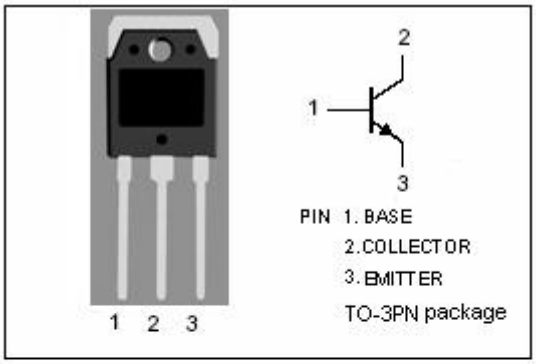
isc Silicon NPN Power Transistor — 2SC3856

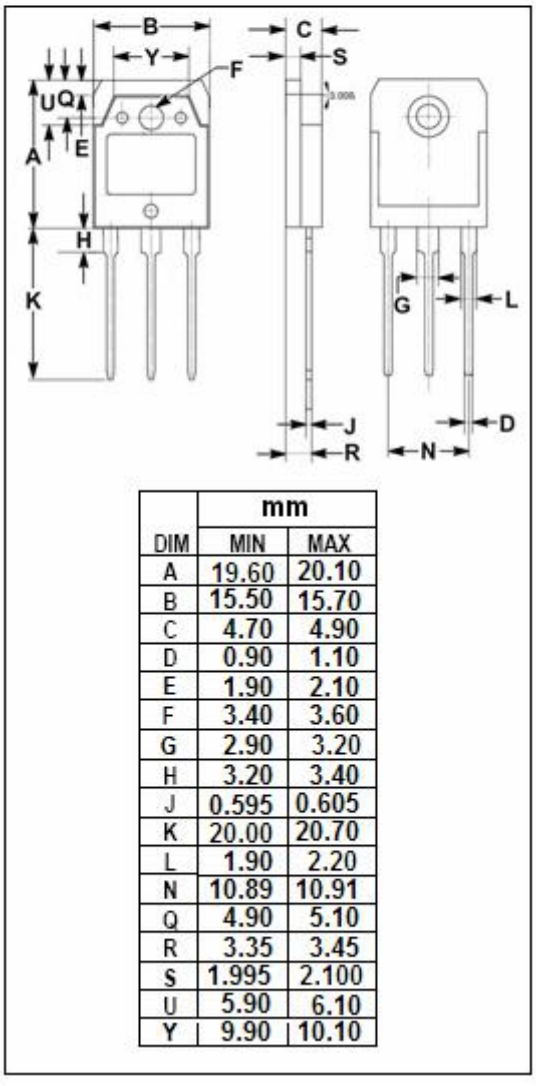


DESCRIPTION

- High Collector-Emitter Breakdown Voltage-
  : $V_{(BR)CEO}$=180V(Min)
- Good Linearity of h_{FE}
- Complement to Type 2SA1492
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Designed for audio and general purpose applications



DIM	mm MIN	mm MAX
A	19.60	20.10
B	15.50	15.70
C	4.70	4.90
D	0.90	1.10
E	1.90	2.10
F	3.40	3.60
G	2.90	3.20
H	3.20	3.40
J	0.595	0.605
K	20.00	20.70
L	1.90	2.20
N	10.89	10.91
Q	4.90	5.10
R	3.35	3.45
S	1.995	2.100
U	5.90	6.10
Y	9.90	10.10

ABSOLUTE MAXIMUM RATINGS(Ta=25℃)

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℃	130	W
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-55~150	℃

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ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	I_C= 50mA ; I_B= 0	180			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C= 5.0A; I_B= 0.5A			2.0	V
I_{CBO}	Collector Cutoff Current	V_{CB}= 200V ; 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= 3A ; V_{CE}= 4V	50		180	
C_{OB}	Output Capacitance	I_E= 0 ; V_{CB}= 10V;f_{test}= 1.0MHz		300		pF
f_T	Current-Gain—Bandwidth Product	I_E=-0.5A ; V_{CE}= 12V		20		MHz
Switching times						
t_{on}	Turn-on Time	I_C= 10A ,R_L= 4Ω , I_{B1}= -I_{B2}= 1A,V_{CC}≒ 40V		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

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