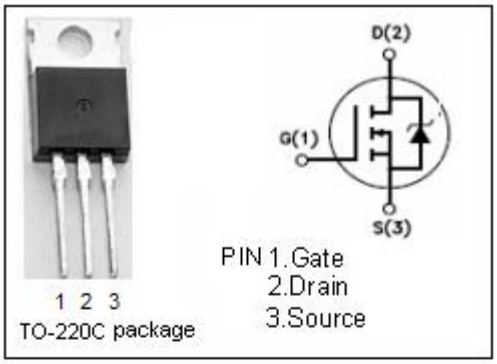
isc N-Channel MOSFET Transistor 2SK2025-01

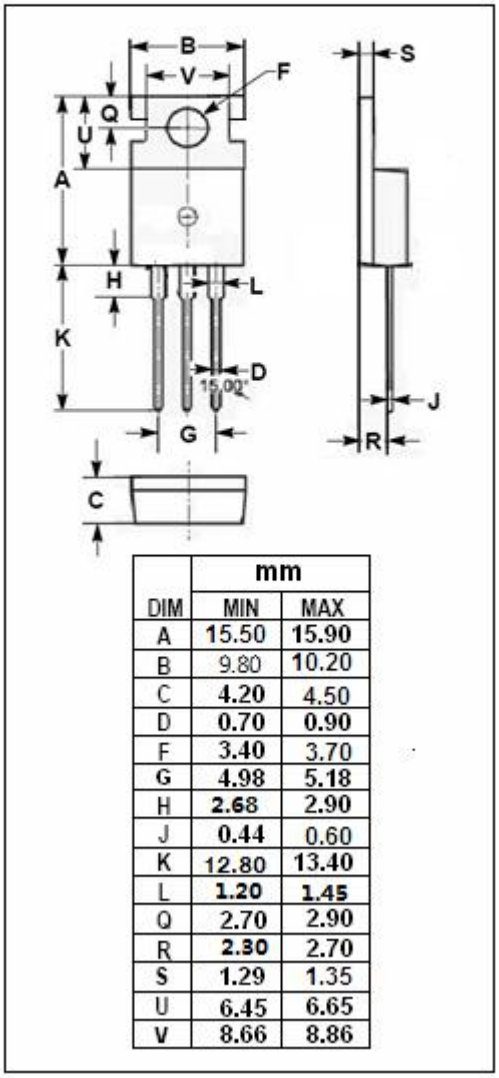
DESCRIPTION

- Drain Current –I_D= 4A@ T_C=25℃
- Drain Source Voltage-
  : V_{DSS}= 600V(Min)
- Fast Switching Speed
- Minimum Lot-to-Lot variations for robust device performance and reliable operation



APPLICATIONS

- Switching regulators
- UPS
- DC-DC converters
- General purpose power amplifier



DIM	mm MIN	MAX
A	15.50	15.90
B	9.80	10.20
C	4.20	4.50
D	0.70	0.90
F	3.40	3.70
G	4.98	5.18
H	2.68	2.90
J	0.44	0.60
K	12.80	13.40
L	1.20	1.45
Q	2.70	2.90
R	2.30	2.70
S	1.29	1.35
U	6.45	6.65
V	8.66	8.86

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	ARAMETER	VALUE	UNIT
V_{DSS}	Drain-Source Voltage (V_{GS}=0)	600	V
V_{GS}	Gate-Source Voltage	±30	V
I_D	Drain Current-continuous@ TC=25℃	4	A
$I_{D(puls)}$	Pulsed Drain Current	16	A
P_{tot}	Total Dissipation@T_C=25℃	60	W
T_j	Max. Operating Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-55~150	℃

• THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance, Junction to Case	2.08	℃/W
$R_{th\ j\text{-}a}$	Thermal Resistance, Junction to Ambient	75	℃/W

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• **ELECTRICAL CHARACTERISTICS (T_C=25℃)**

SYMBOL	PARAMETER	CONDITIONS	MIN	TYPE	MAX	UNIT
$V_{(BR)DSS}$	Drain-Source Breakdown Voltage	V_{GS}= 0; I_D=1mA	600			V
$V_{GS(th)}$	Gate Threshold Voltage	V_{DS}= V_{GS}; I_D=1mA	2.5	3.0	3.5	V
$R_{DS(on)}$	Drain-Source On-Resistance	V_{GS}= 10V; I_D= 2A		2.0	2.4	Ω
I_{GSS}	Gate-Body Leakage Current	V_{GS}= ±30V;V_{DS}= 0			±100	nA
I_{DSS}	Zero Gate Voltage Drain Current	V_{DS}= 600V; V_{GS}= 0			500	μA
Ciss	Input Capacitance	V_{DS}=25V; V_{GS}=0V; f_T=1MHz		1000	1500	pF
Crss	Reverse Transfer Capacitance			20	30	
Coss	Output Capacitance			85	130	
t_r	Rise Time	V_{GS}=10V; I_D=4A; V_{DD}=300V; R_L=10Ω		15	25	ns
$t_{d(on)}$	Turn-on Delay Time			20	30	
t_f	Fall Time			15	25	
$t_{d(off)}$	Turn-off Delay Time			45	70	