

isc Silicon NPN Power Transistor

2SC3858

DESCRIPTION

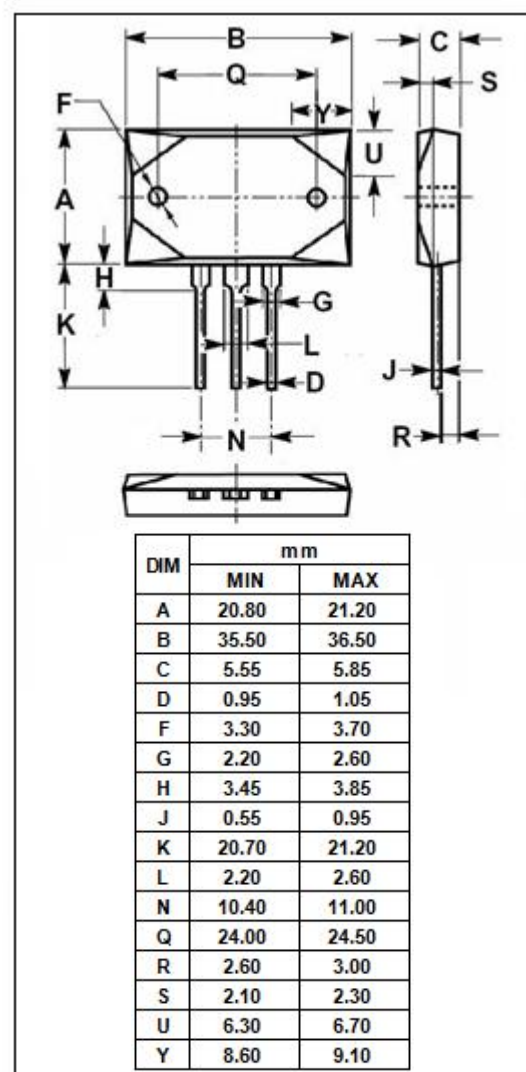
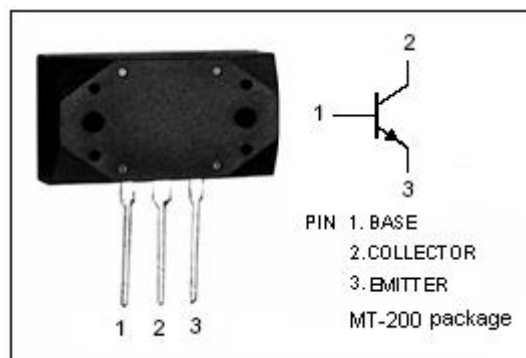
- Collector-Emitter Breakdown Voltage-
 $V_{(BR)CEO} = 200V(\text{Min})$
- Good Linearity of h_{FE}
- Complement to Type 2SA1494
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- 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	200	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current-Continuous	17	A
I_B	Base Current-Continuous	5	A
P_C	Collector Power Dissipation @ $T_C=25^\circ\text{C}$	200	W
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-55~150	$^\circ\text{C}$



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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	$I_C=50\text{mA}$; $I_B=0$	200			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=10\text{A}$; $I_B=1\text{A}$			2.5	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	$I_C=8\text{A}$; $V_{CE}=4\text{V}$	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	$I_E=-1\text{A}$; $V_{CE}=12\text{V}$		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

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

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