isc Silicon NPN Power Transistors BUS24B/C

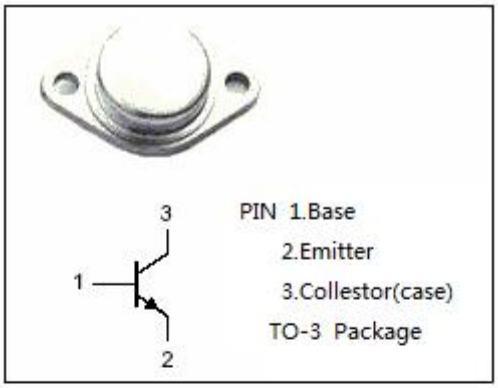
DESCRIPTION

High Switching Speed

- Collector-Emitter Sustaining Voltage-
  : $V_{CEO(SUS)}$= 400V (Min)-BUS24B
  450V (Min)-BUS24C

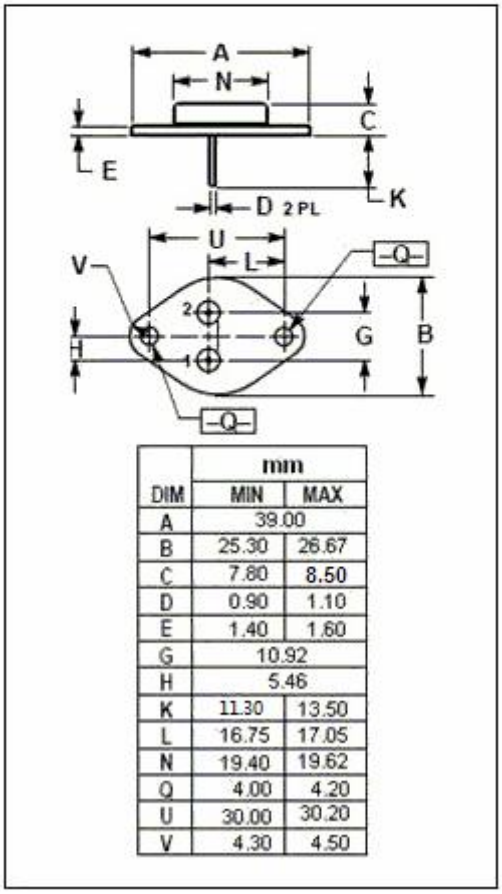
APPLICATIONS

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



ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER		MAX	UNIT
V_{CES}	Collector- Emitter Voltage(V_{BE}= 0)	BUS24B	850	V
		BUS24C	1000	
V_{CEO}	Collector-Emitter Voltage	BUS24B	400	V
		BUS24C	450	
V_{EBO}	Emitter-Base Voltage		9	V
I_C	Collector Current-Continuous		30	A
I_{CM}	Collector Current-Peak		50	A
I_B	Base Current-Continuous		6	A
I_{BM}	Base Current-Peak		10	A
P_C	Collector Power Dissipation @T_C=25℃		250	W
T_j	Junction Temperature		200	℃
T_{stg}	Storage Temperature Range		-65~200	℃



DIM	mm MIN	MAX
A	39.00	
B	25.30	26.67
C	7.80	8.50
D	0.90	1.10
E	1.40	1.60
G	10.92	
H	5.46	
K	11.30	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

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance, Junction to Case	0.7	℃/W

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ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	BUS24B	I_C= 50mA ; I_B= 0	400			V
		BUS24C		450			
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	BUS24B	I_C= 20A; I_B= 4A			1.5	V
		BUS24C	I_C= 16A; I_B= 3.2A			1.5	
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	BUS24B	I_C= 20A; I_B= 4A			1.5	V
		BUS24C	I_C= 16A; I_B= 3.2A			1.5	
I_{CES}	Collector Cutoff Current		V_{CE}=$V_{CESMmax}$; V_{BE}= 0			1	mA
I_{EBO}	Emitter Cutoff Current		V_{EB}= 9V; I_C= 0			10	mA
h_{FE}	DC Current Gain		I_C= 1A ; V_{CE}= 5V		25		
Switching Times , Resistive Load							
t_{on}	Turn-On Time		For BUS24B I_C= 20A ;I_{B1}= -I_{B2}= 2.66A For BUS24C I_C= 20A ;I_{B1}= -I_{B2}= 3.34A			1.0	μs
t_{stg}	Storage Time					4.5	μs
t_f	Fall Time					0.7	μs