

2SC4153

Silicon NPN Triple Diffused Planar Transistor (Switching Transistor)

Application : Humidifier, DC-DC Converter, and General Purpose

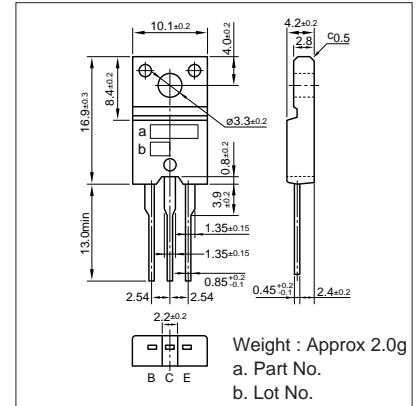
Absolute maximum ratings (Ta=25°C)

Symbol	Ratings	Unit
Vcbo	200	V
Vceo	120	V
Vebo	8	V
Ic	7(Pulse14)	A
Ib	3	A
Pc	30(Tc=25°C)	W
Tj	150	°C
Tstg	-55 to +150	°C

Electrical Characteristics (Ta=25°C)

Symbol	Conditions	Ratings	Unit
Icbo	Vcb=200V	100max	μA
Iebo	VEB=8V	100max	μA
V(BR)CEO	Ic=50mA	120min	V
hFE	VCE=4V, Ic=3A	70to220	
VCE(sat)	Ic=3A, Ib=0.3A	0.5max	V
VBE(sat)	Ic=3A, Ib=0.3A	1.2max	V
fr	VCE=12V, IE=-0.5A	30typ	MHz
COB	VCB=10V, f=1MHz	110typ	pF

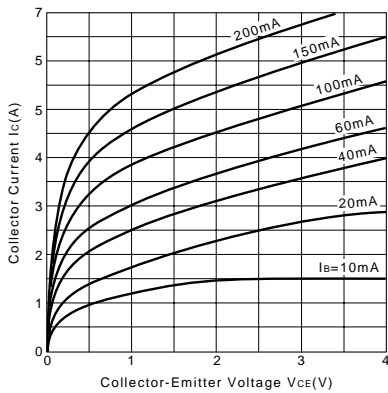
External Dimensions FM20(TO220F)



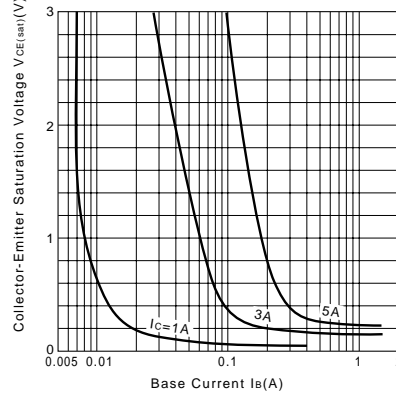
Typical Switching Characteristics (Common Emitter)

Vcc (V)	RL (Ω)	Ic (A)	VBB1 (V)	VBB2 (V)	Ib1 (A)	Ib2 (A)	ton (μs)	tstg (μs)	tf (μs)
50	16.7	3	10	-5	0.3	-0.6	0.5max	3max	0.5max

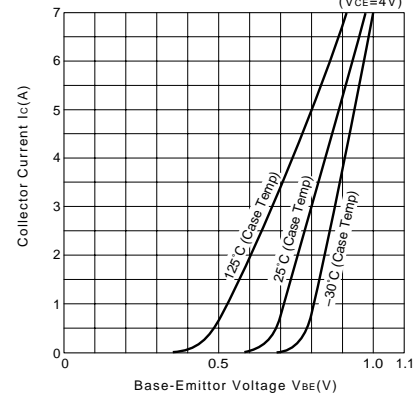
Ic-VCE Characteristics (Typical)



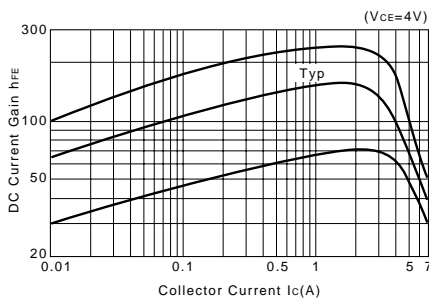
VCE(sat)-Ib Characteristics (Typical)



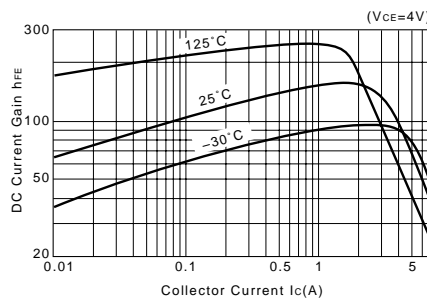
Ic-VBE Temperature Characteristics (Typical)



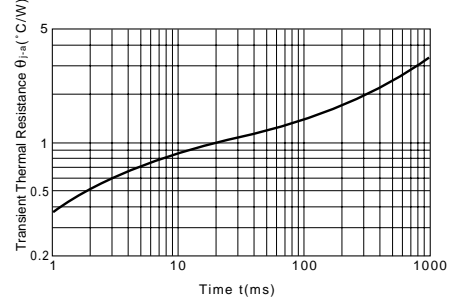
hFE-Ic Characteristics (Typical)



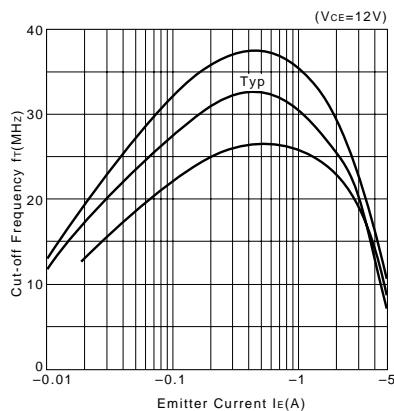
hFE-Ic Temperature Characteristics (Typical)



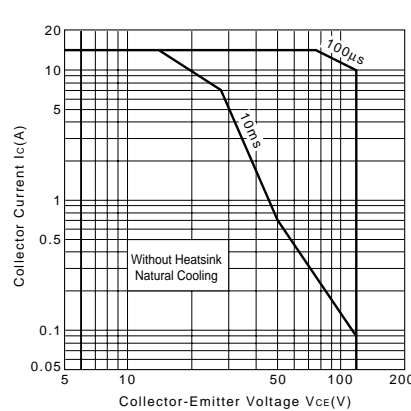
θj-a-t Characteristics



fr-IE Characteristics (Typical)



Safe Operating Area (Single Pulse)



Pc-Ta Derating

