

isc N-Channel MOSFET Transistor

2SK790

DESCRIPTION

- Drain Current $-I_D=15A@ T_C=25^{\circ}C$
- Drain Source Voltage-
: $V_{DSS}= 500V(\text{Min})$
- Fast Switching Speed

APPLICATIONS

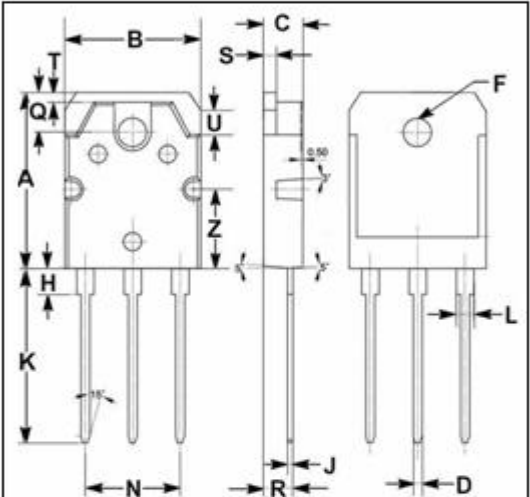
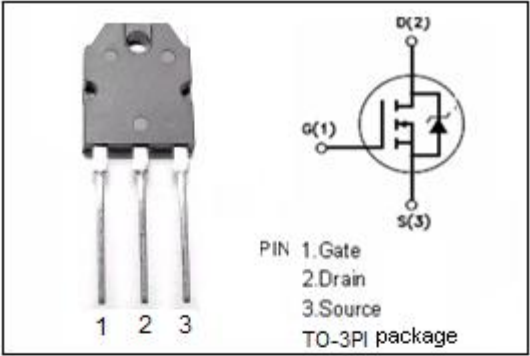
- Designed for high voltage, high speed power switching applications such as switching regulators, converters, solenoid and relay drivers.

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

SYMBOL	ARAMETER	VALUE	UNIT
V_{DSS}	Drain-Source Voltage ($V_{GS}=0$)	500	V
V_{GS}	Gate-Source Voltage	± 20	V
I_D	Drain Current-continuous@ $TC=25^{\circ}C$	15	A
P_{tot}	Total Dissipation@ $TC=25^{\circ}C$	150	W
T_j	Max. Operating Junction Temperature	150	$^{\circ}C$
T_{stg}	Storage Temperature Range	-55~150	$^{\circ}C$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th j-c}$	Thermal Resistance,Junction to Case	1.0	$^{\circ}C/W$
$R_{th j-a}$	Thermal Resistance,Junction to Ambient	62.5	$^{\circ}C/W$



DIM	mm	
	MIN	MAX
A	19.90	20.10
B	15.50	15.70
C	4.40	4.60
D	0.90	1.10
F	3.20	3.40
H	2.90	3.10
J	0.50	0.70
K	19.90	20.10
L	1.90	2.10
N	10.80	11.00
Q	4.40	4.60
R	3.30	3.35
S	1.40	1.60
T	1.00	1.20
U	2.10	2.30
Z	8.90	9.10

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• ELECTRICAL CHARACTERISTICS ($T_C=25^{\circ}\text{C}$)

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
$V_{(BR)DSS}$	Drain-Source Breakdown Voltage	$V_{GS}=0$; $I_D=10\text{mA}$	500			V
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS}=10\text{V}$; $I_D=1\text{mA}$	2.0		4.0	V
$R_{DS(on)}$	Drain-Source On-stage Resistance	$V_{GS}=10\text{V}$; $I_D=7\text{A}$			0.40	Ω
I_{GSS}	Gate Source Leakage Current	$V_{GS}=\pm 20\text{V}$; $V_{DS}=0$			± 100	nA
I_{DSS}	Zero Gate Voltage Drain Current	$V_{DS}=500\text{V}$; $V_{GS}=0$			300	μA
t_r	Rise time	$V_{GS}=10\text{V}$; $I_D=7\text{A}$; $R_L=30\Omega$		70	140	ns
t_{on}	Turn-on time			100	200	ns
t_f	Fall time			75	150	ns
t_{off}	Turn-off time			350	700	ns
V_{SD}	Diode Forward Voltage	$I_F=13\text{A}$; $V_{GS}=0$			1.7	V