

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

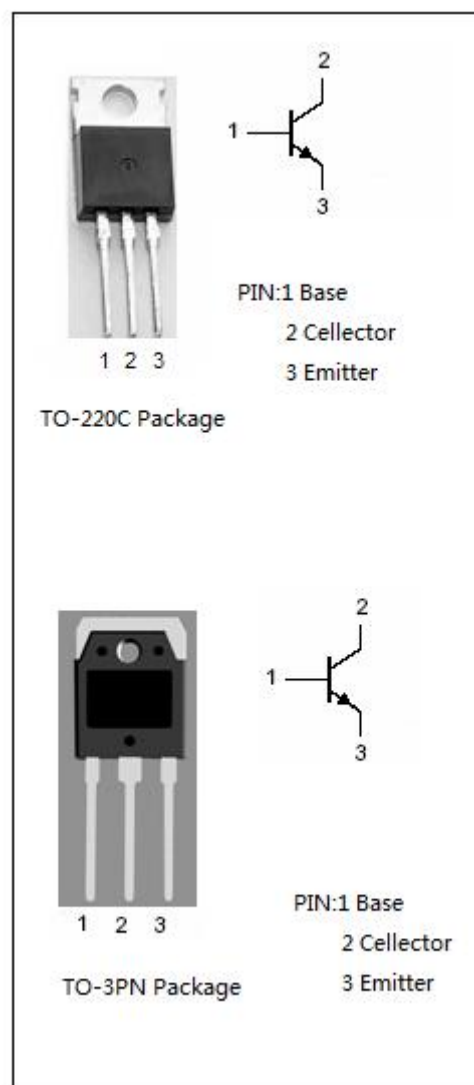
- Energy-saving light
- High frequency switching power supply
- High frequency power transform

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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Outline Drawing

