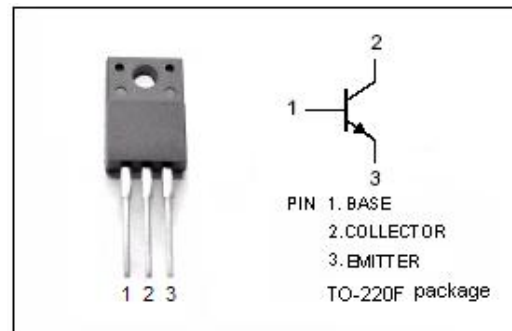


**isc Silicon NPN Power Transistor**
**2SC3851A**
**DESCRIPTION**

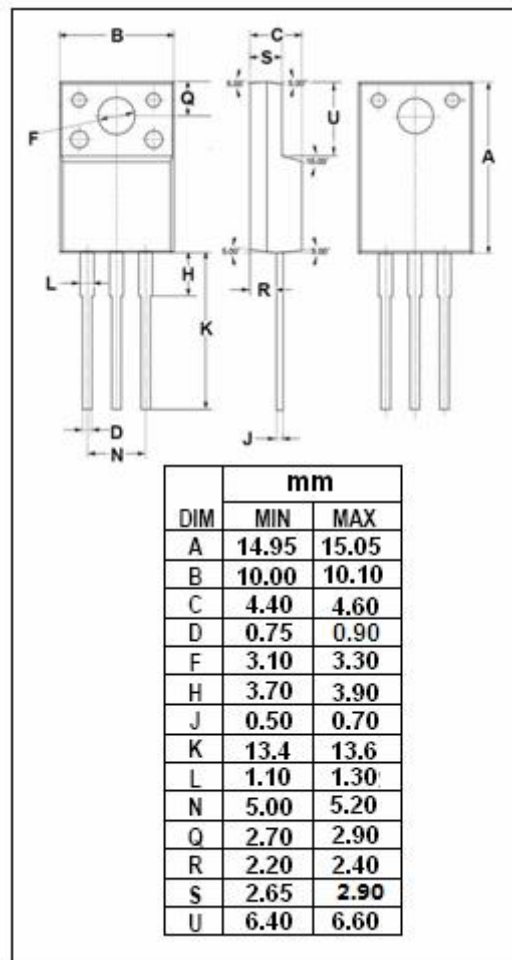
- Collector-Emitter Breakdown Voltage-  
:  $V_{(BR)CEO} = 80V(\text{Min})$
- DC Current Gain-  
:  $h_{FE} = 40(\text{Min}) @ I_C = 1A$
- Complement to Type 2SA1488A
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation


**APPLICATIONS**

- Designed for audio and general purpose applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	100	V
$V_{CEO}$	Collector-Emitter Voltage	80	V
$V_{EBO}$	Emitter-Base Voltage	6	V
$I_C$	Collector Current-Continuous	4	A
$I_B$	Base Current-Continuous	1	A
$P_C$	Collector Power Dissipation @ $T_C = 25^\circ\text{C}$	25	W
$T_J$	Junction Temperature	150	$^\circ\text{C}$
$T_{stg}$	Storage Temperature	-55~150	$^\circ\text{C}$



## isc Silicon NPN Power Transistor

## 2SC3851A

## ELECTRICAL CHARACTERISTICS

T<sub>j</sub>=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>(BR)CEO</sub>	Collector-Emitter Breakdown Voltage	I <sub>C</sub> = 25mA; I <sub>B</sub> = 0	80			V
V <sub>CE(sat)</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = 2A; I <sub>B</sub> = 0.2A			0.5	V
I <sub>CBO</sub>	Collector Cutoff Current	V <sub>CB</sub> = 100V; I <sub>E</sub> = 0			100	μ A
I <sub>EBO</sub>	Emitter Cutoff Current	V <sub>EB</sub> = 6V; I <sub>C</sub> = 0			100	μ A
h <sub>FE</sub>	DC Current Gain	I <sub>C</sub> = 1A; V <sub>CE</sub> = 4V	40		320	
C <sub>OB</sub>	Output Capacitance	I <sub>E</sub> = 0; V <sub>CB</sub> = 10V; f= 1MHz		60		pF
f <sub>T</sub>	Current-Gain—Bandwidth Product	I <sub>E</sub> = -0.2A; V <sub>CE</sub> = 12V		15		MHz

## Switching Times

t <sub>on</sub>	Turn-On Time			0.2		μ s
t <sub>stg</sub>	Storage Time	I <sub>C</sub> = 2A; I <sub>B1</sub> = -I <sub>B2</sub> = 0.2A; V <sub>CC</sub> = 12V; R <sub>L</sub> = 6 Ω		1.0		μ s
t <sub>f</sub>	Fall Time			0.3		μ s

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