# 2SC383

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)

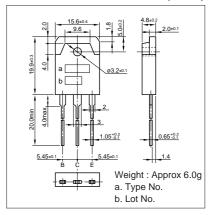
Symbol	2SC3831	Unit	
Vсво	600	V	
VCEO	500	V	
VEBO	10	V	
Ic	10(Pulse20)	А	
Ів	4	А	
Pc	100(Tc=25°C)	W	
Tj	150	°C	
Tstg	-55 to +150	°C	

### Electrical Characteristics

		•	
Symbol	Conditions	ons 2SC3831	
Ісво	Vcb=600V	1max	mA
<b>І</b> ЕВО	VEB=10V	100max	μΑ
V(BR)CEO	Ic=25mA	500min	V
hfe	Vce=4V, Ic=5A	10 to 30	
Vce(sat)	Ic=5A, IB=1A	0.5max	V
VBE(sat)	Ic=5A, IB=1A	1.3 max	V
fr	Vce=12V, Ie=-1A	8typ	MHz
Сов	VcB=10V, f=1MHz	105typ	pF

(Ta=25°C)

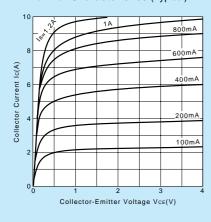
# External Dimensions MT-100(TO3P)



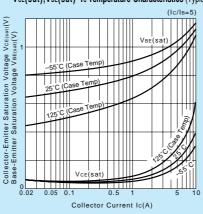
# Typical Switching Characteristics (Common Emitter)

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Vcc (V)	R <sub>L</sub> (Ω)	Ic (A)	V <sub>BB1</sub> (V)	VBB2 (V)	I <sub>B1</sub> (A)	IB2 (A)	ton (µs)	tstg (µs)	tf (µs)
200	40	5	10	-5	0.5	-1.0	1max	4.5max	0.5max

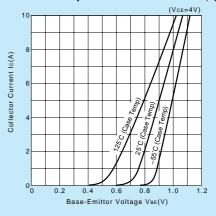
# Ic-VcE Characteristics (Typical)



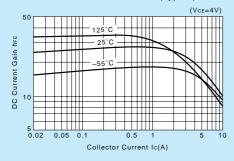
VcE(sat), VBE(sat)-Ic Temperature Characteristics (Typical)



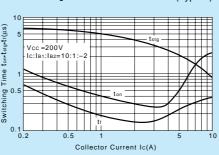
Ic-VBE Temperature Characteristics (Typical)



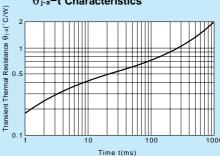
hfe-Ic Characteristics (Typical)



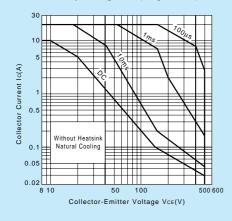
ton•tstg•tf-Ic Characteristics (Typical)



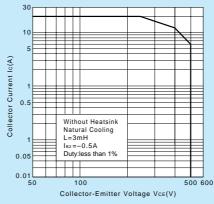
 $\theta_{\text{j-a}}\text{--t Characteristics}$ 



Safe Operating Area (Single Pulse)



**Reverse Bias Safe Operating Area** 



Pc-Ta Derating

