

isc Silicon NPN Power Transistor

2SC4330

DESCRIPTION

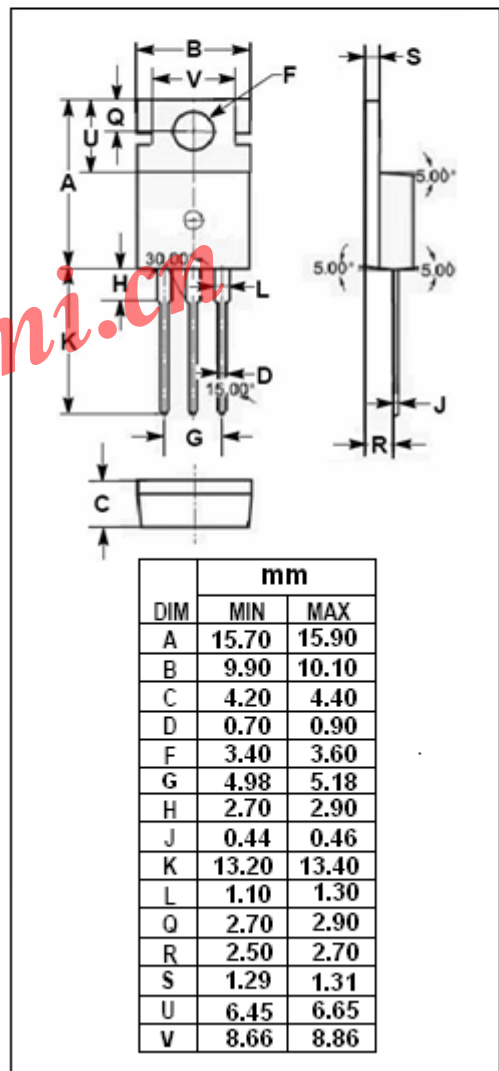
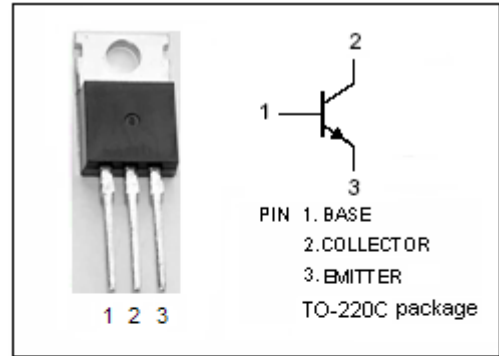
- Low Collector Saturation Voltage
: $V_{CE(sat)} = 0.5V(\text{Max}) @ I_C = 8A$
- Collector-Emitter Sustaining Voltage-
: $V_{CEO(SUS)} = 100V (\text{Min})$
- High Switching Speed

APPLICATIONS

- Designed for high speed and power switching applications

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	150	V
V_{CEO}	Collector-Emitter Voltage	100	V
V_{EBO}	Emitter-Base Voltage	7	V
I_C	Collector Current-Continuous	10	A
I_{CM}	Collector Current-Peak	20	A
I_B	Base Current-Continuous	5	A
P_C	Collector Power Dissipation @ $T_C=25^\circ\text{C}$	40	W
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-55~150	$^\circ\text{C}$



isc Silicon NPN Power Transistor

2SC4330

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	$I_C=3A; I_B=0.3A, L=1mH$	100			V
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	$I_C=6A; I_B=0.3A$			0.3	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	$I_C=8A; I_B=0.4A$			0.5	V
$V_{BE(sat)-1}$	Base-Emitter Saturation Voltage	$I_C=6A; I_B=0.3A$			1.2	V
$V_{BE(sat)-2}$	Base-Emitter Saturation Voltage	$I_C=8A; I_B=0.4A$			1.5	V
I_{CBO}	Collector Cutoff Current	$V_{CB}=150V; I_E=0$			10	μA
I_{CEX}	Collector Cutoff Current	$V_{CE}=100V; V_{BE}=-1.5V$ $V_{CE}=100V; V_{BE}=-1.5V; T_a=125^{\circ}\text{C}$			10 1.0	μA mA
I_{EBO}	Emitter Cutoff Current	$V_{EB}=5V; I_C=0$			10	μA
h_{FE-1}	DC Current Gain	$I_C=1A; V_{CE}=2V$	100			
h_{FE-2}	DC Current Gain	$I_C=2A; V_{CE}=2V$	100	200	400	
h_{FE-3}	DC Current Gain	$I_C=6A; V_{CE}=2V$	60			

◆ h_{FE-2} classifications

M	L	K
100-200	150-300	200-400