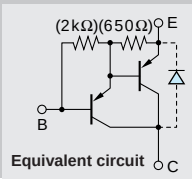
Darlington

2SB1257



Silicon PNP Epitaxial Planar Transistor (Complement to type 2SD2014)

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

■Absolute maximum ratings (Ta=25°C)

Symbol	Ratings	Unit
V_{CBO}	–60	V
V_{CEO}	–60	V
V_{EBO}	–6	V
I_C	–4(Pulse–6)	A
I_B	–1	A
P_C	25(Tc=25°C)	W
Tj	150	°C
Tstg	–55 to +150	°C

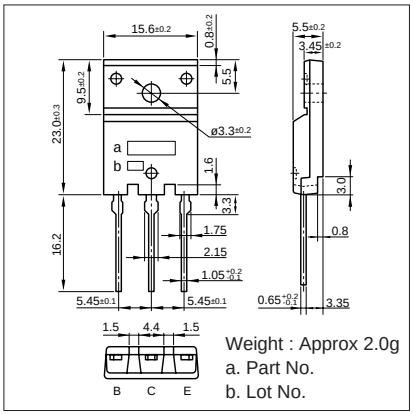
■Electrical Characteristics (Ta=25°C)

Symbol	Conditions	Ratings	Unit
I_{CBO}	V_{CB}=–60V	–10max	μA
I_{EBO}	V_{EB}=–6V	–10max	μA
$V_{(BR)CEO}$	I_C=–10mA	–60min	V
h_{FE}	V_{CE}=–4V, I_C=–3A	2000min	
$V_{CE(sat)}$	I_C=–3A, I_B=–6mA	–1.5max	V
$V_{BE(sat)}$	I_C=–3A, I_B=–6mA	–2max	V
f_T	V_{CE}=–12V, I_E=0.2A	150typ	MHz
C_{OB}	V_{CB}=–10V, f=1MHz	75typ	pF

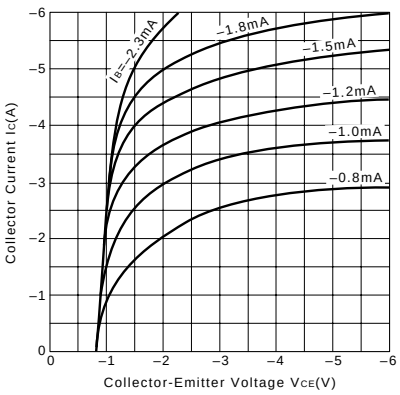
■Typical Switching Characteristics (Common Emitter)

V_{CC} (V)	R_L (Ω)	I_C (A)	V_{BB1} (V)	V_{BB2} (V)	I_{B1} (mA)	I_{B2} (mA)	ton (μs)	tstg (μs)	tf (μs)
–30	10	–3	–10	5	–10	10	0.4typ	0.8typ	0.6typ

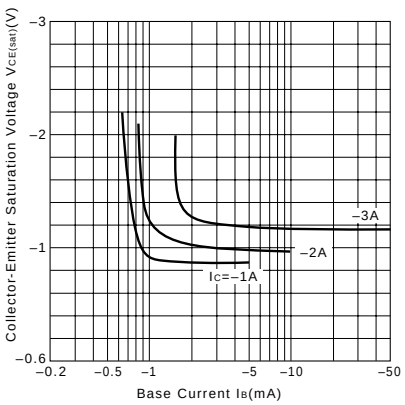
External Dimensions FM20(TO220F)



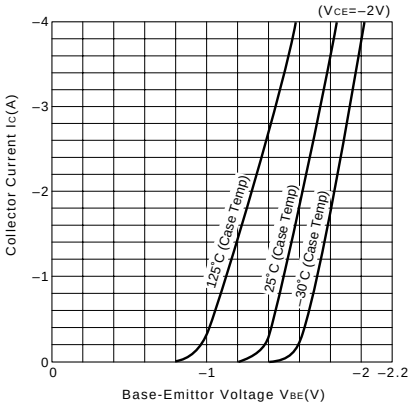
I_C–V_{CE} Characteristics (Typical)



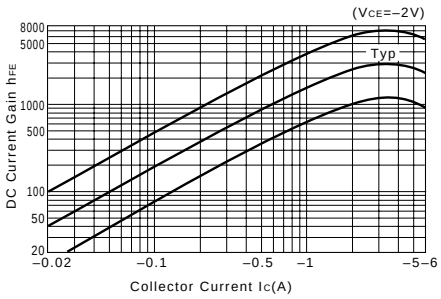
$V_{CE(sat)}$–I_B Characteristics (Typical)



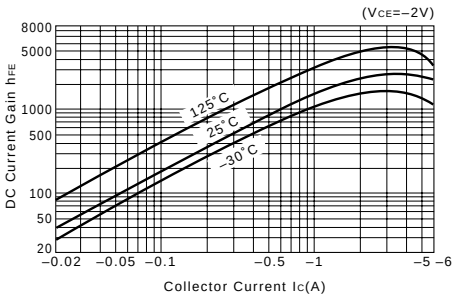
I_C–V_{BE} Temperature Characteristics (Typical)



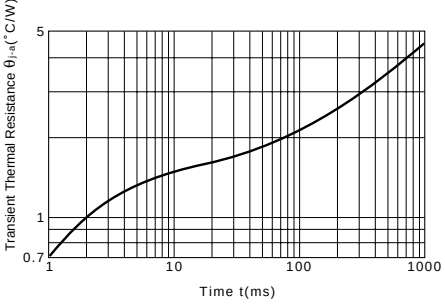
h_{FE}–I_C Characteristics (Typical)



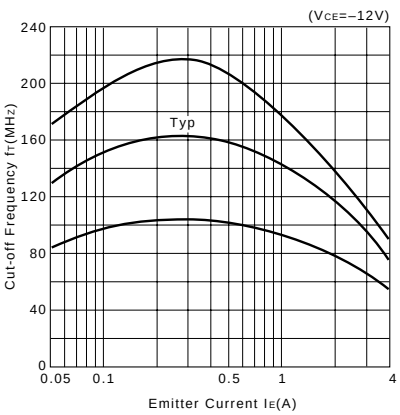
h_{FE}–I_C Temperature Characteristics (Typical)



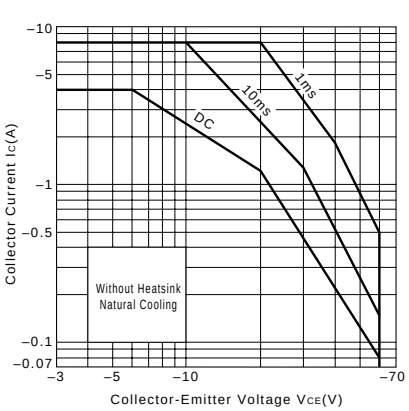
$\theta_{j\text{-}a}$–t Characteristics



f_T–I_E Characteristics (Typical)



Safe Operating Area (Single Pulse)



Pc–Ta Derating

