

2SC3857

Silicon NPN Triple Diffused Planar Transistor (Complement to type 2SA1493)

Application : Audio and General Purpose

Absolute maximum ratings (Ta=25°C)

Symbol	2SC3857	Unit
VCBO	200	V
VCEO	200	V
VEBO	6	V
IC	15	A
IB	5	A
PC	150(Tc=25°C)	W
Tj	150	°C
Tstg	-55 to +150	°C

Electrical Characteristics (Ta=25°C)

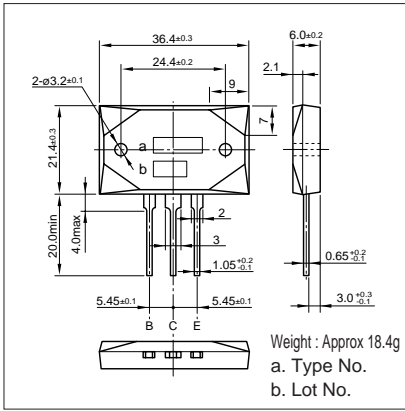
Symbol	Conditions	2SC3857	Unit
ICBO	VCB=200V	100max	μA
IEBO	VEB=6V	100max	μA
V(BR)CEO	IC=50mA	200min	V
hFE	VCE=4V, IC=5A	50min*	
VCE(sat)	IC=10A, IB=1A	3.0max	V
fr	VCE=12V, IE=-0.5A	20typ	MHz
COB	VCB=10V, f=1MHz	250typ	pF

*hFE Rank \bar{O} (50 to 100), P(70 to 140), Y(90 to 180)

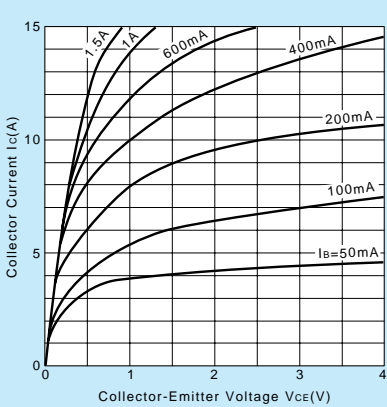
Typical Switching Characteristics (Common Emitter)

VCC (V)	RL (Ω)	IC (A)	VBB1 (V)	VBB2 (V)	IB1 (A)	IB2 (A)	ton (μs)	tstg (μs)	tr (μs)
60	12	5	10	-5	0.5	-0.5	0.3typ	2.4typ	0.4typ

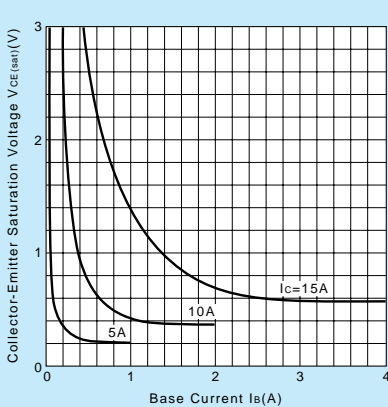
External Dimensions MT-200



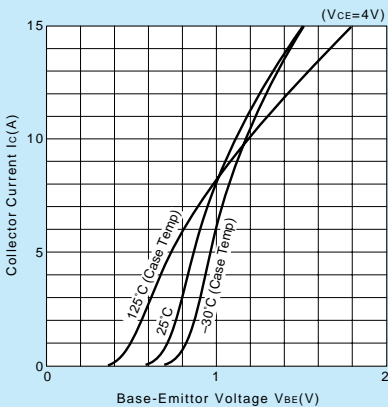
IC-VCE Characteristics (Typical)



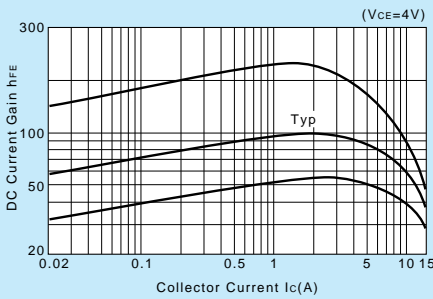
VCE(sat)-IB Characteristics (Typical)



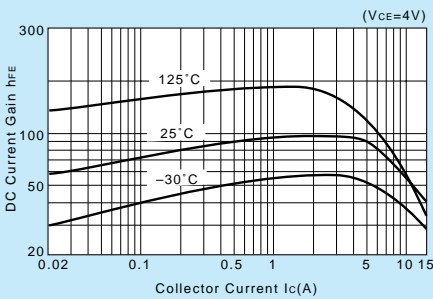
IC-VBE Temperature Characteristics (Typical)



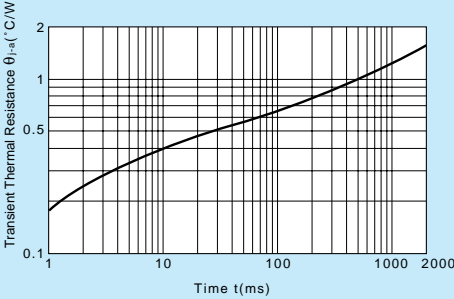
hFE-IC Characteristics (Typical)



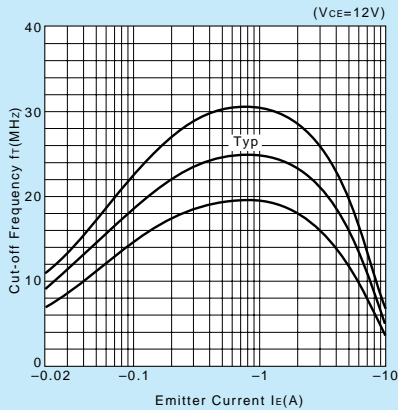
hFE-IC Temperature Characteristics (Typical)



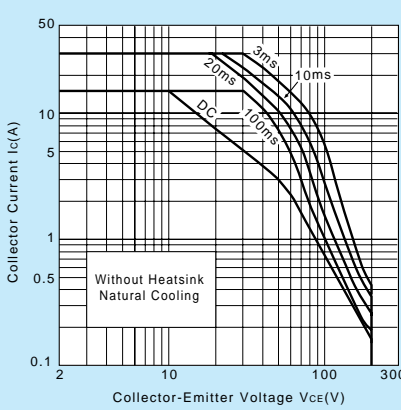
θJA-t Characteristics



fT-IE Characteristics (Typical)



Safe Operating Area (Single Pulse)



PC-Ta Derating

