

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

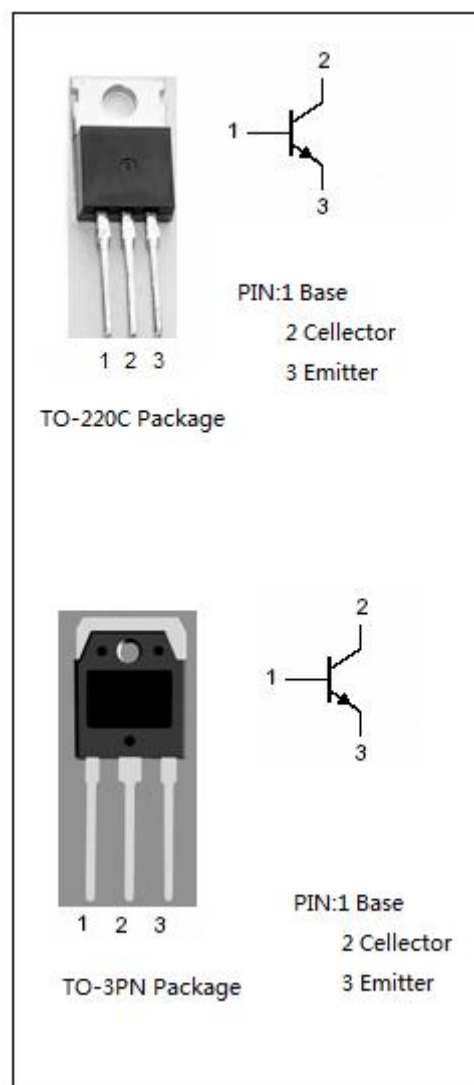
- Energy-saving ligh
- High frequency switching power supply
- High frequency power transform

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	



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ELECTRICAL CHARACTERISTICS

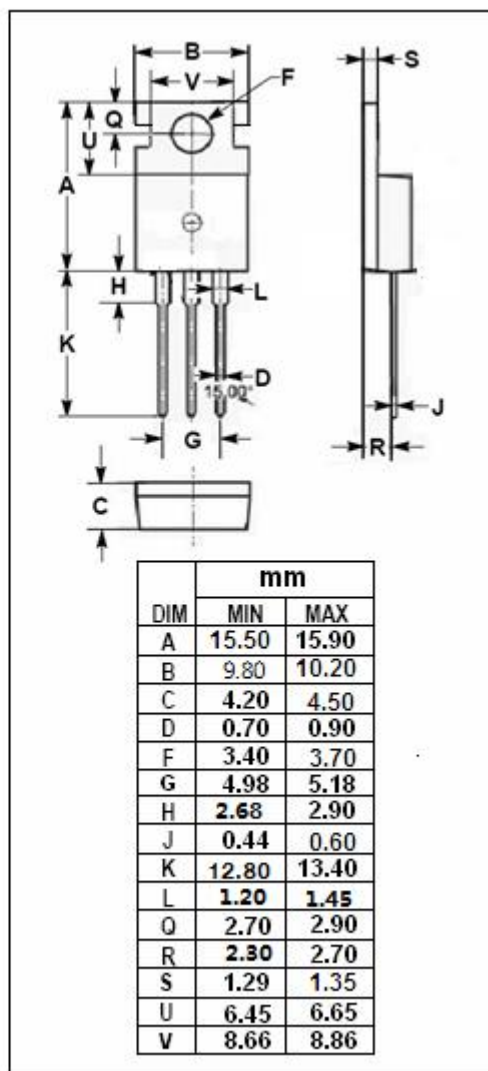
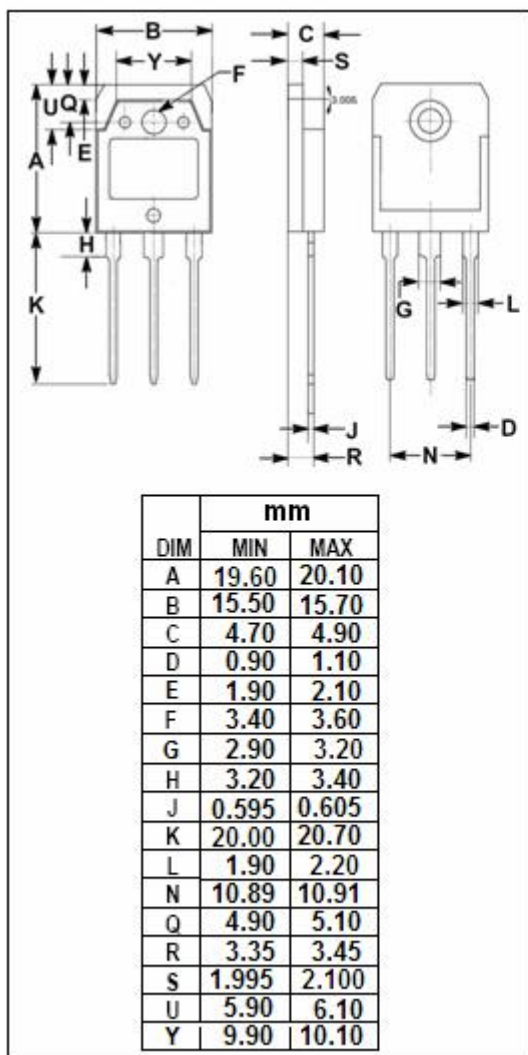
 $T_c = 25^{\circ}\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C = 10\text{mA}; I_B = 0$	350			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = 8\text{A}; I_B = 1.6\text{A}$			1.5	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C = 8\text{A}; I_B = 1.6\text{A}$			1.6	V
I_{CBO}	Collector Cutoff Current	$V_{CB} = 600\text{V}; I_E = 0$			0.1	mA
I_{EBO}	Emitter Cutoff Current	$V_{EB} = 9\text{V}; I_C = 0$			0.01	mA
h_{FE-1}	DC Current Gain	$I_C = 5\text{A}; V_{CE} = 5\text{V}$	8		40	
h_{FE-2}	DC Current Gain	$I_C = 8\text{A}; V_{CE} = 5\text{V}$	8			

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Outline Drawing



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