

isc Silicon NPN Power Transistor
3DD209L
DESCRIPTION

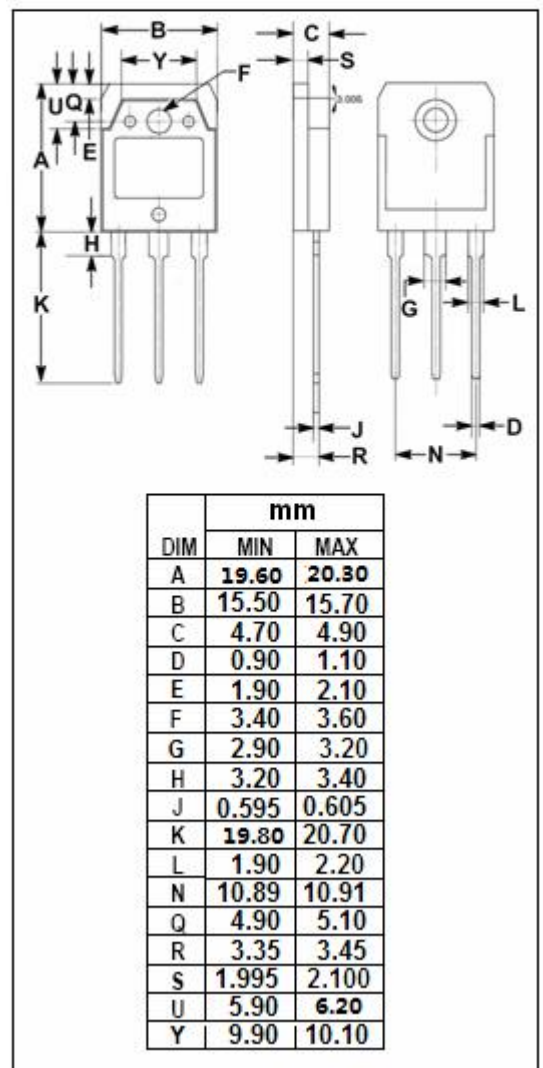
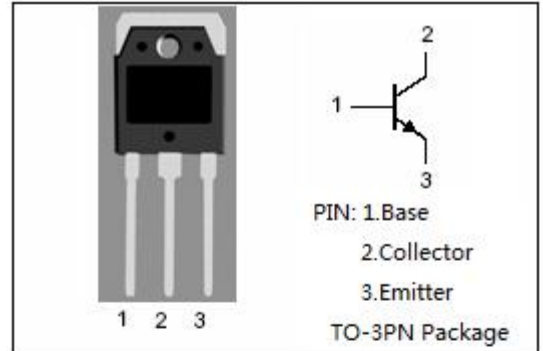
- High breakdown voltage
- High switching speed
- High current capability
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Energy-saving light
- Electronic ballasts
- High frequency switching power supply
- High frequency power transform

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	700	V
V_{CEO}	Collector-Emitter Voltage	400	V
V_{EBO}	Emitter-Base Voltage	9	V
I_c	Collector Current-Continuous	12	A
P_C	Collector Power Dissipation@ $T_C=25^{\circ}\text{C}$	120	W
T_J	Junction Temperature	150	$^{\circ}\text{C}$
T_{stg}	Storage Temperature	-55~150	$^{\circ}\text{C}$



ELECTRICAL CHARACTERISTICS

 T_C=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
V _{(BR)CEO}	Collector-Emitter Breakdown Voltage	I _C = 10mA; I _B = 0	400			V
V _{(BR)CBO}	Collector-Base Breakdown Voltage	I _C =1mA; I _E = 0	700			V
V _{(BR)EBO}	Emitter-Base Breakdown Voltage	I _E = 1mA; I _C = 0	9			V
V _{CE(sat)-1}	Collector-Emitter Saturation Voltage	I _C = 5A; I _B = 1A			1.2	V
V _{CE(sat)-2}	Collector-Emitter Saturation Voltage	I _C = 8A; I _B = 1.6A			1.8	V
V _{BE(sat)}	Base-Emitter Saturation Voltage	I _C = 8A ;I _B = 1.6A			1.8	V
I _{CEO}	Collector Cutoff Current	V _{CE} = 400V; I _B = 0			50	uA
I _{EBO}	Emitter Cutoff Current	V _{EB} = 9V; I _C = 0			10	uA
h _{FE-1}	DC Current Gain	I _C = 5A; V _{CE} = 10V	8		40	
h _{FE-2}	DC Current Gain	I _C = 8A; V _{CE} = 5V	5			

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