

isc Silicon NPN Power Transistor

BUP22A

DESCRIPTION

- Collector-Emitter Sustaining Voltage-
: $V_{CEO(SUS)} = 350V(\text{Min})$
- High Switching Speed

APPLICATIONS

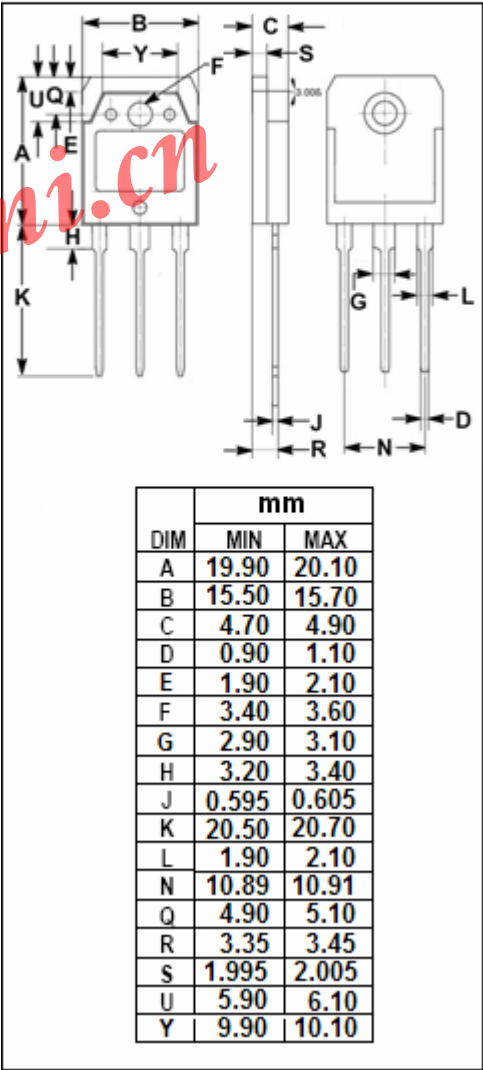
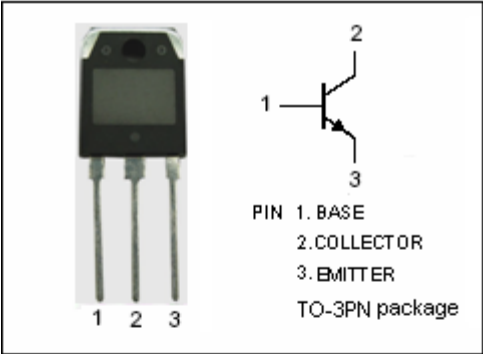
- Designed for use in converters, inverters, switching-regulators, motor control systems etc.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CES}	Collector- Emitter Voltage $V_{BE}=0$	650	V
V_{CEO}	Collector-Emitter Voltage	350	V
V_{EBO}	Emitter-Base Voltage	9	V
I_C	Collector Current-Continuous	8	A
I_{CM}	Collector Current-Peak	20	A
I_B	Base Current-Continuous	4	A
I_{BM}	Base Current-Peak	6	A
P_C	Collector Power Dissipation @ $T_C=25^{\circ}\text{C}$	125	W
T_J	Junction Temperature	150	$^{\circ}\text{C}$
T_{stg}	Storage Temperature Range	-65~150	$^{\circ}\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	1.0	$^{\circ}\text{C/W}$



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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	$I_C = 0.1\text{A}$; $I_B = 0$; $L = 25\text{ mH}$	350			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = 6\text{A}$; $I_B = 0.67\text{A}$			1.5	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C = 6\text{A}$; $I_B = 0.67\text{A}$			1.5	V
I_{CES}	Collector Cutoff Current	$V_{CE} = V_{CESmax}$; $V_{BE} = 0$ $V_{CE} = V_{CESmax}$; $V_{BE} = 0$; $T_J = 125^{\circ}\text{C}$			1 2	mA
I_{EBO}	Emitter Cutoff Current	$V_{EB} = 9\text{V}$; $I_C = 0$			10	mA
h_{FE}	DC Current Gain	$I_C = 1\text{A}$; $V_{CE} = 5\text{V}$		25		

Switching Times; Resistive Load

t_{on}	Turn-On Time	$I_C = 6\text{A}$; $I_{B1} = -I_{B2} = 0.67\text{A}$		0.5		$\mu\text{ s}$
t_s	Storage Time			3.0		$\mu\text{ s}$
t_f	Fall Time			0.3		$\mu\text{ s}$