

2SC3830

Silicon NPN Triple Diffused Planar Transistor (High Voltage and High Speed Switching Transistor)

Application : Switching Regulator and General Purpose

Absolute maximum ratings (Ta=25°C)

Symbol	2SC3830	Unit
VCBO	600	V
VCEO	500	V
VEBO	10	V
IC	6(Pulse12)	A
IB	2	A
Pc	50(Tc=25°C)	W
TJ	150	°C
Tstg	-55 to +150	°C

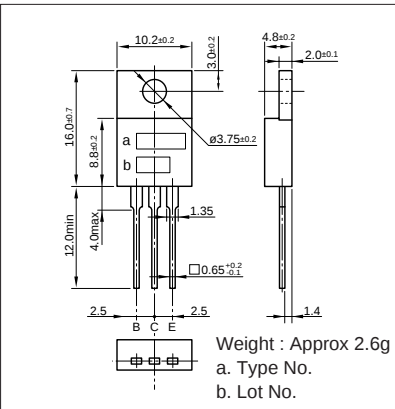
Electrical Characteristics (Ta=25°C)

Symbol	Conditions	2SC3830	Unit
ICBO	VCB=600V	1max	mA
IEBO	VEB=10V	100max	μA
V(BR)CEO	IC=25mA	500min	V
hFE	VCE=4V, IC=2A	10to30	
VCE(sat)	IC=2A, IB=0.4A	0.5max	V
VBE(sat)	IC=2A, IB=0.4A	1.3max	V
fr	VCE=12V, IE=-0.5A	8typ	MHz
COB	VCB=10V, f=1MHz	45typ	pF

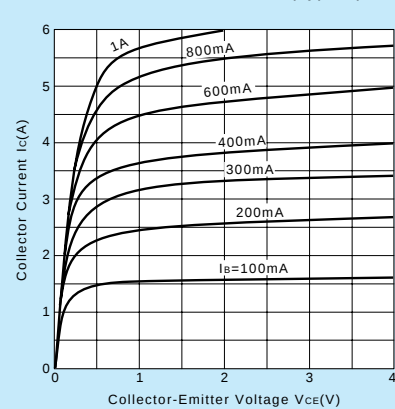
Typical Switching Characteristics (Common Emitter)

VCC (V)	RL (Ω)	IC (A)	VBB1 (V)	VBB2 (V)	IB1 (A)	IB2 (A)	ton (μs)	tstg (μs)	tr (μs)
200	100	2	10	-5	0.2	-0.4	1max	4.5max	0.5max

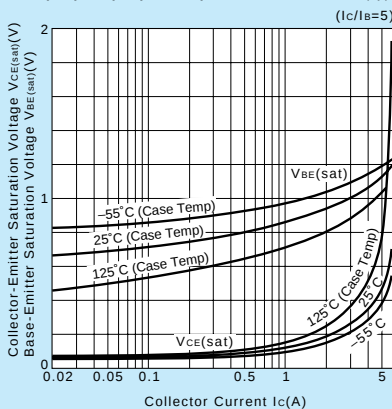
External Dimensions MT-25(TO220)



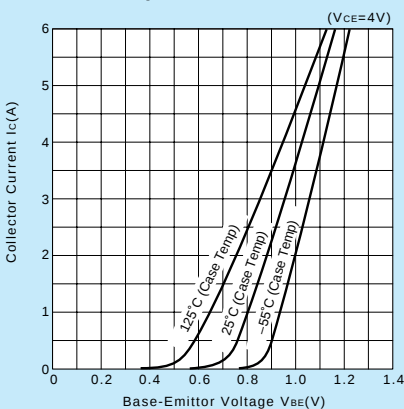
IC-VCE Characteristics (Typical)



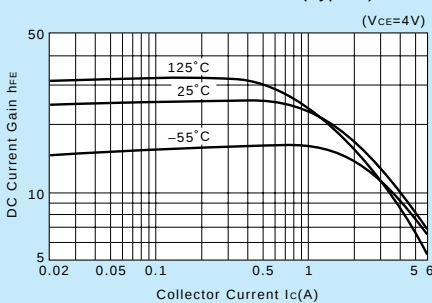
VCE(sat), VBE(sat)-IC Temperature Characteristics (Typical)



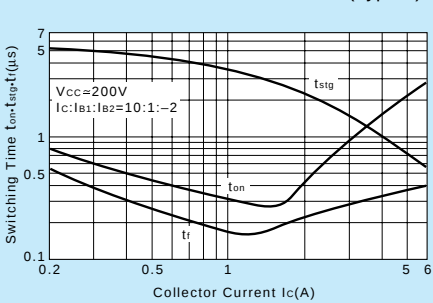
IC-VBE Temperature Characteristics (Typical)



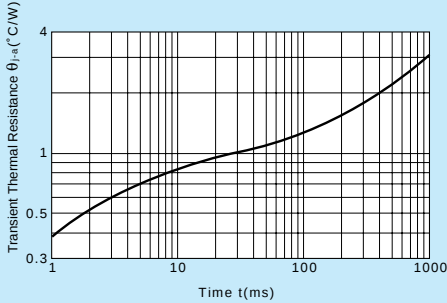
hFE-IC Characteristics (Typical)



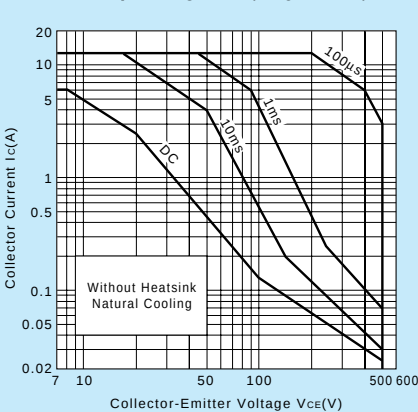
ton•tstg•tr-IC Characteristics (Typical)



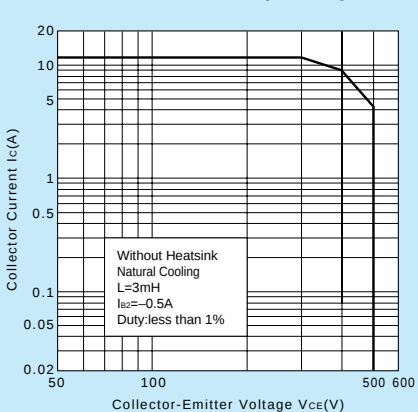
θJA-t Characteristics



Safe Operating Area (Single Pulse)



Reverse Bias Safe Operating Area



Pc-Ta Derating

