INCHANGE Semiconductor

Isc N-Channel MOSFET Transistor   STP110N8F6

• **FEATURES**

• Very low on-resistance

• Very low gate charge

• High avalanche ruggedness

• Low gate drive power loss

• 100% avalanche tested

• Minimum Lot-to-Lot variations for robust device
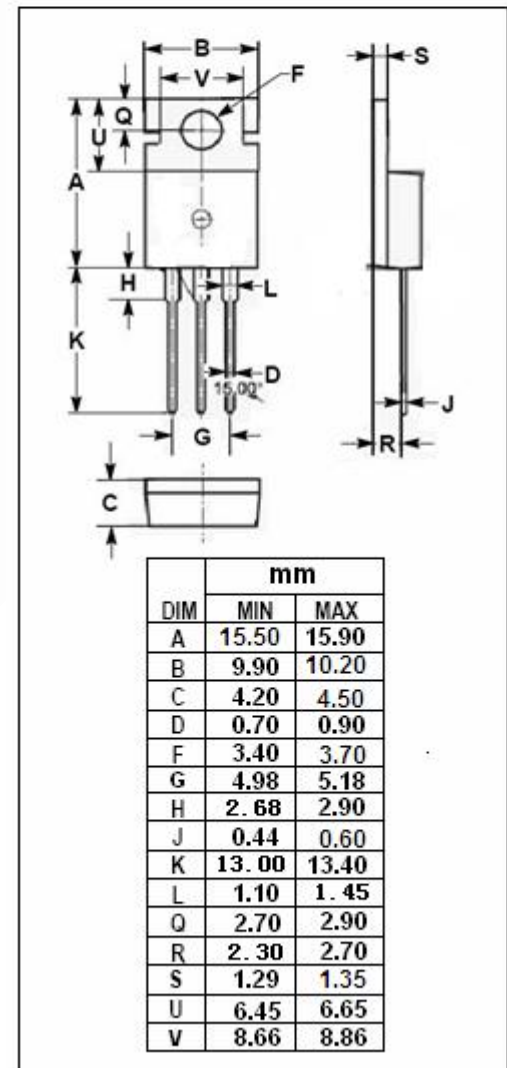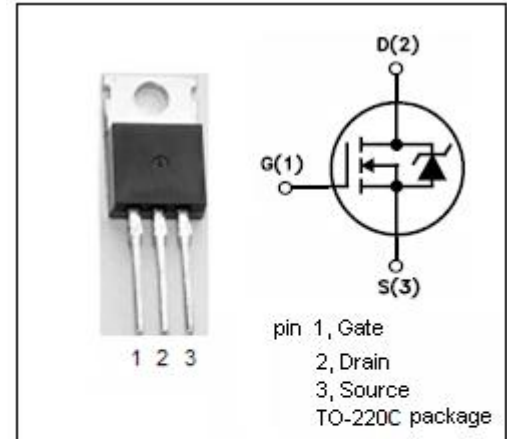 performance and reliable operation

• **APPLICATIONS**

• Switching applications

pin 1, Gate
2, Drain
3, Source
TO-220C package

• **ABSOLUTE MAXIMUM RATINGS(T$_a$=25℃)**

SYMBOL	PARAMETER	VALUE	UNIT
V$_{DSS}$	Drain-Source Voltage	80	V
V$_{GSS}$	Gate-Source Voltage	±20	V
I$_D$	Drain Current-Continuous@T$_C$=25℃ T$_C$=100℃	110 85	A
I$_{DM}$	Drain Current-Single Pulsed	440	A
P$_D$	Total Dissipation	200	W
T$_j$	Operating Junction Temperature	-55~175	℃
T$_{stg}$	Storage Temperature	-55~175	℃

• **THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	MAX	UNIT
Rth(ch-c)	Channel-to-case thermal resistance	0.75	℃/W
Rth(ch-a)	Channel-to-ambient thermal resistance	62.5	℃/W

mm		
DIM	MIN	MAX
A	15.50	15.90
B	9.90	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	13.00	13.40
L	1.10	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

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= 1mA	80			V
$V_{GS(th)}$	Gate Threshold Voltage	V_{DS}=±20V; I_D=0.25mA	2.5		4.5	V
$R_{DS(on)}$	Drain-Source On-Resistance	V_{GS}= 10V; I_D=55A		5.6	6.5	mΩ
I_{GSS}	Gate-Source Leakage Current	V_{GS}= ±20V；V_{DS}= 0V			±0.1	μA
I_{DSS}	Drain-Source Leakage Current	V_{DS}= 80V; V_{GS}= 0V；T_J=25℃ T_J=125℃			1 50	μA
V_{SDF}	Diode forward voltage	I_{SD}=110A, V_{GS} = 0 V			1.2	V