

isc Silicon NPN Power Transistors

BUV28/A

DESCRIPTION

- Collector-Emitter Sustaining Voltage-
: $V_{CEO(SUS)} = 200V(\text{Min})$ - BUV28
225V(Min)- BUV28A
- High Switching Speed

APPLICATIONS

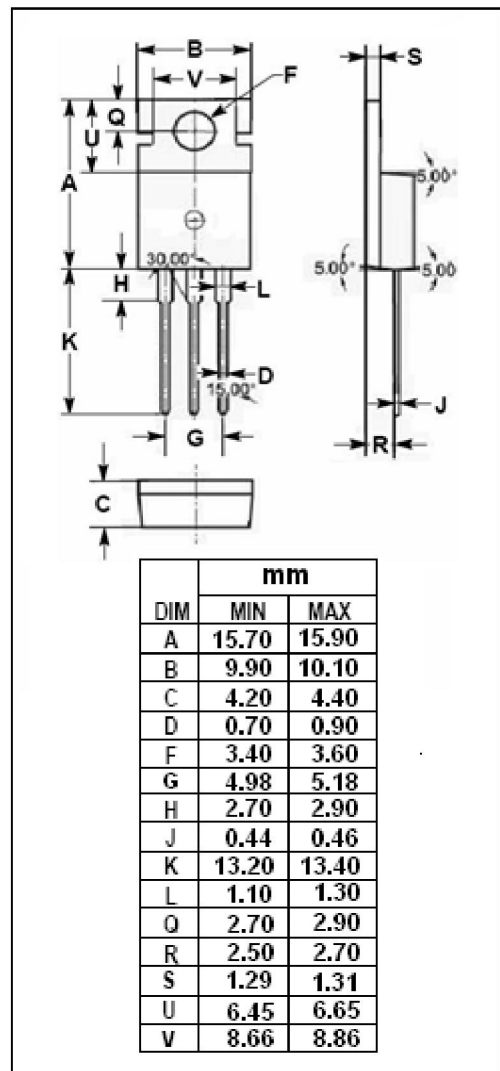
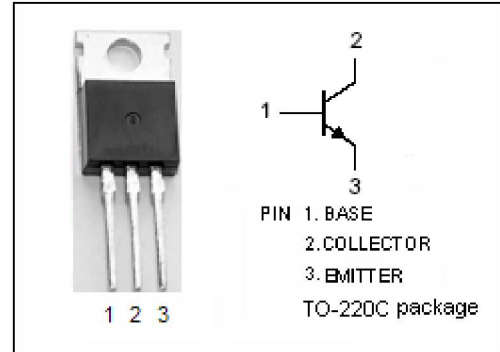
- Designed for fast switching applications such as high frequency and efficiency converters, switching regulators and motor control.

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

SYMBOL	PARAMETER	VALUE	UNIT	
V_{CES}	Collector-Emitter Voltage $V_{BE} = 0$	BUV28	400	V
		BUV28A	450	
V_{CEO}	Collector-Emitter Voltage	BUV28	200	V
		BUV28A	225	
V_{EBO}	Emitter-Base Voltage	5	V	
I_C	Collector Current-Continuous	12	A	
I_{CM}	Collector Current-Peak	20	A	
I_B	Base Current-Continuous	2	A	
I_{BM}	Base Current-Peak	4	A	
P_C	Collector Power Dissipation @ $T_C=25^\circ\text{C}$	65	W	
T_J	Junction Temperature	150	$^\circ\text{C}$	
T_{stg}	Storage Temperature Range	-65~150	$^\circ\text{C}$	

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	1.92	$^\circ\text{C/W}$



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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	BUV28	$I_C=0.2A; I_B=0; L=25mH$	200			V
		BUV28A					
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	BUV28	$I_C=6A; I_B=0.6A$			1.5	V
		BUV28A	$I_C=4A; I_B=0.4A$			1.5	
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	BUV28	$I_C=3A; I_B=0.3A$			0.7	V
		BUV28A	$I_C=2A; I_B=0.2A$			0.7	
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	BUV28	$I_C=6A; I_B=0.6A$			2.0	V
		BUV28A	$I_C=4A; I_B=0.4A$			2.0	
I_{CEX}	Collector Cutoff Current		$V_{CE}=V_{CESmax}; V_{BE}=-1.5V; T_J=125^{\circ}\text{C}$			1.0	mA
I_{CES}	Collector Cutoff Current		$V_{CE}=V_{CESmax}; R_{BE}=50\Omega; T_J=125^{\circ}\text{C}$			3.0	mA
I_{EBO}	Emitter Cutoff Current		$V_{EB}=5V; I_C=0$			1.0	mA

Switching Times; Resistive Load

t_{on}	Turn-On Time	$V_{CE}=50V$ For BUV28 $I_C=6A; I_{B1}=0.6A; I_{B2}=-1.2A$ For BUV28A $I_C=4A; I_{B1}=0.4A; I_{B2}=-0.8A$		0.3	1.0	μs
t_{stg}	Storage Time			0.5	1.5	μs
t_f	Fall Time			0.1	0.25	μs