

isc Silicon NPN Power Transistor

2SC4848

DESCRIPTION

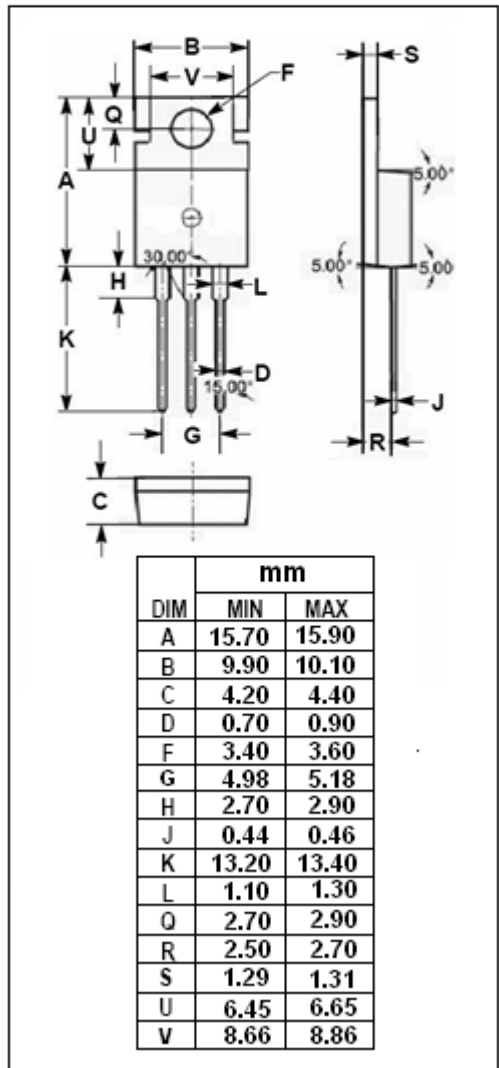
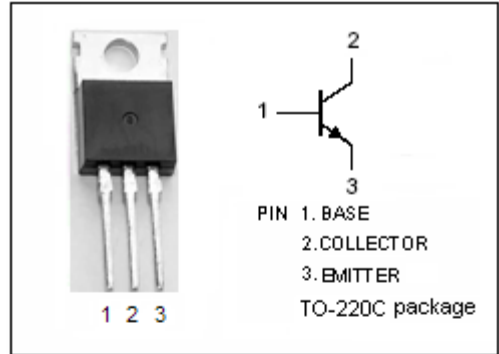
- Low Collector Saturation Voltage
: $V_{CE(sat)} = 0.6V(\text{Max}) @ I_C = 5A$
- Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO} = 120V (\text{Min})$
- High Switching Speed
- Wide Area of Safe Operation

APPLICATIONS

- Designed for power amplifier and general purpose applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	250	V
V_{CEO}	Collector-Emitter Voltage	120	V
V_{EBO}	Emitter-Base Voltage	12	V
I_C	Collector Current-Continuous	7	A
I_{CM}	Collector Current-Pulse	15	A
P_C	Collector Power Dissipation @ $T_a=25^\circ C$	2	W
	Collector Power Dissipation @ $T_c=25^\circ C$	40	
T_J	Junction Temperature	150	$^\circ C$
T_{stg}	Storage Temperature Range	-55~150	$^\circ C$



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ELECTRICAL CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEX(SUS)}$	Collector-Emitter Breakdown Voltage	$I_{CP}= 8A; I_{B1}= -I_{B2}= 0.5A, I_C= 5A;$ $L= 200 \mu H, \text{ clamped}$	125			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C= 5A; I_B= 0.5A$			0.6	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C= 5A; I_B= 0.5A$			1.2	V
I_{CBO}	Collector Cutoff Current	$V_{CB}= 100V; I_E= 0$			10	μA
I_{CEO}	Collector Cutoff Current	$V_{CE}= 100V; I_B= 0; T_a= 125^\circ\text{C}$			2.0	mA
I_{EBO}	Emitter Cutoff Current	$V_{EB}= 12V; I_C= 0$			10	μA
h_{FE}	DC Current Gain	$I_C= 3A; V_{CE}= 5V$	100		200	
f_T	Current-Gain—Bandwidth Product	$I_E= -0.5A; V_{CE}= 10V$		20		MHz
C_{OB}	Output Capacitance	$I_E= 0; V_{CB}= 10V; f_{test}= 1.0\text{MHz}$		150		pF

Switching times

t_{on}	Turn-on Time	$I_C= 5A; I_{B1}= -I_{B2}= 0.5A;$ $R_L= 10 \Omega; V_{CC} \approx 50V$			0.5	μs
t_{stg}	Storage Time				2.5	μs
t_f	Fall Time				0.5	μs