

isc Silicon NPN Power Transistors

TIP50

DESCRIPTION

- DC Current Gain $-h_{FE} = 30\sim150@ I_C= 0.3A$
- Collector-Emitter Sustaining Voltage-
: $V_{CEO(SUS)} = 400V(Min)$

APPLICATIONS

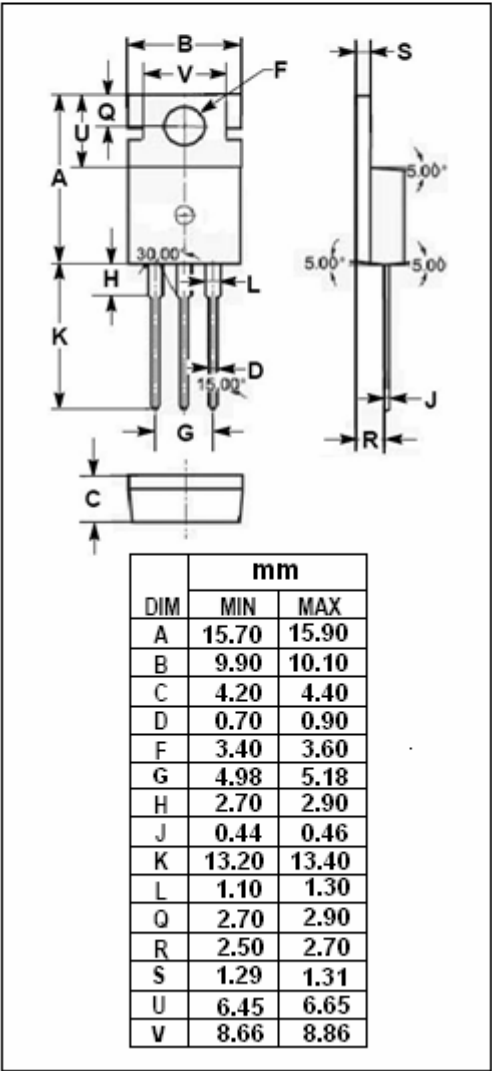
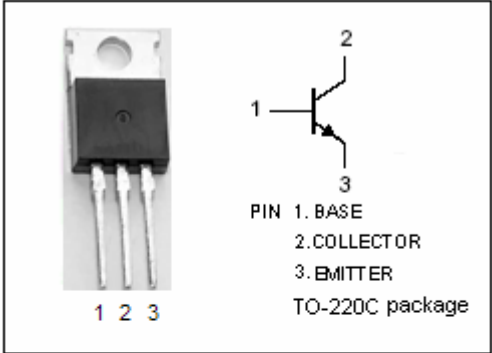
- Designed for line operated audio output amplifier,switchmode power supply drivers and other switching applications

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	500	V
V_{CEO}	Collector-Emitter Voltage	400	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current-Continuous	1.0	A
I_{CM}	Collector Current-Peak	2.0	A
I_B	Base Current	0.6	A
P_D	Collector Power Dissipation $T_c=25^{\circ}C$	40	W
	Collector Power Dissipation $T_a=25^{\circ}C$	2	
T_j	Junction Temperature	150	$^{\circ}C$
T_{stg}	Storage Temperature Range	-65~150	$^{\circ}C$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance,Junction to Case	3.125	$^{\circ}C/W$
$R_{th\ j-a}$	Thermal Resistance,Junction to Ambient	62.5	$^{\circ}C/W$



isc Silicon NPN Power Transistors**TIP50****ELECTRICAL CHARACTERISTICS** $T_C=25^{\circ}\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C=30\text{mA}; I_B=0$	400		V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=1\text{A}; I_B=0.2\text{A}$		1.0	V
$V_{BE(on)}$	Base-Emitter On Voltage	$I_C=1\text{A}; V_{CE}=10\text{V}$		1.5	V
I_{CES}	Collector Cutoff Current	$V_{CE}=500\text{V}; V_{BE}=0$		1.0	mA
I_{CEO}	Collector Cutoff Current	$V_{CE}=300\text{V}; I_B=0$		1.0	mA
I_{EBO}	Emitter Cutoff Current	$V_{EB}=5\text{V}; I_C=0$		1.0	mA
h_{FE-1}	DC Current Gain	$I_C=0.3\text{A}; V_{CE}=10\text{V}$	30	150	
h_{FE-2}	DC Current Gain	$I_C=1\text{A}; V_{CE}=10\text{V}$	10		
f_T	Current-Gain—Bandwidth Product	$I_C=0.1\text{A}; V_{CE}=10\text{V}$	10		MHz