V; V <sub>DS</sub> = 0V			±0.1	μ A
I <sub>DSS</sub>	Drain-Source Leakage Current	V <sub>DS</sub> = 1000V; V <sub>GS</sub> = 0v; T <sub>j</sub> =25°C V <sub>DS</sub> = 800V; V <sub>GS</sub> = 0v; T <sub>j</sub> =125°C			25 250	μ A
V <sub>SDF</sub>	Diode forward voltage	I <sub>SD</sub> =4.2A, V <sub>GS</sub> = 0 V			2	V

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