

**isc Silicon PNP Power Transistor**

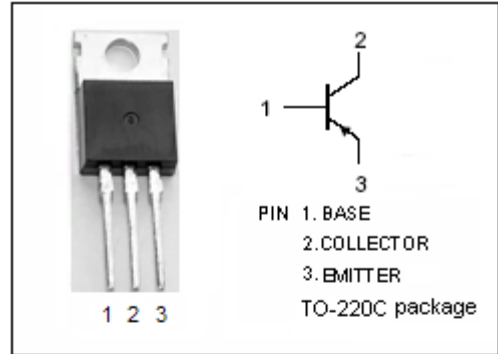
**BD304**

**DESCRIPTION**

- DC Current Gain -  
:  $h_{FE} = 30(\text{Min.}) @ I_C = -2\text{A}$
- Collector-Emitter Breakdown Voltage-  
:  $V_{(BR)CEO} = -60\text{V}(\text{Min.})$
- Complement to Type BD303

**APPLICATIONS**

- Designed for audio output stages up to 25W, vertical deflection circuits in color TV receivers.

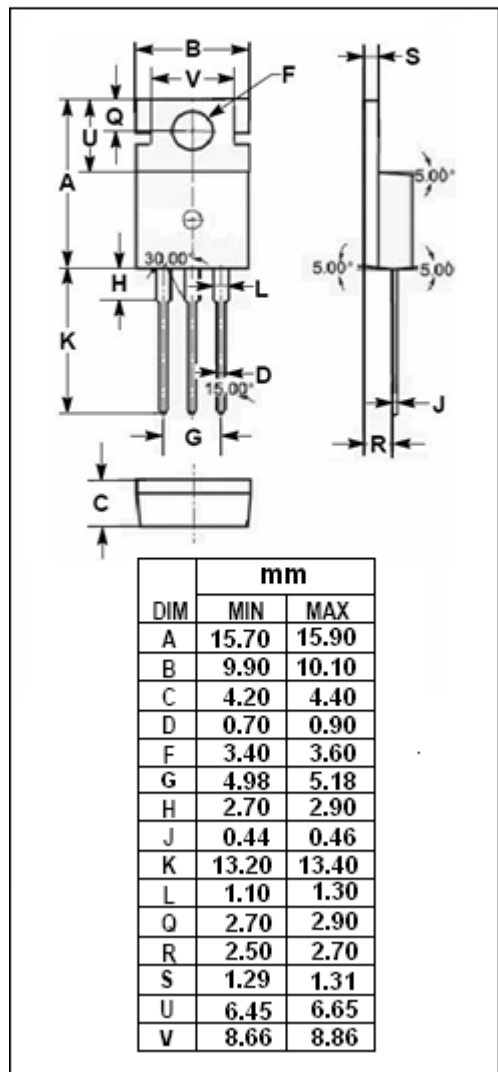


**ABSOLUTE MAXIMUM RATINGS( $T_a=25^\circ\text{C}$ )**

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	-60	V
$V_{CEO}$	Collector-Emitter Voltage	-60	V
$V_{EBO}$	Emitter-Base Voltage	-5	V
$I_C$	Collector Current-Continuous	-8	A
$I_{CM}$	Collector Current-Peak	-12	A
$I_B$	Base Current-Continuous	-2	A
$P_C$	Collector Power Dissipation @ $T_C=25^\circ\text{C}$	55	W
$T_J$	Junction Temperature	150	$^\circ\text{C}$
$T_{stg}$	Storage Temperature Range	-65~150	$^\circ\text{C}$

**THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	2.3	$^\circ\text{C/W}$



**isc Silicon PNP Power Transistor****BD304****ELECTRICAL CHARACTERISTICS** $T_C=25^\circ\text{C}$  unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	$I_C = -200\text{mA}; I_B = 0$	-60		V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = -3\text{A}; I_B = -0.3\text{A}$		-1.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C = -3\text{A}; I_B = -0.3\text{A}$		-1.5	V
$I_{CEO}$	Collector Cutoff Current	$V_{CE} = -30\text{V}; I_B = 0$		-1.0	mA
$I_{CBO}$	Collector Cutoff Current	$V_{CB} = -40\text{V}; I_E = 0; T_C = 150^\circ\text{C}$		-1.0	mA
$I_{EBO}$	Emitter Cutoff Current	$V_{EB} = -5\text{V}; I_C = 0$		-5.0	mA
$h_{FE}$	DC Current Gain	$I_C = -2\text{A}; V_{CE} = -2\text{V}$	30		
$f_T$	Current-Gain—Bandwidth Product	$I_C = -0.3\text{A}; V_{CE} = -3\text{V}$	3		MHz