

isc Silicon NPN Power Transistor
2SC4848
DESCRIPTION

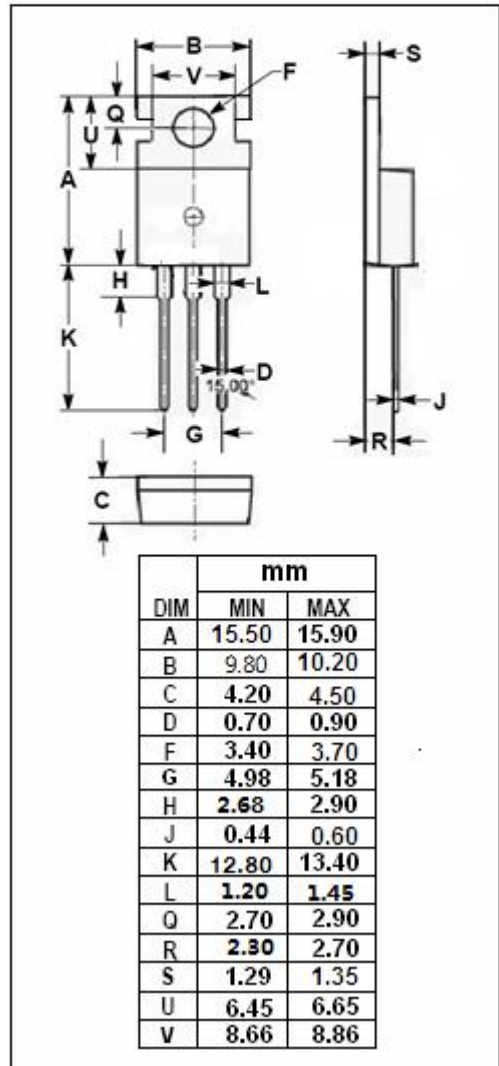
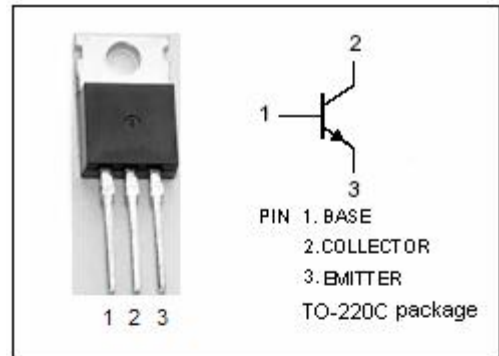
- Low Collector Saturation Voltage
: $V_{CE(sat)} = 0.6V(\text{Max}) @ I_C = 5A$
- Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO} = 120V (\text{Min})$
- High Switching Speed
- Wide Area of Safe Operation
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Designed for power amplifier and general purpose applications.

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

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 @ $T_a = 25^\circ\text{C}$	2	W
	Collector Power Dissipation @ $T_c = 25^\circ\text{C}$	40	
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-55~150	$^\circ\text{C}$



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ELECTRICAL CHARACTERISTICS

 T_c=25°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 μ H, 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	μ A
I _{CEO}	Collector Cutoff Current	V _{CE} = 100V; I _B = 0; T _a = 125°C			2.0	mA
I _{EBO}	Emitter Cutoff Current	V _{EB} = 12V; I _C = 0			10	μ A
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} = 1.0MHz		150		pF

Switching times

t _{on}	Turn-on Time				0.5	μ s
t _{stg}	Storage Time	I _C = 5A ; I _{B1} = -I _{B2} = 0.5A; R _L = 10 Ω ; V _{CC} ≈ 50V			2.5	μ s
t _f	Fall Time				0.5	μ s

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