

Silicon NPN Power Transistor

DESCRIPTION

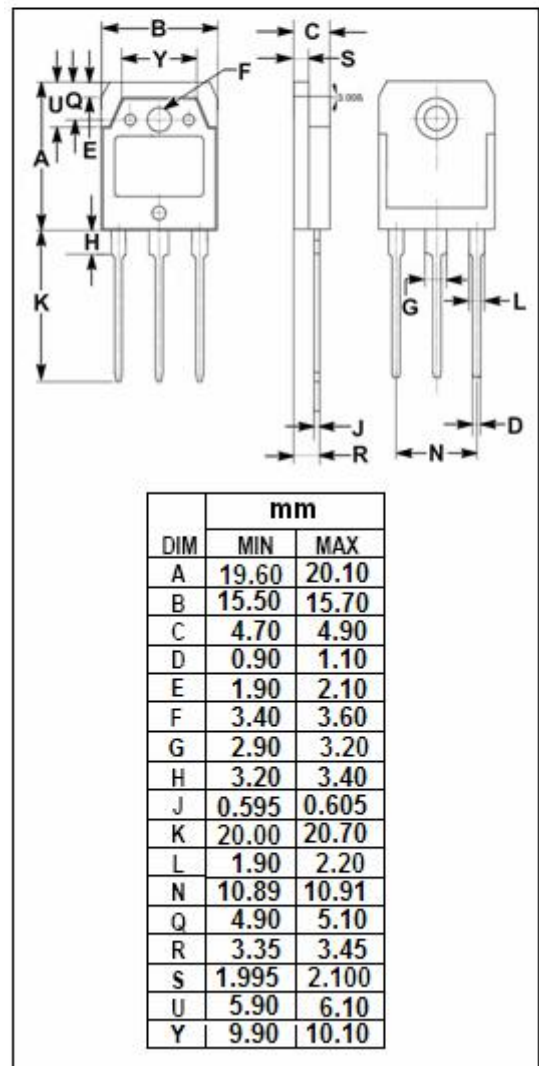
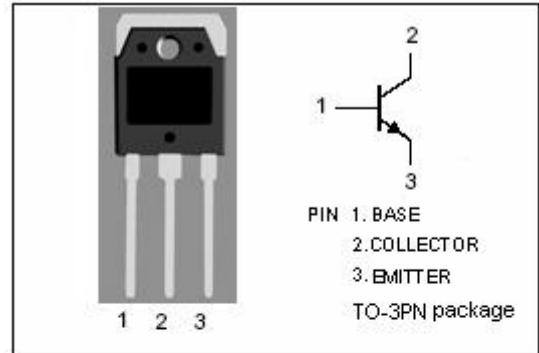
- High Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO}=180V(\text{Min})$
- Good Linearity of h_{FE}
- Complement to Type 2SA1492

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	200	V
V_{CEO}	Collector-Emitter Voltage	180	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current-Continuous	15	A
I_B	Base Current-Continuous	4	A
P_C	Collector Power Dissipation @ $T_C=25^\circ\text{C}$	130	W
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-55~150	$^\circ\text{C}$



Ordering Information

Product	Package	Packaging
2SC3856T4TL	TO-3PN	Tube



ELECTRICAL CHARACTERISTICS

$T_c=25^{\circ}\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	$I_C= 50\text{mA} ; I_B= 0$	180			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C= 5.0\text{A}; I_B= 0.5\text{A}$			2.0	V
I_{CBO}	Collector Cutoff Current	$V_{CB}= 200\text{V} ; I_E= 0$			100	μA
I_{EBO}	Emitter Cutoff Current	$V_{EB}= 6\text{V}; I_C= 0$			100	μA
h_{FE}	DC Current Gain	$I_C= 3\text{A} ; V_{CE}= 4\text{V}$	50		180	
C_{OB}	Output Capacitance	$I_E= 0 ; V_{CB}= 10\text{V}; f_{test}= 1.0\text{MHz}$		300		pF
f_T	Current-Gain—Bandwidth Product	$I_E=-0.5\text{A} ; V_{CE}= 12\text{V}$		20		MHz

Switching times

t_{on}	Turn-on Time	$I_C= 10\text{A}, R_L= 4\Omega,$ $I_{B1}= -I_{B2}= 1\text{A}, V_{CC}= 40\text{V}$		0.5		μs
t_{stg}	Storage Time			1.8		μs
t_f	Fall Time			0.6		μs

◆ h_{FE} Classifications

O	P	Y
50-100	70-140	90-180