

isc N-Channel MOSFET Transistor

IRL3705Z, IIRL3705Z

• FEATURES

- Static drain-source on-resistance:
 $R_{DS(on)} \leq 8.0m\Omega$
- Enhancement mode
- Fast Switching Speed
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

• DESCRIPTION

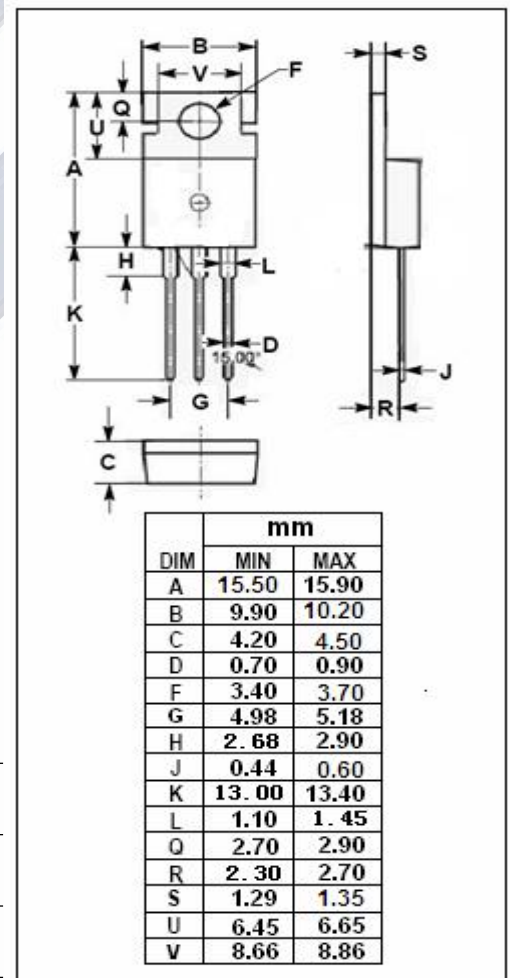
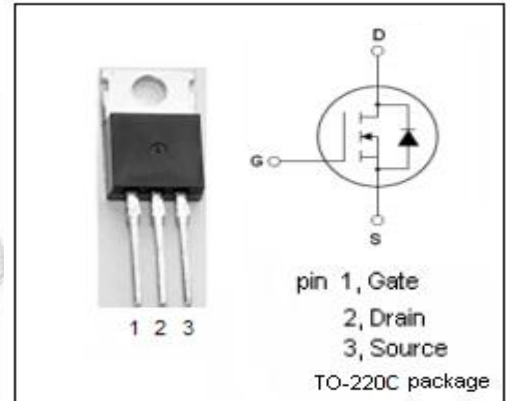
- reliable device for use in a wide variety of applications

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{DS}	Drain-Source Voltage	55	V
V_{GS}	Gate-Source Voltage	± 16	V
I_D	Drain Current-Continuous	75	A
I_{DM}	Drain Current-Single Pulsed	340	A
P_D	Total Dissipation @ $T_c=25^\circ C$	130	W
T_j	Max. Operating Junction Temperature	175	$^\circ C$
T_{stg}	Storage Temperature	-55~175	$^\circ C$

• THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th(ch-c)}$	Channel-to-case thermal resistance	1.14	$^\circ C/W$
$R_{th(ch-a)}$	Channel-to-ambient thermal resistance	62	$^\circ C/W$



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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 = 250 μ A	55			V
V _{GS(th)}	Gate Threshold Voltage	V _{DS} =V _{GS} ; I _D =250 μ A	1.0		3.0	V
R _{DS(on)}	Drain-Source On-Resistance	V _{GS} =10V; I _D =52A			8.0	mΩ
I _{GSS}	Gate-Source Leakage Current	V _{GS} =±16V			±0.2	μ A
I _{DSS}	Drain-Source Leakage Current	V _{DS} =55V; V _{GS} = 0V			20	μ A
V _{SD}	Diode forward voltage	I _S =52A, V _{GS} = 0 V			1.3	V