

INCHANGE Semiconductor

isc Product Specification

isc Silicon NPN Power Transistors

BUS21B/C

DESCRIPTION

- High Switching Speed
- Collector-Emitter Sustaining Voltage-
: $V_{CEO(SUS)} = 400V$ (Min)-BUS21B
450V (Min)-BUS21C

APPLICATIONS

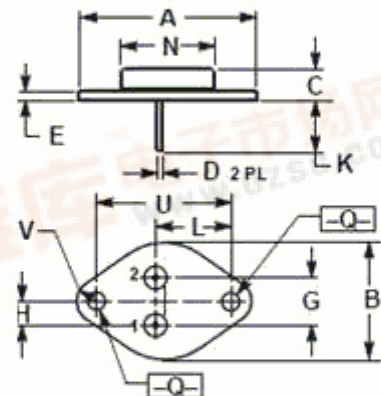
- Designed for use in converters, inverters, switching regulators, motor control systems etc.

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

SYMBOL	PARAMETER	MAX	UNIT
V_{CES}	Collector- Emitter Voltage($V_{BE}=0$)	BUS21B 750	V
		BUS21C 850	
V_{CEO}	Collector-Emitter Voltage	BUS21B 400	V
		BUS21C 450	
V_{EBO}	Emitter-Base Voltage	9	V
I_C	Collector Current-Continuous	5	A
I_{CM}	Collector Current-Peak	10	A
I_B	Base Current	2	A
I_{BM}	Base Current-Peak	4	A
P_C	Collector Power Dissipation @ $T_C=25^\circ C$	100	W
T_j	Junction Temperature	200	$^\circ C$
T_{stg}	Storage Temperature Range	-65~200	$^\circ C$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th j-c}$	Thermal Resistance, Junction to Case	1.75	$^\circ C/W$



DIM	mm	
	MIN	MAX
A	39.00	
B	25.30	26.67
C	7.60	8.30
D	0.90	1.10
E	1.40	1.60
G	10.92	
H	5.46	
K	11.40	13.50
L	16.75	17.05
N	19.40	19.62
Q	4.00	4.20
U	30.00	30.20
V	4.30	4.50

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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	BUS21B	$I_C=0.1\text{A}; I_B=0; L=25\text{mH}$	400			V
		BUS21C		450			
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	BUS21B	$I_C=3\text{A}; I_B=0.4\text{A}$			1.5	V
		BUS21C	$I_C=3\text{A}; I_B=0.5\text{A}$			1.5	
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	BUS21B	$I_C=3\text{A}; I_B=0.4\text{A}$			1.5	V
		BUS21C	$I_C=3\text{A}; I_B=0.5\text{A}$			1.5	
I_{CES}	Collector Cutoff Current		$V_{CE}=V_{CESMmax}; V_{BE}=0$			1	mA
I_{EBO}	Emitter Cutoff Current		$V_{EB}=9\text{V}; I_C=0$			10	mA
h_{FE-1}	DC Current Gain		$I_C=0.5\text{A}; V_{CE}=10\text{V}$		25		
h_{FE-2}	DC Current Gain	BUS21B	$I_C=3\text{A}; V_{CE}=1.5\text{V}$	7.5			
		BUS21C		6			