

isc N-Channel MOSFET Transistor

TK20E60U, ITK20E60U

• FEATURES

- Low drain-source on-resistance:
 $R_{DS(on)} \leq 0.19\Omega$.
- Enhancement mode:
 $V_{th} = 3.0$ to $5.0V$ ($V_{DS} = 10V, I_D = 1mA$)
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

• DESCRIPTION

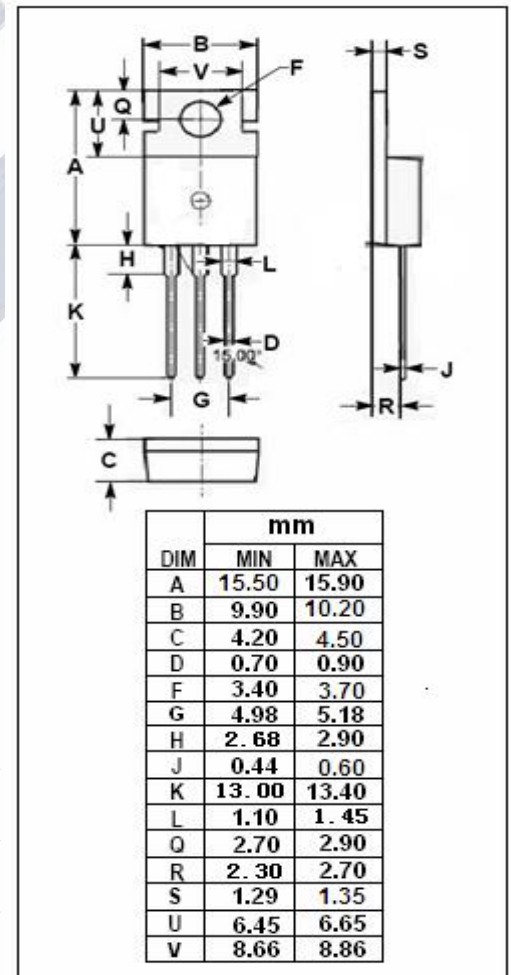
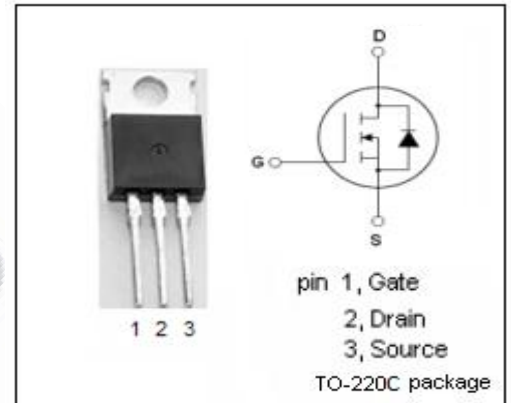
- Switching Voltage Regulators

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{DS}	Drain-Source Voltage	600	V
V_{GS}	Gate-Source Voltage	± 30	V
I_D	Drain Current-Continuous	20	A
I_{DM}	Drain Current-Single Pulsed	40	A
P_D	Total Dissipation @ $T_c = 25^\circ C$	190	W
T_j	Max. Operating Junction Temperature	150	$^\circ C$
T_{stg}	Storage Temperature	-55~150	$^\circ C$

• THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th(ch-c)}$	Channel-to-case thermal resistance	0.658	$^\circ C/W$
$R_{th(ch-a)}$	Channel-to-ambient thermal resistance	83.3	$^\circ C/W$



isc N-Channel MOSFET Transistor
TK20E60U, ITK20E60U
ELECTRICAL CHARACTERISTICS

 T_C=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
BV _{DSS}	Drain-Source Breakdown Voltage	V _{GS} =0V; I _D =10mA	600			V
V _{GS(th)}	Gate Threshold Voltage	V _{DS} =10V; I _D =1mA	3.0		5.0	V
R _{DS(on)}	Drain-Source On-Resistance	V _{GS} =10V; I _D =10A			190	mΩ
I _{GSS}	Gate-Source Leakage Current	V _{GS} = ±30V; V _{DS} = 0V			±1	μA
I _{DSS}	Drain-Source Leakage Current	V _{DS} =600V; V _{GS} = 0V			100	μA
V _{SDF}	Diode forward voltage	I _{DR} =20A, V _{GS} = 0 V			1.7	V