

isc Silicon NPN Power Transistors

BUP23B/C

DESCRIPTION

- Collector-Emitter Sustaining Voltage-
: $V_{CEO(SUS)} = 400V$ (Min)-BUP23B
450V (Min)-BUP23C
- High Switching Speed

APPLICATIONS

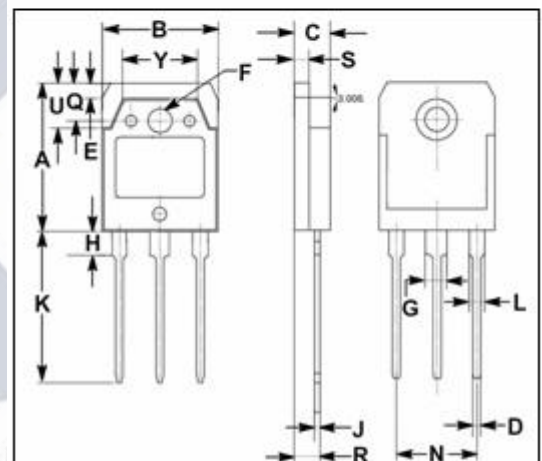
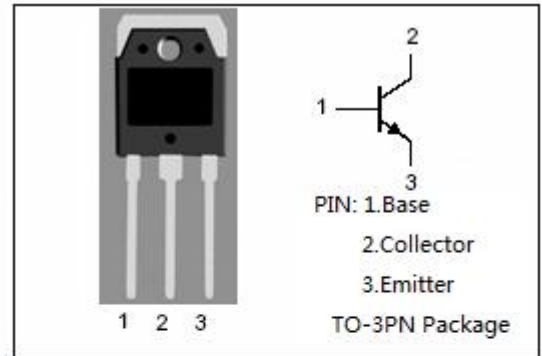
- Designed for use in converters, inverters, switching regulators, motor control systems etc.

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

SYMBOL	PARAMETER	VALUE	UNIT	
V_{CES}	Collector- Emitter Voltage($V_{BE} = 0$)	BUP23B	750	V
		BUP23C	850	
V_{CEO}	Collector-Emitter Voltage	BUP23B	400	V
		BUP23C	430	
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- Continuous	6	A	
I_{BM}	Base Current-Peak	9	A	
P_C	Collector Power Dissipation @ $T_c=25^\circ C$	175	W	
T_J	Junction Temperature	150	$^\circ C$	
T_{stg}	Storage Temperature Range	-65~150	$^\circ C$	

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R_{thj-c}	Thermal Resistance, Junction to Case	0.7	$^\circ C/W$



DIM	mm	
	MIN	MAX
A	19.60	20.30
B	15.50	15.70
C	4.70	4.90
D	0.90	1.10
E	1.90	2.10
F	3.40	3.60
G	2.90	3.20
H	3.20	3.40
J	0.595	0.605
K	19.80	20.70
L	1.90	2.20
N	10.89	10.91
Q	4.90	5.10
R	3.35	3.45
S	1.995	2.100
U	5.90	6.20
Y	9.90	10.10

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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	BUP23B	$I_C=50\text{mA}; I_B=0$	400			V
		BUP23C		450			
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	BUP23B	$I_C=10\text{A}; I_B=1.33\text{A}$			1.5	V
		BUP23C		$I_C=10\text{A}; I_B=1.67\text{A}$			
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	BUP23B	$I_C=10\text{A}; I_B=1.33\text{A}$			1.5	V
		BUP23C		$I_C=10\text{A}; I_B=1.67\text{A}$			
I_{CES}	Collector Cutoff Current	$V_{CE}=V_{CESmax}; V_{BE}=0$			1	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	For BUP23B $I_C=10\text{A}; I_{B1}=-I_{B2}=1.33\text{A}$ For BUP23C $I_C=10\text{A}; I_{B1}=-I_{B2}=1.67\text{A}$		0.7		μs
t_{stg}	Storage Time			2.0		μs
t_f	Fall Time			0.27		μs