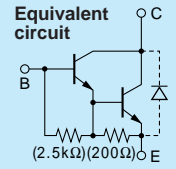


Darlington

2SD1785



Silicon NPN Triple Diffused Planar Transistor (Complement to type 2SB1258)

Application : Driver for Solenoid, Relay and Motor, Series Regulator, and General Purpose

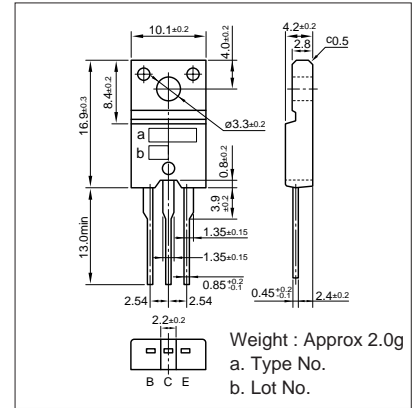
Absolute maximum ratings (Ta=25°C)

Symbol	2SD1785	Unit
Vcbo	120	V
Vceo	120	V
Vebo	6	V
Ic	6(Pulse10)	A
Ib	1	A
Pc	30(Tc=25°C)	W
Tj	150	°C
Tstg	-55 to +150	°C

Electrical Characteristics (Ta=25°C)

Symbol	Conditions	2SD1785	Unit
Icbo	VcB=120V	10max	μA
IeBo	VEB=6V	10max	mA
V(BR)CEO	Ic=10mA	120min	V
hFE	VCE=2V, Ic=3A	2000min	
VCE(sat)	Ic=2A, Ib=3mA	1.5max	V
fr	VCE=12V, IE=-0.1A	100typ	MHz
COB	VcB=10V, f=1MHz	70typ	pF

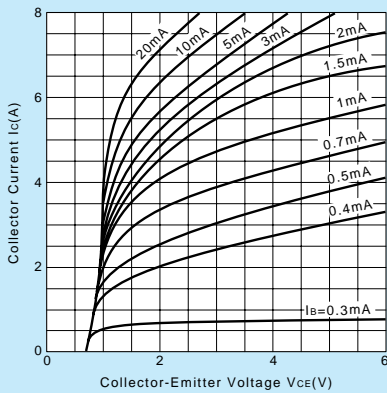
External Dimensions FM20(TO220F)



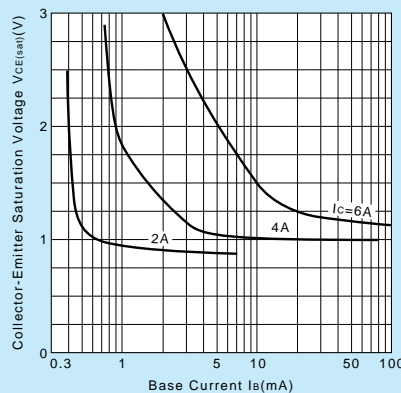
Typical Switching Characteristics (Common Emitter)

VCC (V)	RL (Ω)	Ic (A)	VBB1 (V)	VBB2 (V)	Ib1 (mA)	Ib2 (mA)	ton (μs)	tstg (μs)	tf (μs)
30	10	3	10	-1.5	3	-3	0.5typ	5.5typ	1.5typ

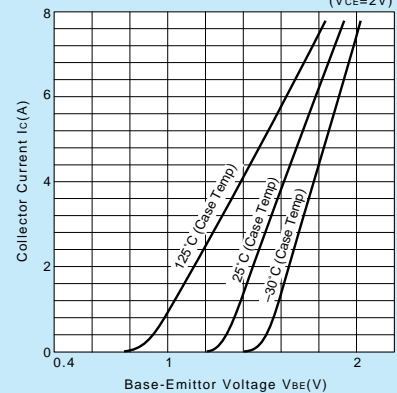
Ic-VCE Characteristics (Typical)



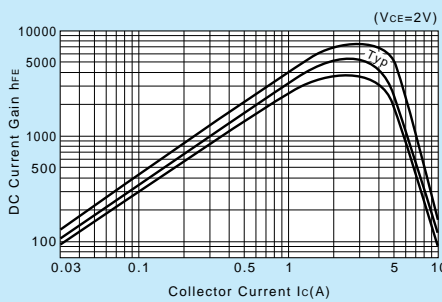
VCE(sat)-Ib Characteristics (Typical)



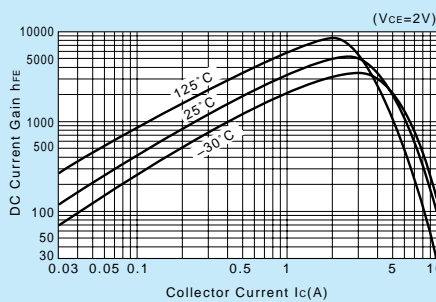
Ic-VBE Temperature Characteristics (Typical)



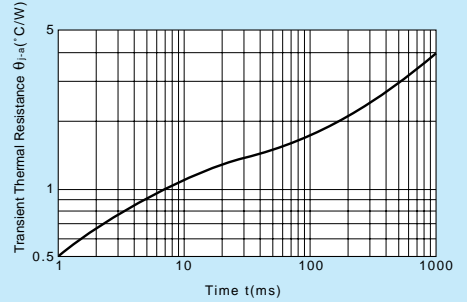
hFE-Ic Characteristics (Typical)



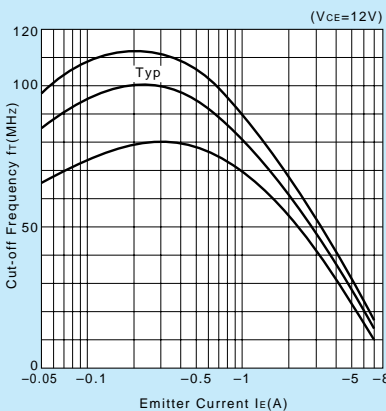
hFE-Ic Temperature Characteristics (Typical)



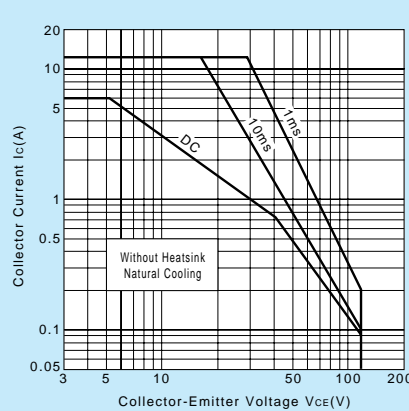
θj-a-t Characteristics



fr-IE Characteristics (Typical)



Safe Operating Area (Single Pulse)



Pc-Ta Derating

