

**Inchange Semiconductor**

**Product Specification**

**Silicon NPN Power Transistors**

**2N4864**

**DESCRIPTION**

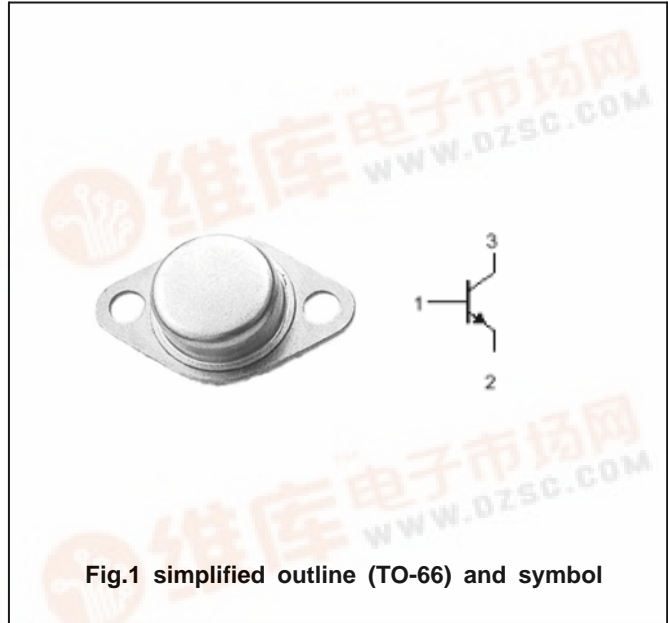
- With TO-66 package
- Continuous collector current- $I_C=2A$
- High  $V_{CEO}:120V$  (Min)

**APPLICATIONS**

- For use in general-purpose switching and linear amplifier applications

**PINNING (See Fig.2)**

PIN	DESCRIPTION
1	Base
2	Emitter
3	Collector



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

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$V_{CBO}$	Collector-base voltage	Open emitter	140	V
$V_{CEO}$	Collector-emitter voltage	Open base	120	V
$V_{EBO}$	Emitter-base voltage	Open collector	7	V
$I_C$	Collector current		2	A
$P_T$	Total power dissipation	$T_C=25^{\circ}C$	16	W
$T_j$	Junction temperature		150	$^{\circ}C$
$T_{stg}$	Storage temperature		-65~200	$^{\circ}C$

**THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	MAX	UNIT
$R_{(th) jc}$	Thermal resistance junction to case	7.0	$^{\circ}C/W$

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## CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CE(SUS)}$	Collector-emitter sustaining voltage	$I_C=0.1\text{ A}$ ; $I_B=0$	120			V
$V_{CE(sat)}$	Collector-emitter saturation voltage	$I_C=2\text{A}$ ; $I_B=0.4\text{A}$			1.5	V
$V_{BE(sat)}$	Base-emitter saturation voltage	$I_C=2\text{A}$ ; $I_B=0.4\text{A}$			2.0	V
$V_{BE(on)}$	Base -emitter on voltage	$I_C=0.5\text{A}$ ; $V_{CE}=5\text{V}$			1.5	V
$I_{CEX}$	Collector cut-off current	$V_{CE}=140\text{V}$ ; $V_{BE(off)}=1.5\text{V}$ $T_C=150^\circ\text{C}$			2.0 5.0	mA
$I_{CEO}$	Collector cut-off current	$V_{CE}=120\text{V}$ ; $I_B=0$			10	mA
$I_{EBO}$	Emitter cut-off current	$V_{EB}=7\text{V}$ ; $I_C=0$			1.0	mA
$h_{FE-1}$	DC current gain	$I_C=0.5\text{A}$ ; $V_{CE}=5\text{V}$	50		150	
$h_{FE-2}$	DC current gain	$I_C=2\text{A}$ ; $V_{CE}=5\text{V}$	10			
$C_{OB}$	Output capacitance	$I_E=0$ ; $V_{CB}=10\text{V}$ ; $f=1\text{MHz}$		50		pF
$f_T$	Transition frequency	$I_C=0.5\text{A}$ ; $V_{CE}=5\text{V}$		50		MHz

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PACKAGE OUTLINE

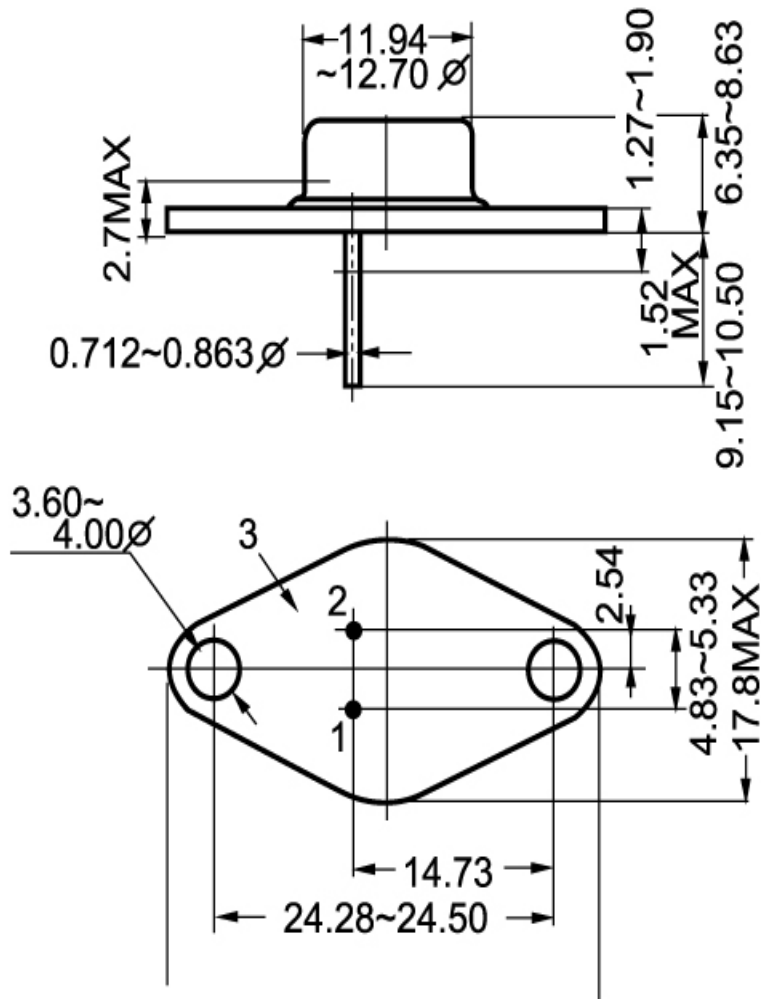


Fig.2 Outline dimensions