

isc Silicon NPN Power Transistor**2SC3852A****DESCRIPTION**

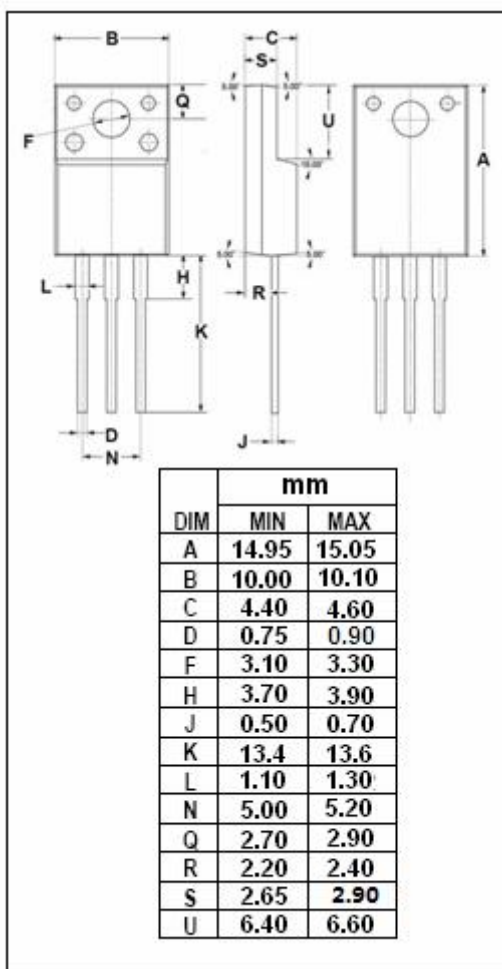
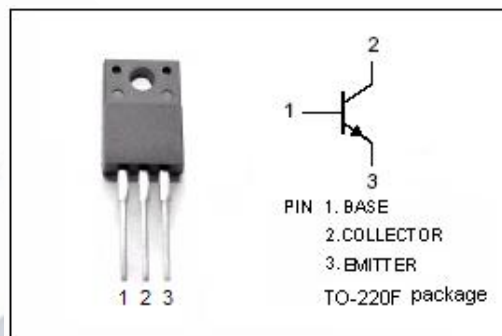
- Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO} = 80V(\text{Min})$
- DC Current Gain-
: $h_{FE} = 200(\text{Min}) @ I_C = 0.5A$

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	100	V
V_{CEO}	Collector-Emitter Voltage	80	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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SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	$I_C = 25\text{mA}; I_B = 0$	80			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = 2\text{A}; I_B = 50\text{mA}$			0.5	V
I_{CBO}	Collector Cutoff Current	$V_{CB} = 100\text{V}; I_E = 0$			10	μA
I_{EBO}	Emitter Cutoff Current	$V_{EB} = 6\text{V}; I_C = 0$			10	μA
h_{FE}	DC Current Gain	$I_C = 0.5\text{A}; V_{CE} = 4\text{V}$	400			
C_{OB}	Output Capacitance	$I_E = 0; V_{CB} = 10\text{V}; f = 1\text{MHz}$		50		pF
f_T	Current-Gain—Bandwidth Product	$I_E = -0.2\text{A}; V_{CE} = 12\text{V}$		15		MHz

Switching Times

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