

isc Silicon NPN Power Transistor

2SC3168

DESCRIPTION

- Excellent Safe Operating Area
- Low Collector-Emitter Saturation Voltage
- Minimum Lot-to-Lot variations for robust device Performance and reliable operation.

APPLICATIONS

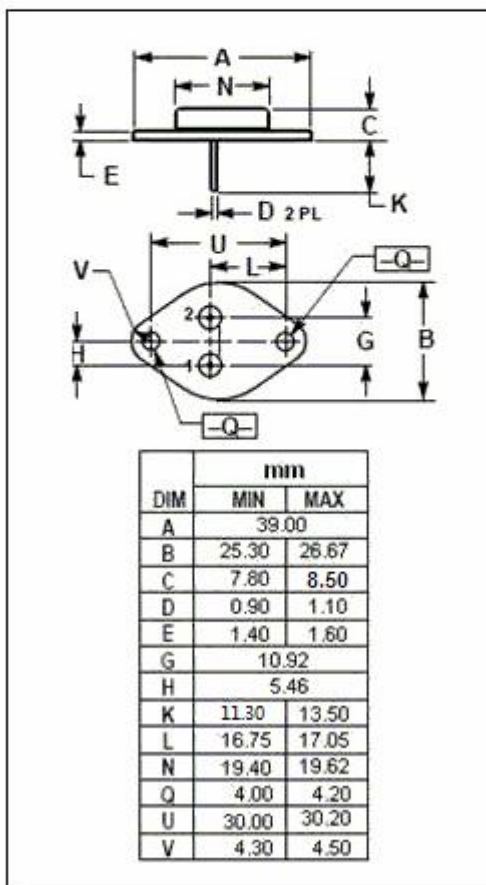
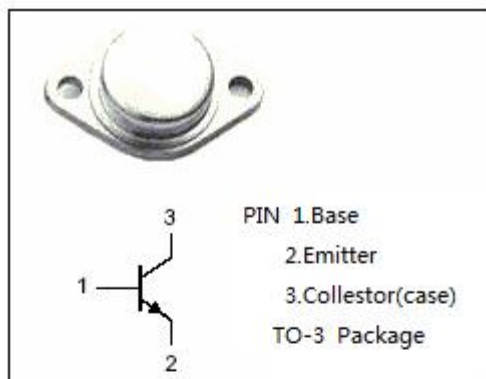
- Switching regulator
- Motor controls
- Deflections circuits

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	500	V
V_{CEO}	Collector-Emitter Voltage	400	V
V_{EBO}	Emitter-Base Voltage	7	V
I_C	Collector Current-Continuous	10	A
I_B	Base Current	7	A
P_C	Collector Power Dissipation@ $T_c=25^{\circ}\text{C}$	200	W
T_J, T_{stg}	Operating and Storage Junction Temperature Range	-65~+200	$^{\circ}\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	0.875	$^{\circ}\text{C/W}$



isc Silicon NPN Power Transistors**2SC3168****ELECTRICAL CHARACTERISTICS** $T_C=25^{\circ}\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
$V_{(BR)CBO}$	Collector-Base breakdown voltage	$I_C=1\text{mA}$; $I_B=0$	500			V
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	$I_C=10\text{mA}$; $I_B=0$	400			V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	$I_E=1\text{mA}$; $I_C=0$	7			V
$V_{CE(sat)^*}$	Collector-Emitter Saturation Voltage	$I_C=10\text{A}$; $I_B= 2.0\text{A}$			1.0	V
$V_{BE(sat)^*}$	Base-Emitter Saturation Voltage	$I_C=10\text{A}$; $I_B= 2.0\text{A}$			1.5	V
I_{CEO}	Collector Cutoff Current	$V_{CE}= 500\text{V}$; $I_B=0$			0.1	mA
I_{EBO}	Emitter Cutoff Current	$V_{EB}= 7\text{V}$; $I_C=0$			0.1	mA
h_{FE}^*	DC Current Gain	$I_C= 10\text{A}$; $V_{CE}= 2\text{V}$	10		40	

*:pulsed test $PW \leq 300\mu\text{s}$, duty cycle $\leq 6\%$ **NOTICE:**

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