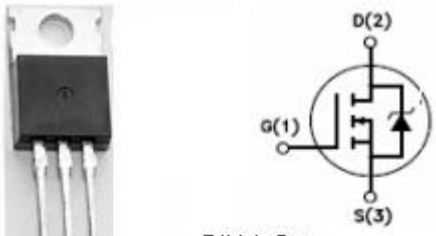
isc N-Channel MOSFET Transistor 2SK1876

DESCRIPTION

- Drain Current I_D= 10A@ T_C=25℃
- Drain Source Voltage
  : V_{DSS}= 450V(Min)
- Fast Switching Speed
- Low on-resistance
- For switchinggregulator,DC-DC Converter
- Minimum Lot-to-Lot variations for robust device performance and reliable operation



APPLICATIONS

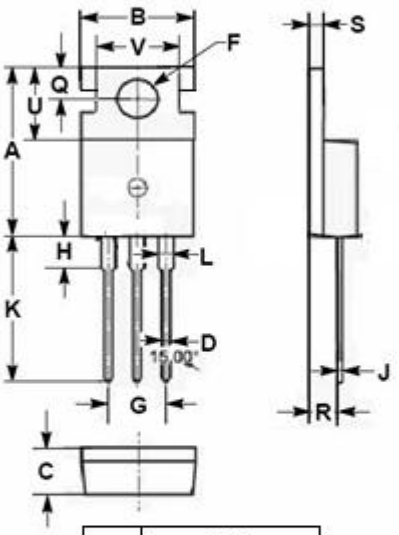
- High speed power switching

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{DSS}	Drain-Source Voltage (V_{GS}=0)	450	V
V_{GS}	Gate-Source Voltage	±30	V
I_D	Drain Current-continuous@ TC=25℃	10	A
P_{tot}	Total Dissipation@TC=25℃	80	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	1.56	℃/W
$R_{th\ j\text{-}a}$	Thermal Resistance, Junction to Ambient	75	℃/W



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

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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	450			V
$V_{(BR)GSS}$	Gate-Source Breakdown Voltage	V_{DS}= 0; I_G= 100 μA	±30			V
$V_{GS(th)}$	Gate Threshold Voltage	V_{DS}= V_{GS}; I_D=1mA	2.5		3.5	V
V_{DF}	Body to drain diode forward voltage	I_S= 5A, V_{GS}= 0		0.9		V
$R_{DS(on)}$	Drain-Source On-Resistance	V_{GS}= 10V; I_D=5A			0.65	Ω
I_{GSS}	Gate-Body Leakage Current	V_{GS}= ±30V;V_{DS}= 0			±100	nA
I_{DSS}	Zero Gate Voltage Drain Current	V_{DS}=450V; V_{GS}= 0			500	μA
C_{iss}	Input Capacitance	V_{DS}=10V; V_{GS}=0V; f_T=1MHz		1800		pF
C_{rss}	Reverse Transfer Capacitance			100		
C_{oss}	Output Capacitance			240		
t_r	Rise Time	V_{GS}=10V; I_D=2.5A; V_{DD}=200V; R_L=12Ω		120		ns
t_{on}	Turn-on Time			45		
t_f	Fall Time			120		
t_{off}	Turn-off Time			240		

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