

isc Silicon NPN Power Transistor
3DD209L
DESCRIPTION

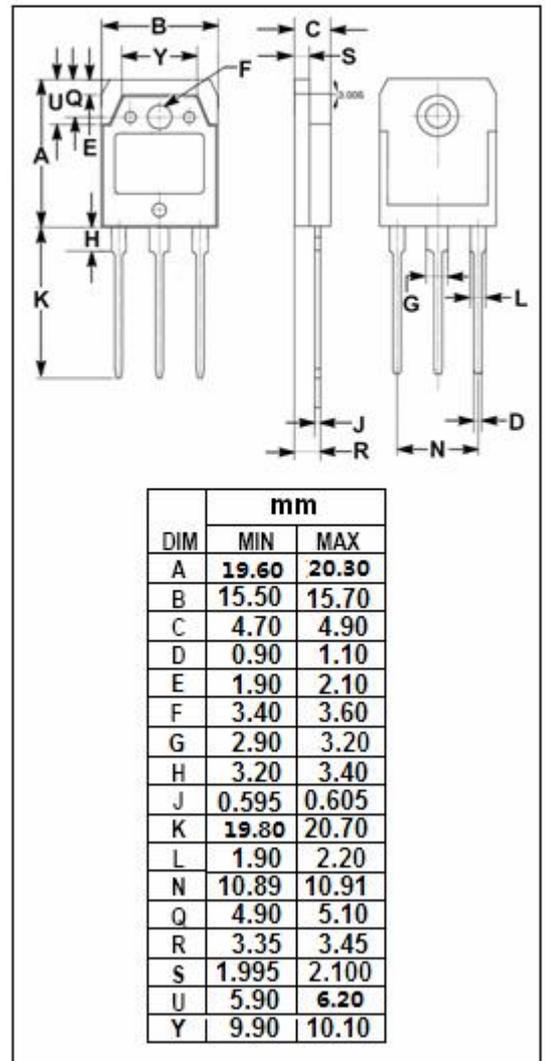
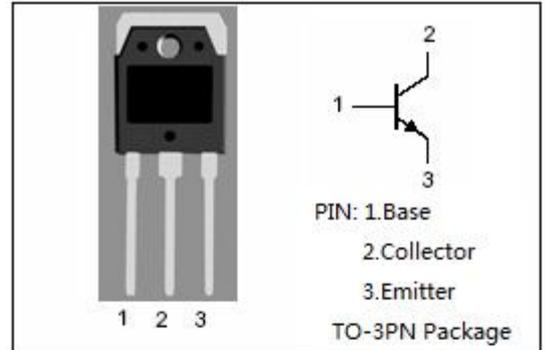
- High breakdown voltage
- High switching speed
- High current capability
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

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 $T_C=25^{\circ}\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	$I_C=10\text{mA}; I_B=0$	400			V
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	$I_C=1\text{mA}; I_E=0$	700			V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	$I_E=1\text{mA}; I_C=0$	9			V
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	$I_C=5\text{A}; I_B=1\text{A}$			1.2	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	$I_C=8\text{A}; I_B=1.6\text{A}$			1.8	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C=8\text{A}; I_B=1.6\text{A}$			1.8	V
I_{CEO}	Collector Cutoff Current	$V_{CE}=400\text{V}; I_B=0$			50	μA
I_{EBO}	Emitter Cutoff Current	$V_{EB}=9\text{V}; I_C=0$			10	μA
h_{FE-1}	DC Current Gain	$I_C=5\text{A}; V_{CE}=10\text{V}$	8		40	
h_{FE-2}	DC Current Gain	$I_C=8\text{A}; V_{CE}=5\text{V}$	5			

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