

isc Silicon NPN Power Transistor

2SC3852

DESCRIPTION

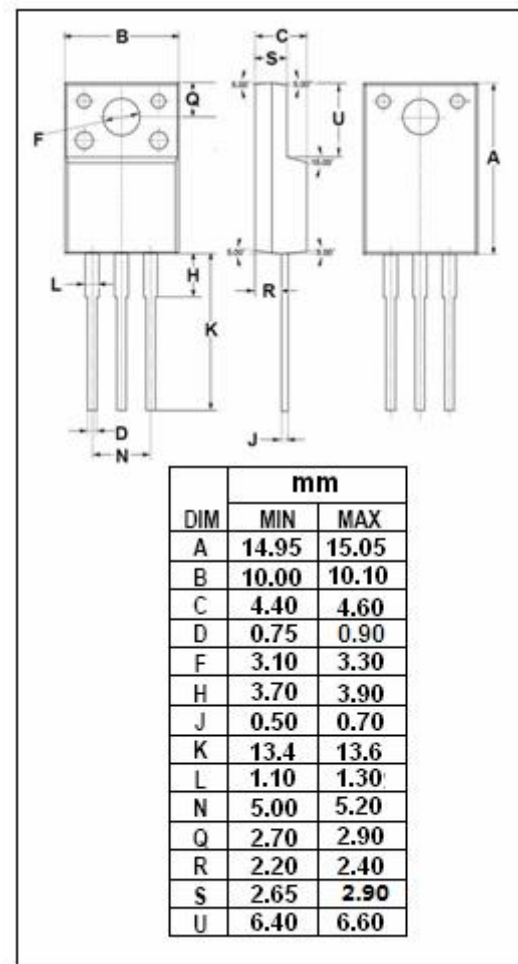
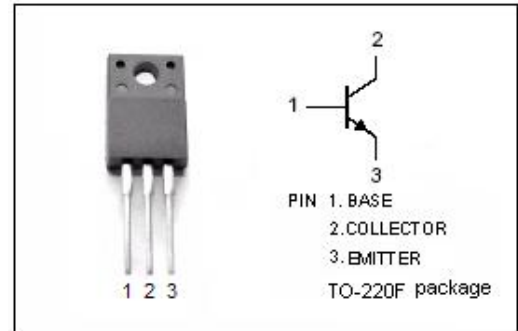
- Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO} = 60V(\text{Min})$
- DC Current Gain-
: $h_{FE} = 200(\text{Min}) @ I_C = 0.5A$
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Driver for solenoid and motor, series regulator 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	3	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

Tj=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	$I_C = 2A; I_B = 50mA$			0.5	V
I_{CBO}	Collector Cutoff Current	$V_{CB} = 80V; I_E = 0$			100	μA
I_{EBO}	Emitter Cutoff Current	$V_{EB} = 6V; I_C = 0$			100	μA
h_{FE}	DC Current Gain	$I_C = 0.5A; V_{CE} = 4V$	200			
C_{OB}	Output Capacitance	$I_E = 0; V_{CB} = 10V; f = 1MHz$		50		pF
f_T	Current-Gain—Bandwidth Product	$I_E = -0.2A; V_{CE} = 12V$		15		MHz

Switching Times

t_{on}	Turn-On Time	$I_C = 1A; I_{B1} = 15mA; I_{B2} = -30mA;$ $V_{CC} = 20V; R_L = 20\Omega$		0.8		μs
t_{stg}	Storage Time			3.0		μs
t_f	Fall Time			1.2		μs

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