

isc Silicon NPN Power Transistor

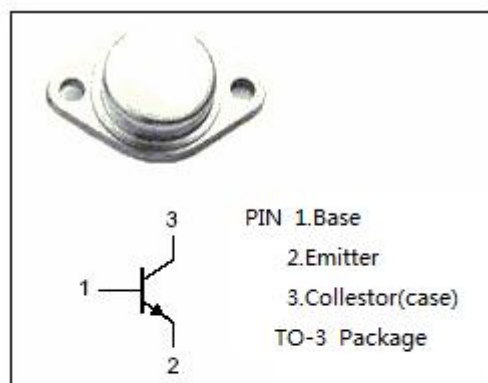
2N3864

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.

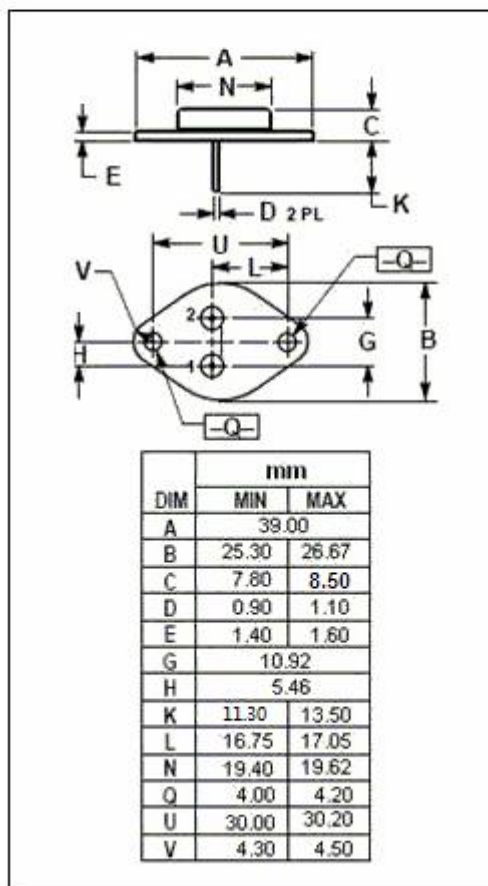
APPLICATIONS

- Designed for medium-speed switching and amplifier applications.



ABSOLUTE MAXIMUM RATINGS(T_a=25°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°C	117	W
T _J	Junction Temperature	-65~200	°C
T _{stg}	Storage Temperature	-65~200	°C



THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R _{th j-c}	Thermal Resistance,Junction to Case	1.5	°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%