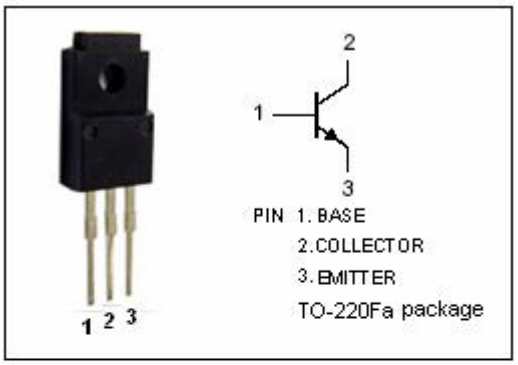
isc Silicon NPN Power Transistor — 2SC4849

DESCRIPTION

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

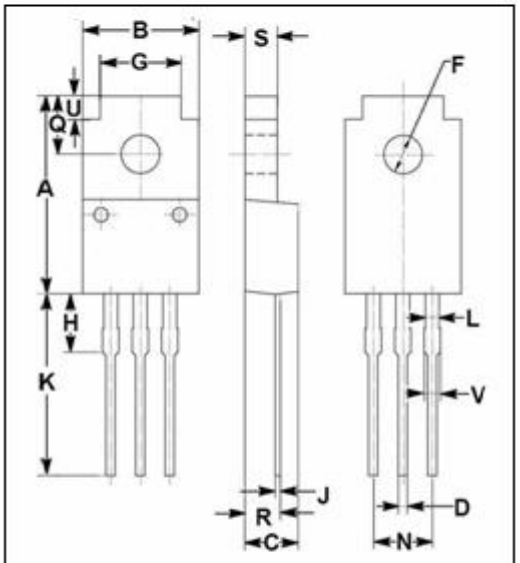


APPLICATIONS

- Designed for power amplifier and general purpose applications.

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

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℃	2	W
	Collector Power Dissipation @ T_C=25℃	30	
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-55~150	℃



DIM	mm MIN	mm MAX
A	16.85	17.15
B	9.54	10.10
C	4.35	4.65
D	0.75	0.90
F	3.20	3.40
G	6.90	7.20
H	3.80	4.20
J	0.45	0.75
K	13.35	13.80
L	1.10	1.30
N	4.98	5.18
Q	4.85	5.15
R	2.55	3.25
S	2.70	2.90
U	1.75	2.05
V	1.30	1.50

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ELECTRICAL CHARACTERISTICS

T_C=25℃ 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℃			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	I_C= 5A ;I_{B1}= -I_{B2}= 0.5A; R_L= 10Ω ; V_{CC}≈ 50V			0.5	μ s
t_{stg}	Storage Time				2.5	μ s
t_f	Fall Time				0.5	μ s

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