

**isc Silicon NPN Power Transistor**
**2SC1863**
**DESCRIPTION**

- With TO-66 Package
- Low collector saturation voltage
- Minimum Lot-to-Lot variations for robust device performance and reliable operation.

**APPLICATIONS**

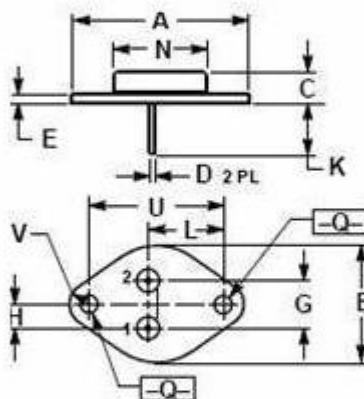
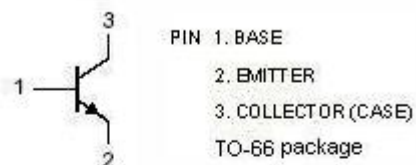
- Designed for switching and wide-band amplifier applications

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	150	V
$V_{CEO}$	Collector-Emitter Voltage	100	V
$V_{EBO}$	Emitter-Base Voltage	7	V
$I_C$	Collector Current-Continuous	7	A
$P_C$	Collector Power Dissipation @ $T_C=25^{\circ}\text{C}$	40	W
$T_J$	Junction Temperature	150	$^{\circ}\text{C}$
$T_{stg}$	Storage Temperature Range	-55~150	$^{\circ}\text{C}$

**THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	3.125	$^{\circ}\text{C/W}$



DIM	mm	
	MIN	MAX
A	31.40	31.80
B	17.30	17.90
C	6.70	7.10
D	0.70	0.90
E	1.40	1.80
G	5.08	
H	2.54	
K	9.80	10.50
L	14.70	14.90
N	12.40	12.70
Q	3.60	3.80
U	24.30	24.50
V	3.50	3.70

**isc Silicon NPN Power Transistor****2SC1863****ELECTRICAL CHARACTERISTICS****T<sub>C</sub>=25°C unless otherwise specified**

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
V <sub>CE(sat)</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = 1A; I <sub>B</sub> = 0.1A		0.5	V
V <sub>BE(on)</sub>	Base-Emitter On Voltage	I <sub>C</sub> = 1A; V <sub>CE</sub> = 2V		1.0	V
I <sub>CBO</sub>	Collector Cutoff Current	V <sub>CB</sub> =150V; I <sub>B</sub> = 0		100	uA
I <sub>EBO</sub>	Emitter Cutoff Current	V <sub>EB</sub> = 7V; I <sub>C</sub> =0		100	uA
h <sub>FE-1</sub>	DC Current Gain	I <sub>C</sub> = 3A ; V <sub>CE</sub> = 5V	20		
h <sub>FE-2</sub>	DC Current Gain	I <sub>C</sub> = 5A ; V <sub>CE</sub> = 5V	15		

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