

isc Silicon NPN Power Transistor

2SC3856-P

DESCRIPTION

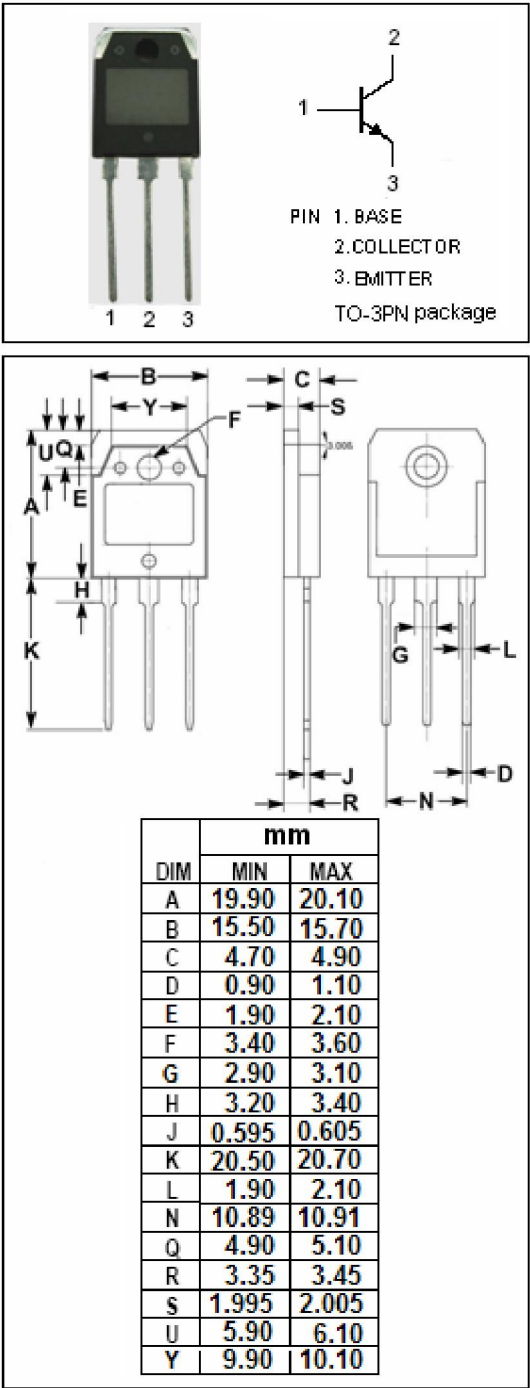
- High Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO}=180V(\text{Min})$
- Good Linearity of h_{FE}

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	$^{\circ}\text{C}$



isc Silicon NPN Power Transistor**2SC3856-P****ELECTRICAL CHARACTERISTICS****T_C=25°C unless otherwise specified**

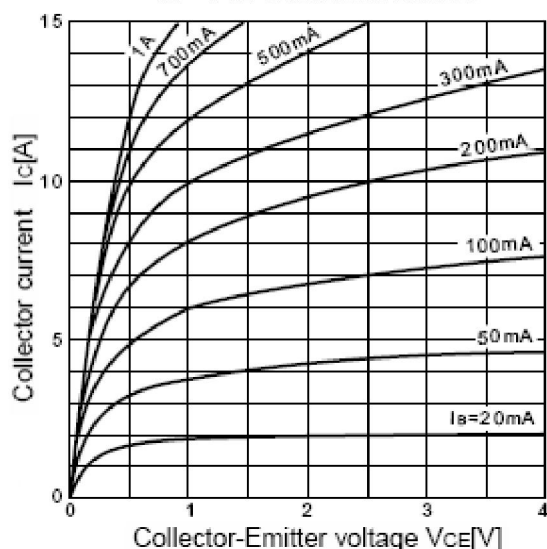
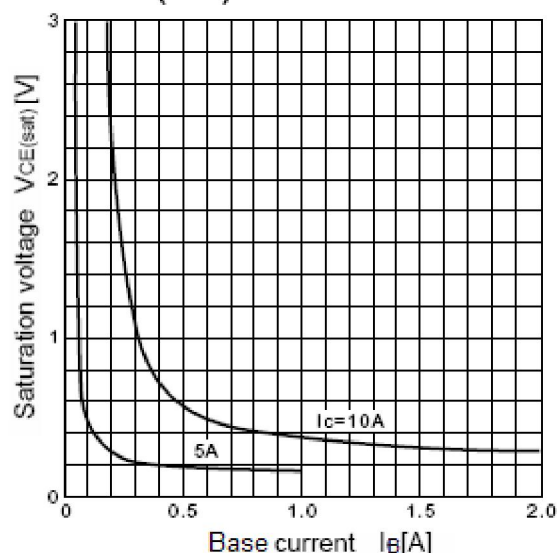
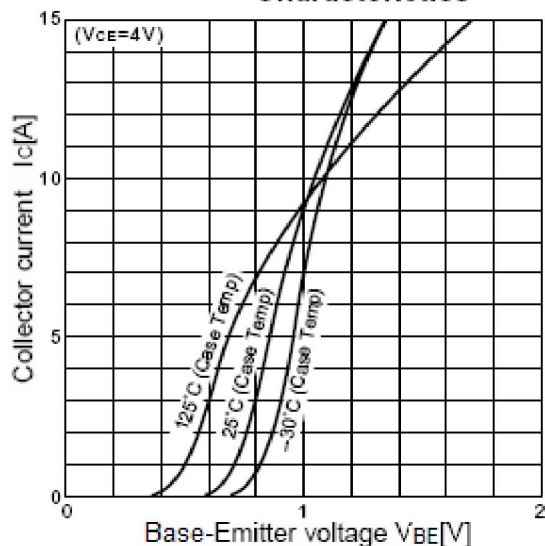
SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{(BR)CEO}	Collector-Emitter Breakdown Voltage	I _C = 50mA ; I _B = 0	180			V
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = 5.0A; I _B = 0.5A			2.0	V
I _{CBO}	Collector Cutoff Current	V _{CB} = 200V ; I _E = 0			100	μ A
I _{EBO}	Emitter Cutoff Current	V _{EB} = 6V; I _C = 0			100	μ A
h _{FE}	DC Current Gain	I _C = 3A ; V _{CE} = 4V	70		140	
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

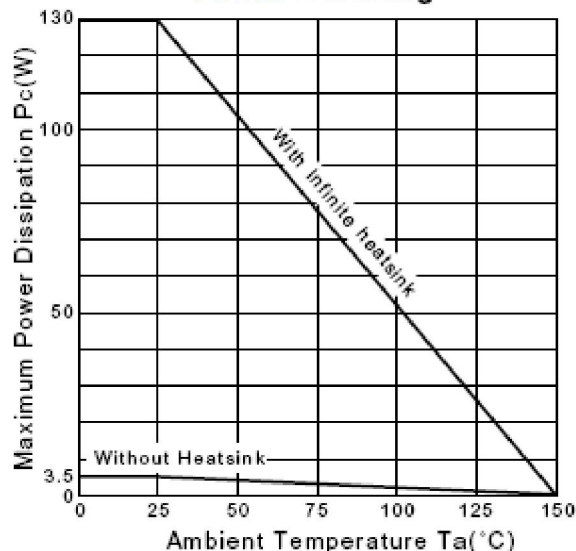
t _{on}	Turn-on Time	I _C = 10A , R _L = 4 Ω , I _{B1} = -I _{B2} = 1A, V _{CC} = 40V		0.5		μ s
t _{stg}	Storage Time			1.8		μ s
t _f	Fall Time			0.6		μ s

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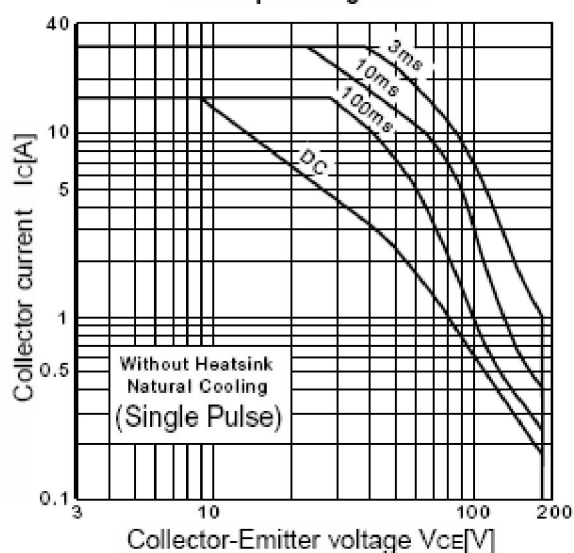
2SC3856

 I_C - V_{CE} Characteristics $V_{CE(sat)}$ - I_B Characteristics I_C - V_{BE} Characteristics

Power Derating



Safe Operating Area

 h_{FE} - I_C Characteristics