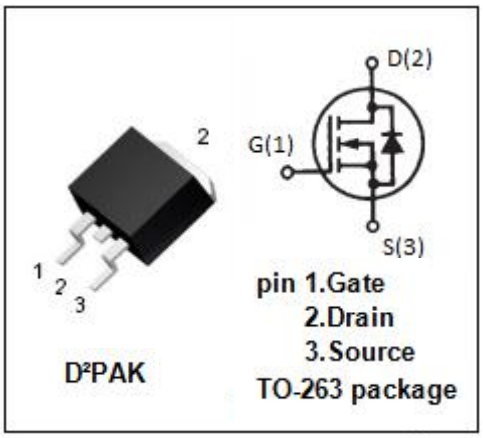
isc N-Channel MOSFET Transistor IXTA12N50P



- **FEATURES**
- Static drain-source on-resistance:
  $R_{DS}(on) \leq 0.5\Omega @ V_{GS}=10V$
- Fully characterized avalanche voltage and current
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

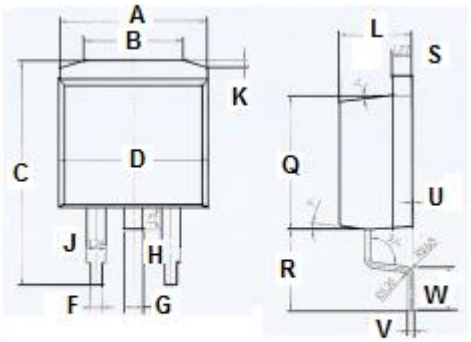
- **APPLICATION**
- DC/DC Converter
- Ideal for high-frequency switching and synchronous rectification

- **ABSOLUTE MAXIMUM RATINGS(T_a=25℃)**

SYMBOL	PARAMETER	VALUE	UNIT
V_{DSS}	Drain-Source Voltage	500	V
V_{GS}	Gate-Source Voltage	±30	V
I_D	Drain Current-Continuous	12	A
I_{DM}	Drain Current-Single Pulsed	30	A
P_D	Total Dissipation @T_C=25℃	200	W
T_j	Operating Junction Temperature	-55~150	℃
T_{stg}	Storage Temperature	-55~150	℃

- **THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	MAX	UNIT
$R_{th(j-c)}$	Junction-to-case thermal resistance	0.625	℃/W



DIM	mm MIN	MAX
A	10	
B	6.6	6.8
C	15.23	15.25
D	10.15	10.17
F	0.76	0.78
G	1.26	1.28
H	1.4	1.6
J	1.33	1.35
K	0.4	0.6
L	4.6	4.8
Q	8.69	8.71
R	5.28	5.30
S	1.26	1.28
U	0.0	0.2
V	0.37	0.39
W	2.80	2.82

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ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
BV_{DSS}	Drain-Source Breakdown Voltage	V_{GS}=0V; I_D = 250 μA	500		V
$V_{GS(th)}$	Gate Threshold Voltage	V_{DS}=V_{GS}; I_D = 250 μA	3.0	5.5	V
$R_{DS(on)}$	Drain-Source On-Resistance	V_{GS}=10V; I_D= 6A		0.5	Ω
I_{GSS}	Gate-Source Leakage Current	V_{GS}= ±30V;V_{DS}=0V		±100	nA
I_{DSS}	Drain-Source Leakage Current	V_{DS}= V_{DSS}; V_{GS}= 0V		5	μA
		V_{DS}= V_{DSS}; V_{GS}= 0V;T_J= 125℃		250	
V_{SD}	Diode forward voltage	I_F= 12A; V_{GS} = 0V		1.5	V