

isc Silicon NPN Power Transistor
2SC3851
DESCRIPTION

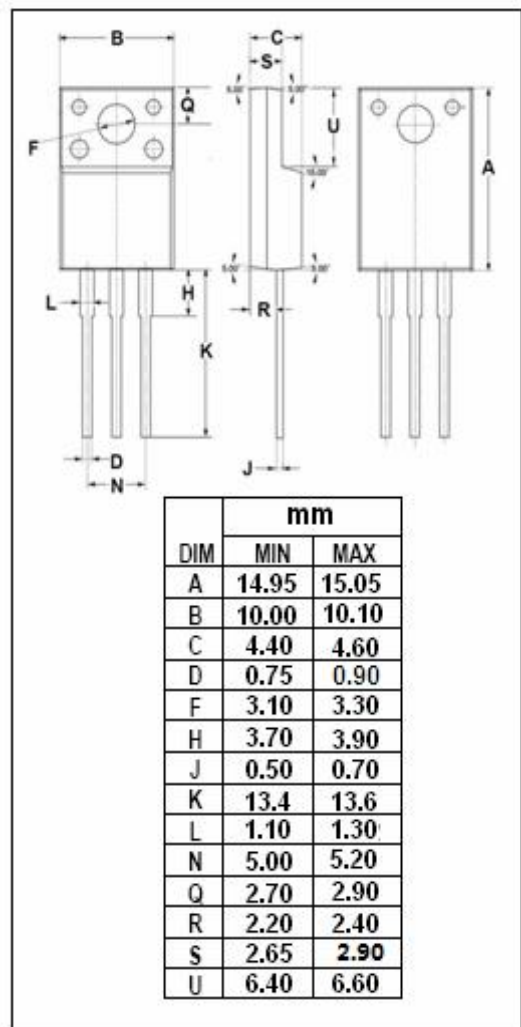
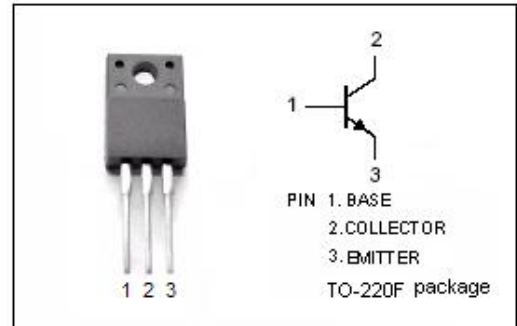
- Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO} = 60V(\text{Min})$
- DC Current Gain-
: $h_{FE} = 40(\text{Min}) @ I_C = 1A$
- Complement to Type 2SA1488
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

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	80	V
V_{CEO}	Collector-Emitter Voltage	60	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	$^\circ\text{C}$



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ELECTRICAL CHARACTERISTICS
T_j=25°C unless otherwise specified

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

Switching Times

t _{on}	Turn-On Time			0.2		μ s
t _{stg}	Storage Time	I _C = 2A; I _{B1} = -I _{B2} = 0.2A; V _{CC} = 12V; R _L = 6 Ω		1.0		μ s
t _f	Fall Time			0.3		μ s

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