

isc Silicon NPN Power Transistors

BUS11/A

DESCRIPTION

- High Switching Speed
- Collector-Emitter Sustaining Voltage-
: $V_{CEO(SUS)} = 400V$ (Min)-BUS11
450V (Min)-BUS11A

APPLICATIONS

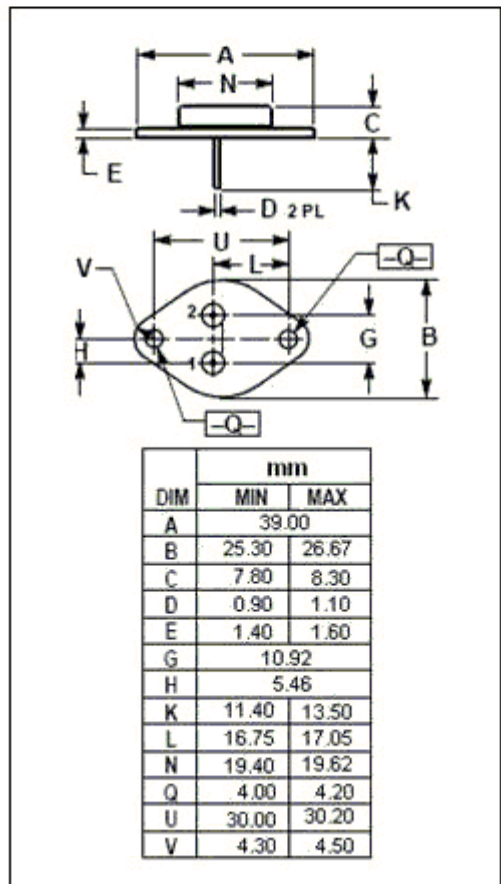
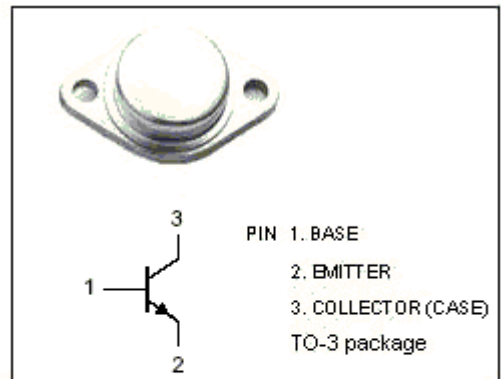
- Designed for use in converters, inverters, switching regulators, motor control systems etc.

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

SYMBOL	PARAMETER	MAX	UNIT	
V_{CES}	Collector- Emitter Voltage($V_{BE} = 0$)	BUS11	850	V
		BUS11A	1000	
V_{CEO}	Collector-Emitter Voltage	BUS11	400	V
		BUS11A	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	$^\circ C/W$



isc Silicon NPN Power Transistors

BUS11/A

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	BUS11	$I_C=0.1\text{A}; I_B=0; L=25\text{mH}$	400			V
		BUS11A					
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	BUS11	$I_C=3\text{A}; I_B=0.6\text{A}$			1.5	V
		BUS11A	$I_C=2.5\text{A}; I_B=0.5\text{A}$			1.5	
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	BUS11	$I_C=3\text{A}; I_B=0.6\text{A}$			1.4	V
		BUS11A	$I_C=2.5\text{A}; I_B=0.5\text{A}$			1.4	
I_{CES}	Collector Cutoff Current		$V_{CE}=V_{CESMmax}; V_{BE}=0$ $V_{CE}=V_{CESMmax}; V_{BE}=0; T_J=125^{\circ}\text{C}$			1 2	mA
I_{EBO}	Emitter Cutoff Current		$V_{EB}=9\text{V}; I_C=0$			10	mA
h_{FE}	DC Current Gain		$I_C=1\text{A}; V_{CE}=5\text{V}$	15		50	

Switching Times , Resistive Load

t_{on}	Turn-On Time	For BUS11 $I_C=3\text{A}; I_{B1}=-I_{B2}=0.6\text{A}$ For BUS11A $I_C=2.5\text{A}; I_{B1}=-I_{B2}=0.5\text{A}$			1.0	μs
t_{stg}	Storage Time				4.0	μs
t_f	Fall Time				0.8	μs