isc N-Channel MOSFET Transistor   TK100A06N1，ITK100A06N1

- **FEATURES**
- Low drain-source on-resistance:
  $R_{DS}(ON)$ = 2.7mΩ (typ.) (V_{GS} = 10 V)
- Enhancement mode:
  Vth = 2.0 to 4.0V (V_{DS} = 10 V, I_D=1.0mA)
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device
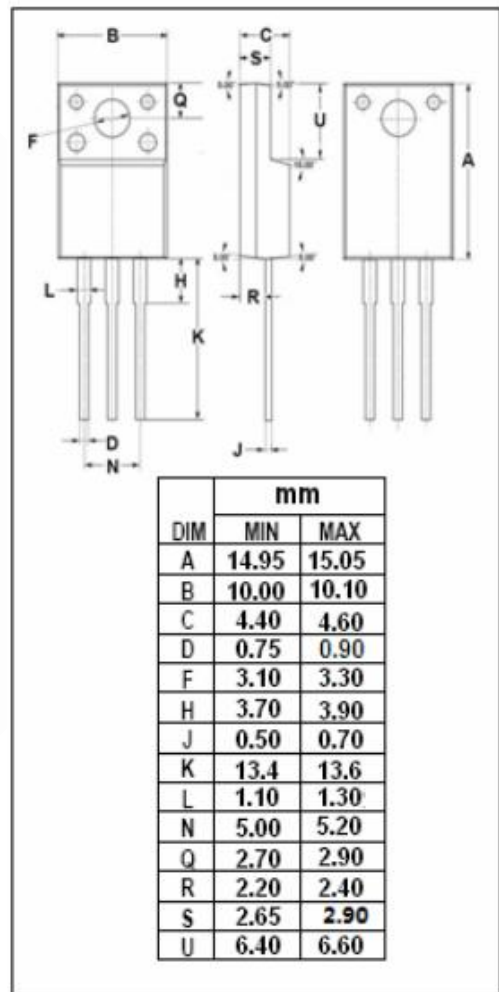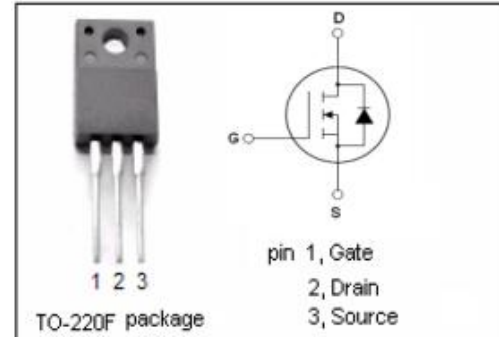 performance and reliable operation

- **DESCRITION**
- Switching Voltage Regulators

pin 1, Gate
2, Drain
3, Source

TO-220F package

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{DSS}	Drain-Source Voltage	60	V
V_{GS}	Gate-Source Voltage	$\pm$20	V
I_D	Drain Current-Continuous	100	A
I_{DM}	Drain Current-Single Pulsed	584	A
P_D	Total Dissipation @T_C=25℃	45	W
T_j	Max. Operating Junction Temperature	150	℃
T_{stg}	Storage Temperature	-55~150	℃

- **THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	MAX	UNIT
Rth(ch-c)	Channel-to-case thermal resistance	2.77	℃/W
Rth(ch-a)	Channel-to-ambient thermal resistance	62.5	℃/W

DIM	mm	
	MIN	MAX
A	14.95	15.05
B	10.00	10.10
C	4.40	4.60
D	0.75	0.90
F	3.10	3.30
H	3.70	3.90
J	0.50	0.70
K	13.4	13.6
L	1.10	1.30
N	5.00	5.20
Q	2.70	2.90
R	2.20	2.40
S	2.65	2.90
U	6.40	6.60

ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
BV_{DSS}	Drain-Source Breakdown Voltage	V_{GS}=0V; I_D= 10mA	60			V
$V_{GS(th)}$	Gate Threshold Voltage	V_{DS}= 10V; I_D=1.0mA	2.0		4.0	V
$R_{DS(on)}$	Drain-Source On-Resistance	V_{GS}= 10V; I_D=50A			2.7	mΩ
I_{GSS}	Gate-Source Leakage Current	V_{GS}= $\pm$20V;V_{DS}= 0V			$\pm$0.1	μA
I_{DSS}	Drain-Source Leakage Current	V_{DS}= 60V; V_{GS}= 0V			10	μA
V_{SDF}	Diode forward voltage	I_{DR} =100A, V_{GS} = 0 V			1.2	V