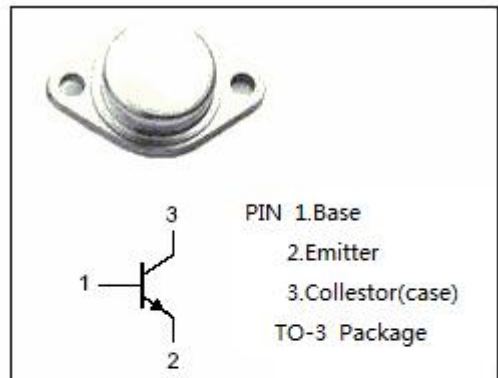


isc Silicon NPN Power Transistor
2N3863
DESCRIPTION

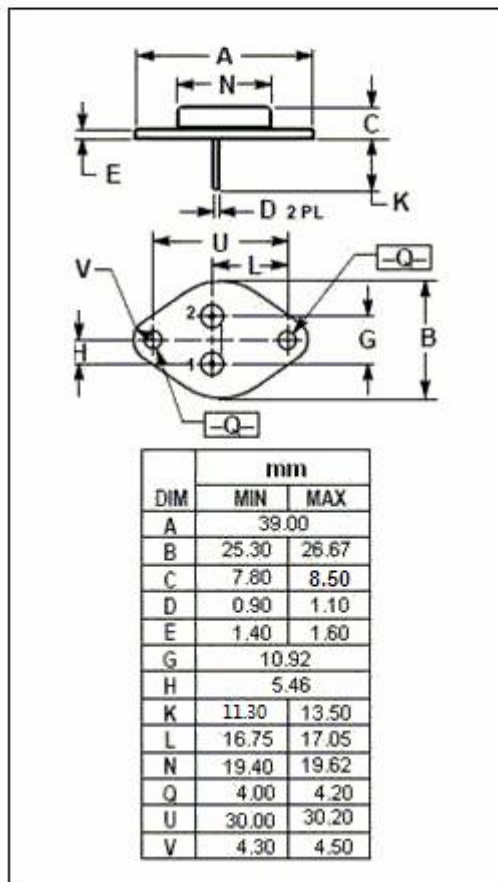
- Excellent Safe Operating Area
- Low Collector-Emitter Saturation Voltage
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation.

APPLICATIONS

- Designed for medium-speed switching and amplifier applications.


ABSOLUTE MAXIMUM RATINGS(T_a=25°C)

SYMBOL	PARAMETER	VALUE	UNIT
V _{CB0}	Collector-Base Voltage	70	V
V _{CEO}	Collector-Emitter Voltage	50	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

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2N3863

ELECTRICAL CHARACTERISTICS

 $T_C=25^{\circ}\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{CE(SUS)}^*$	Collector-Emitter Sustaining Voltage	$I_C=200\text{mA}; I_B=0$	50		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	60	

*:Pulse test:Pulse width=300us,duty cycle≤2%

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