

INCHANGE Semiconductor

isc Product Specification

isc Silicon NPN Power Transistors

BUS22B/C

DESCRIPTION

- High Switching Speed
- Collector-Emitter Sustaining Voltage-  
:  $V_{CEO(SUS)} = 400V$  (Min)-BUS22B  
450V (Min)-BUS22C

APPLICATIONS

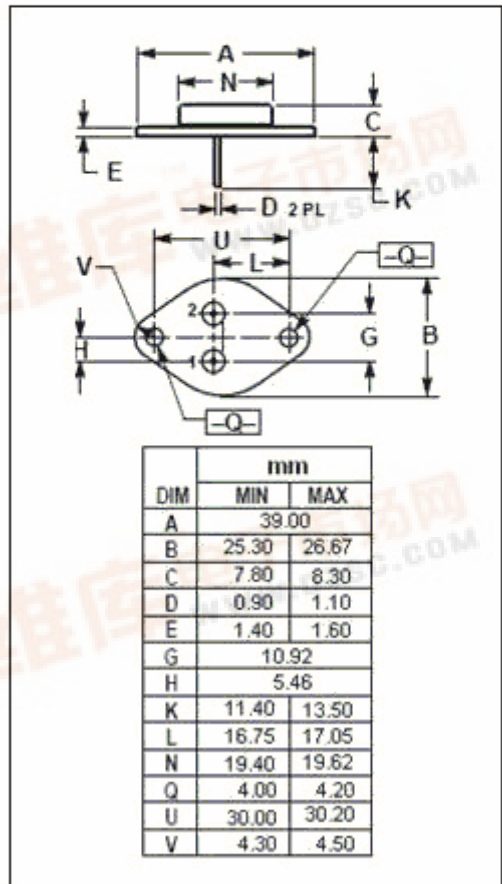
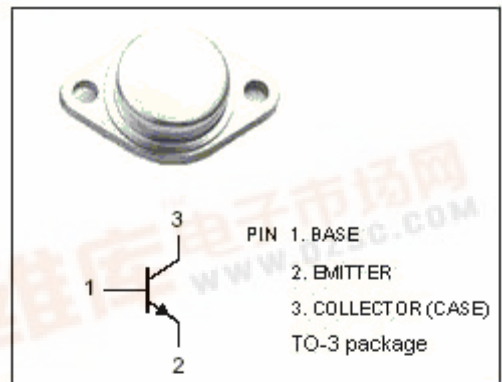
- Designed for use in converters, inverters, switching regulators, motor control systems etc.

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

SYMBOL	PARAMETER	MAX	UNIT	
$V_{CES}$	Collector- Emitter Voltage( $V_{BE}= 0$ )	BUS22B	750	V
		BUS22C	850	
$V_{CEO}$	Collector-Emitter Voltage	BUS22B	400	V
		BUS22C	450	
$V_{EBO}$	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 @ $T_C=25^{\circ}C$	125	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	1.4	$^{\circ}C/W$



## isc Silicon NPN Power Transistors

## BUS22B/C

## 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	BUS22B	400			V
		BUS22C				
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	BUS22B			1.5	V
		BUS22C			1.5	
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	BUS22B			1.5	V
		BUS22C			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	$I_C=1A; V_{CE}=5V$		18		

## Switching Times , Resistive Load

$t_{on}$	Turn-On Time	For BUS22B $I_C=6A;  I_{B1} = I_{B2} =0.8A$ For BUS22C $I_C=6A;  I_{B1} = I_{B2} =1A$		0.5		$\mu s$
$t_{stg}$	Storage Time			3.0		$\mu s$
$t_f$	Fall Time			0.3		$\mu s$