

isc Silicon NPN Power Transistor

2SC3857

DESCRIPTION

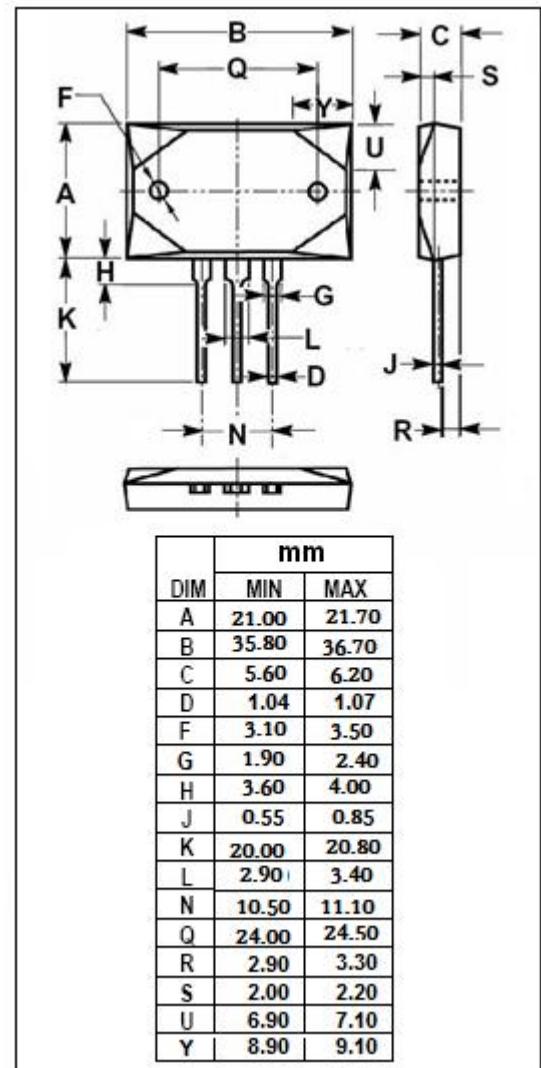
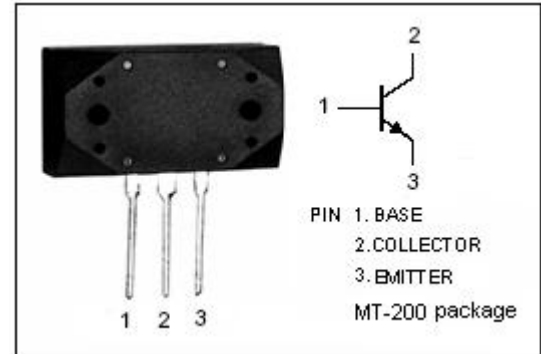
- Collector-Emitter Breakdown Voltage-
 $V_{(BR)CEO} = 200V(\text{Min})$
- Good Linearity of h_{FE}
- Complement to Type 2SA1493
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

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	15	A
I_B	Base Current-Continuous	5	A
P_C	Collector Power Dissipation @ $T_C=25^\circ\text{C}$	150	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°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{(BR)CEO}	Collector-Emitter Breakdown Voltage	I _C = 50mA ; I _B = 0	200			V
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = 10A; I _B = 1A			3.0	V
I _{CBO}	Collector Cutoff Current	V _{CB} = 200V; I _E = 0			100	μ A
I _{EBO}	Emitter Cutoff Current	V _{EB} = 6V; I _C = 0			100	μ A
h _{FE}	DC Current Gain	I _C = 5A; V _{CE} = 4V	50		180	
C _{OB}	Output Capacitance	I _E = 0; V _{CB} = 10V; f _{test} = 1.0MHz		250		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 = 5A, R _L = 12 Ω , I _{B1} = -I _{B2} = 0.5A, V _{CC} = 60V		0.3		μ s
t _{stg}	Storage Time			2.4		μ s
t _f	Fall Time			0.4		μ s

◆ h_{FE} Classifications

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

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