

## isc N-Channel MOSFET Transistor

## IXTY5N50P

## • FEATURES

- Static drain-source on-resistance:  
 $R_{DS(on)} \leq 1.4\Omega @ V_{GS}=10V$
- Fully characterized avalanche voltage and current
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

## • APPLICATION

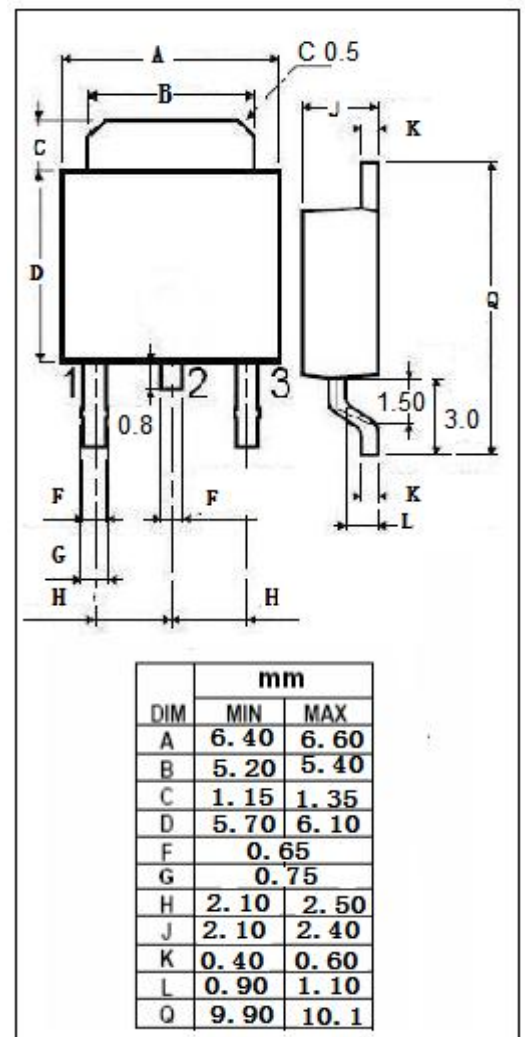
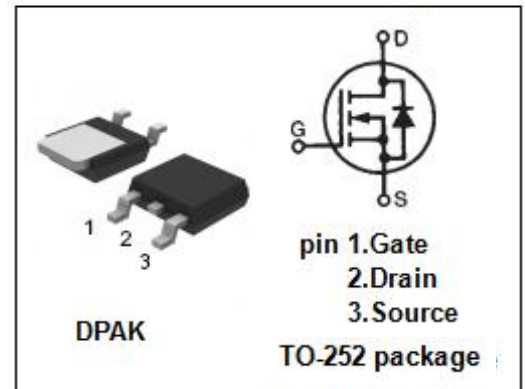
- DC/DC Converter
- Ideal for high-frequency switching and synchronous rectification

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{DS}$	Drain-Source Voltage	500	V
$V_{GS}$	Gate-Source Voltage	$\pm 30$	V
$I_D$	Drain Current-Continuous	4.8	A
$I_{DM}$	Drain Current-Single Pulsed	10	A
$P_D$	Total Dissipation @ $T_c=25^\circ\text{C}$	89	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
$R_{th(j-c)}$	Junction-to-case thermal resistance	1.40	$^\circ\text{C}/\text{W}$



**isc N-Channel MOSFET Transistor****IXTY5N50P****ELECTRICAL CHARACTERISTICS** $T_c=25^{\circ}\text{C}$  unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$BV_{DSS}$	Drain-Source Breakdown Voltage	$V_{GS}=0V$ ; $I_D = 250\ \mu A$	500		V
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS}=V_{GS}$ ; $I_D = 50\ \mu A$	3.0	5.0	V
$R_{DS(on)}$	Drain-Source On-Resistance	$V_{GS}=10V$ ; $I_D = 2.4A$		1.4	$\Omega$
$I_{GSS}$	Gate-Source Leakage Current	$V_{GS} = \pm 30V$ ; $V_{DS}=0V$		$\pm 100$	nA
$I_{DSS}$	Drain-Source Leakage Current	$V_{DS} = V_{DSS}$ ; $V_{GS} = 0V$		5	$\mu A$
		$V_{DS} = V_{DSS}$ ; $V_{GS} = 0V$ ; $T_J = 125^{\circ}\text{C}$		50	
$V_{SD}$	Diode forward voltage	$I_F = 4.8A$ ; $V_{GS} = 0V$		1.5	V

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