

isc N-Channel MOSFET Transistor

IXTA1N100

• FEATURES

- Static drain-source on-resistance:
 $R_{DS(on)} \leq 11\Omega @ V_{GS}=10V$
- Fully characterized avalanche voltage and current
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

• APPLICATION

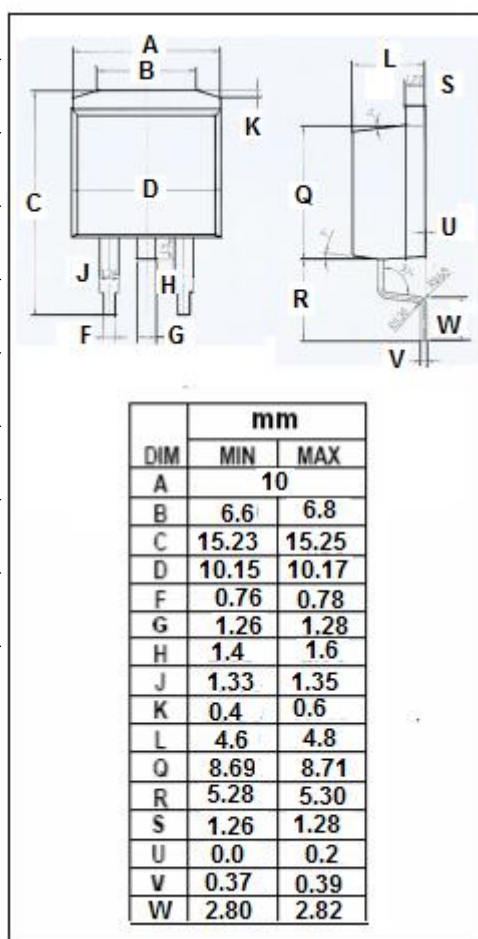
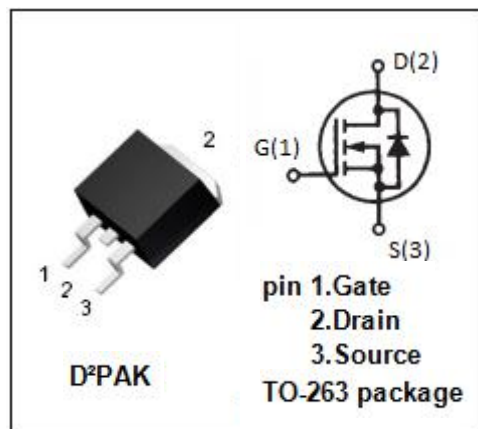
- DC/DC Converter
- Switch-Mode and Resonant-Mode Power Supplies

• 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	± 20	V
I_D	Drain Current-Continuous	1.5	A
I_{DM}	Drain Current-Single Pulsed	6	A
P_D	Total Dissipation @ $T_c=25^\circ\text{C}$	54	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	2.31	$^\circ\text{C/W}$



isc N-Channel MOSFET Transistor**IXTP1N100****ELECTRICAL CHARACTERISTICS** $T_c=25^{\circ}\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
BV_{DSS}	Drain-Source Breakdown Voltage	$V_{GS}=0V$; $I_D = 250\ \mu A$	1000		V
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS}=V_{GS}$; $I_D = 50\ \mu A$	2.5	4.5	V
$R_{DS(on)}$	Drain-Source On-Resistance	$V_{GS}=10V$; $I_D = 1A$		11	Ω
I_{GSS}	Gate-Source Leakage Current	$V_{GS} = \pm 20V$; $V_{DS}=0V$		± 100	nA
I_{DSS}	Drain-Source Leakage Current	$V_{DS} = V_{DSS}$; $V_{GS} = 0V$		25	μA
		$V_{DS} = V_{DSS}$; $V_{GS} = 0V$; $T_J = 125^{\circ}\text{C}$		500	
V_{SD}	Diode forward voltage	$I_F=1.5A$; $V_{GS} = 0V$		1.8	V

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