

isc Silicon NPN Power Transistor

2N3864

DESCRIPTION

- Excellent Safe Operating Area
- Low Collector-Emitter Saturation Voltage
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation.

APPLICATIONS

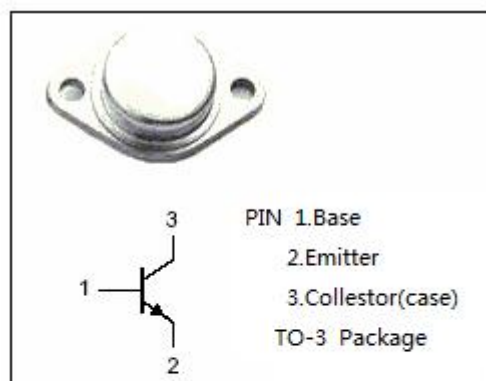
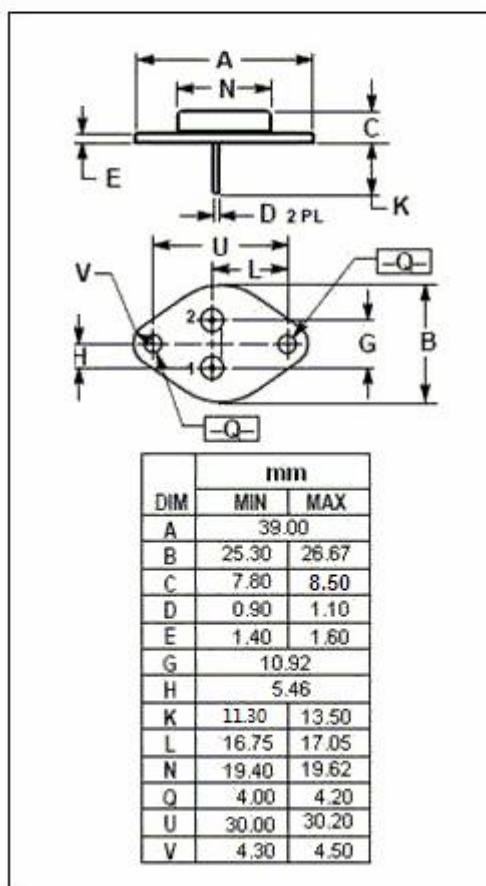
- Designed for medium-speed switching and amplifier applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	110	V
V_{CEO}	Collector-Emitter Voltage	90	V
V_{EBO}	Emitter-Base Voltage	7	V
I_C	Collector Current-Continuous	7.5	A
P_C	Collector Power Dissipation@ $T_c=25^{\circ}\text{C}$	117	W
T_J	Junction Temperature	-65~200	$^{\circ}\text{C}$
T_{stg}	Storage Temperature	-65~200	$^{\circ}\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	1.5	$^{\circ}\text{C/W}$



isc Silicon NPN Power Transistor**2N3864****ELECTRICAL CHARACTERISTICS** $T_C=25^{\circ}\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{CEO(SUS)}^*$	Collector-Emitter Sustaining Voltage	$I_C=200\text{mA}; I_B=0$	90		V
I_{EBO}	Emitter Cutoff Current	$V_{EB}=7\text{V}; I_C=0$		5	mA
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=3\text{A}; I_B=0.2\text{A}$		1.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C=3\text{A}; I_B=0.2\text{A}$		2.0	V
h_{FE}	DC Current Gain	$I_C=3\text{A}; V_{CE}=2\text{V}$	30	90	

*:Pulse test:Pulse width=300us,duty cycle $\leq$ 2%