

## isc N-Channel MOSFET Transistor

## IXTP140N055T2

## • FEATURES

- Static drain-source on-resistance:  
 $R_{DS(on)} \leq 5.4\text{m}\Omega @ V_{GS}=10\text{V}$
- Fully characterized avalanche voltage and current
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

## • APPLICATION

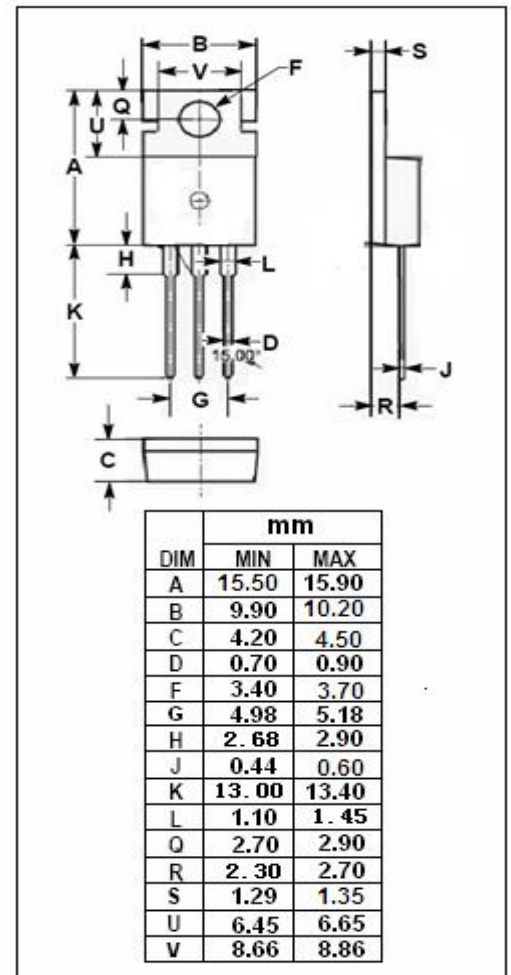
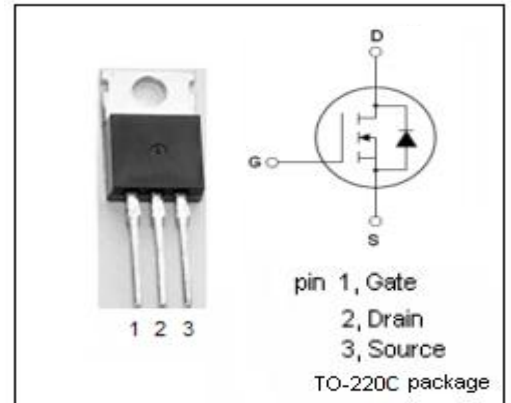
- DC/DC Converters
- High Current Switching Applications

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{DSS}$	Drain-Source Voltage	55	V
$V_{GS}$	Gate-Source Voltage	$\pm 20$	V
$I_D$	Drain Current-Continuous	140	A
$I_{DM}$	Drain Current-Single Pulsed	350	A
$P_D$	Total Dissipation @ $T_c=25^\circ\text{C}$	180	W
$T_j$	Operating Junction Temperature	-55~175	$^\circ\text{C}$
$T_{stg}$	Storage Temperature	-55~175	$^\circ\text{C}$

## • THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th(j-c)}$	Junction-to-case thermal resistance	0.83	$^\circ\text{C/W}$



**isc N-Channel MOSFET Transistor****IXTP140N055T2****ELECTRICAL CHARACTERISTICS** $T_c=25^{\circ}\text{C}$  unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$BV_{DSS}$	Drain-Source Breakdown Voltage	$V_{GS}=0V$ ; $I_D = 250\ \mu A$	55		V
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS}=V_{GS}$ ; $I_D = 250\ \mu A$	2.0	4.0	V
$R_{DS(on)}$	Drain-Source On-Resistance	$V_{GS}=10V$ ; $I_D = 50A$		5.4	$m\Omega$
$I_{GSS}$	Gate-Source Leakage Current	$V_{GS} = \pm 20V$ ; $V_{DS}=0V$		$\pm 200$	nA
$I_{DSS}$	Drain-Source Leakage Current	$V_{DS} = V_{DSS}$ ; $V_{GS} = 0V$		5	$\mu A$
		$V_{DS} = V_{DSS}$ ; $V_{GS} = 0V$ ; $T_J = 150^{\circ}\text{C}$		150	
$V_{SD}$	Diode forward voltage	$I_F = 70A$ ; $V_{GS} = 0V$		1.3	V

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