

isc Silicon NPN Power Transistor
3DD13009NL
DESCRIPTION

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

APPLICATIONS

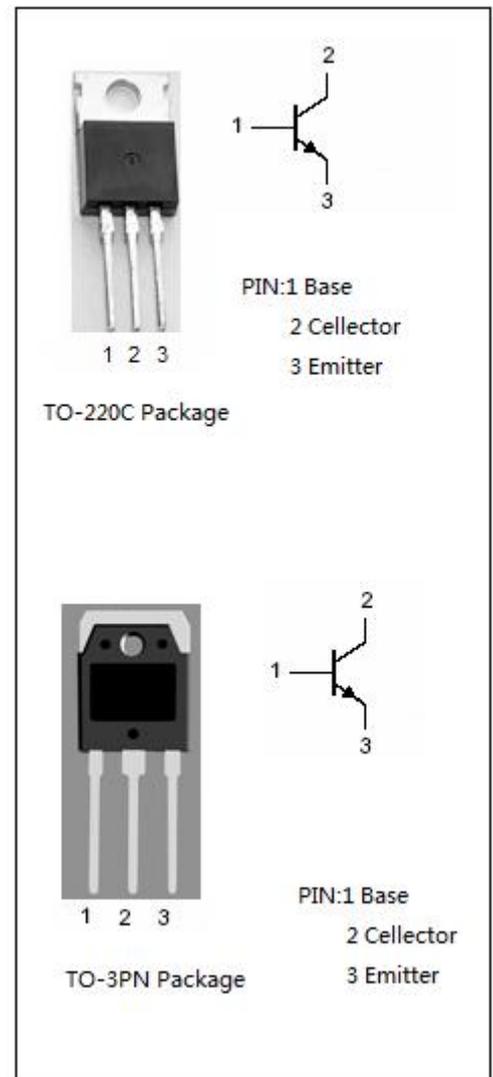
- Energy-saving light
- High frequency switching power supply
- High frequency power transform

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

SYMBOL	PARAMETER	VALUE	UNIT	
V_{CEV}	Collector-Emitter Voltage	600	V	
V_{CEO}	Collector-Emitter Voltage	350	V	
V_{EBO}	Emitter-Base Voltage	9	V	
I_C	Collector Current-Continuous	15	A	
I_{CM}	Collector Current-peak	30	A	
I_B	Base Current	7	A	
I_{BM}	Base Current-Peak	14	A	
P_C	Collector Power Dissipation $T_c=25^\circ\text{C}$	TO-220	110	W
		TO-3PN	130	
T_j	Junction Temperature	150	$^\circ\text{C}$	
T_{stg}	Storage Temperature Range	-55~150	$^\circ\text{C}$	

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT	
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	TO-220	1.14	$^\circ\text{C/W}$
		TO-3PN	0.96	



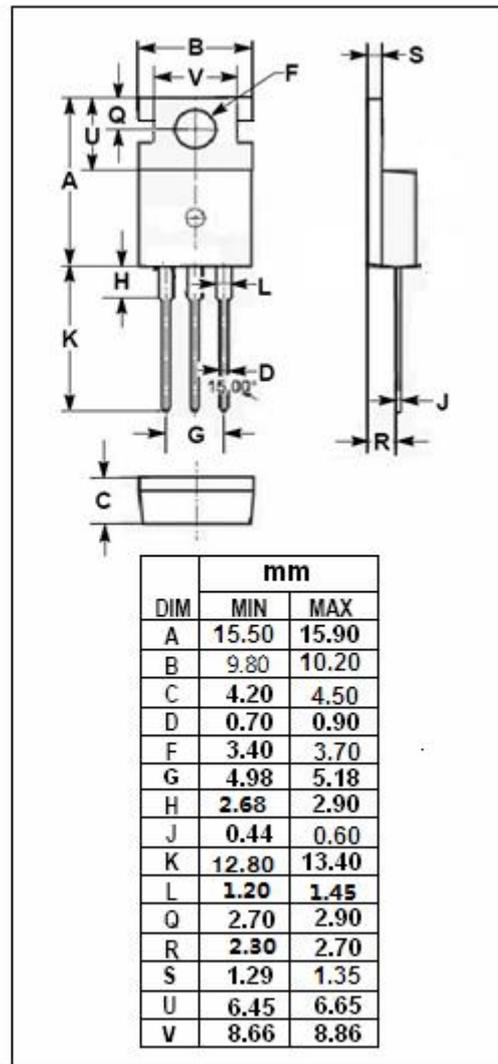
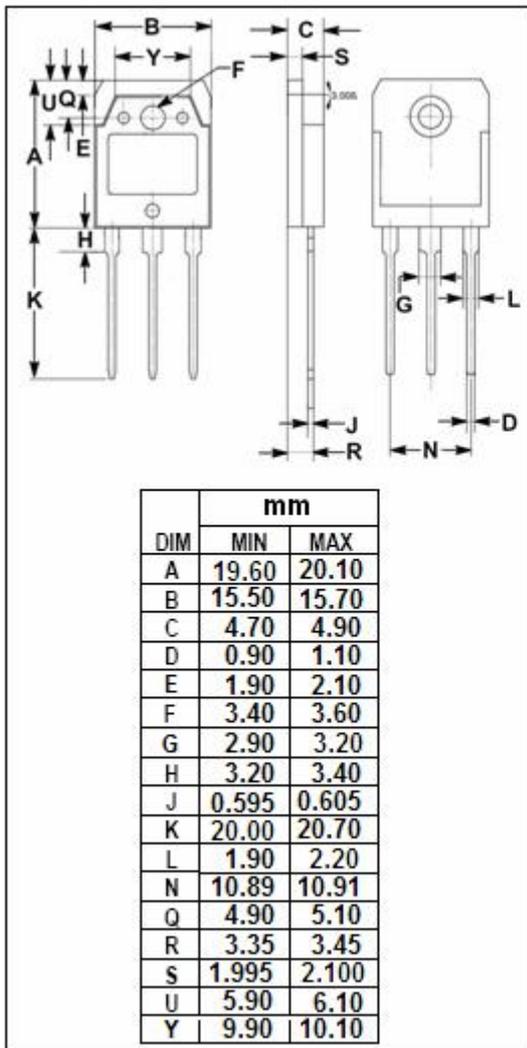
isc Silicon NPN Power Transistor**3DD13009NL****ELECTRICAL CHARACTERISTICS****T_C =25°C unless otherwise specified**

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CEO(SUS)}	Collector-Emitter Sustaining Voltage	I _C = 10mA; I _B = 0	350			V
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = 8A ;I _B = 1.6A			1.5	V
V _{BE(sat)}	Base-Emitter Saturation Voltage	I _C = 8A ;I _B = 1.6A			1.6	V
I _{CBO}	Collector Cutoff Current	V _{CB} = 600V; I _E =0			0.1	mA
I _{EBO}	Emitter Cutoff Current	V _{EB} =9V; I _C = 0			0.01	mA
h _{FE-1}	DC Current Gain	I _C = 5A; V _{CE} = 5V	8		40	
h _{FE-2}	DC Current Gain	I _C = 8A; V _{CE} = 5V	8			

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3DD13009N

Outline Drawing



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