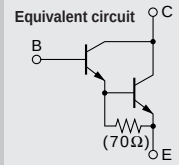


Darlington

2SD2642



Silicon NPN Triple Diffused Planar Transistor (Complement to type 2SB1687)

Application : Audio, Series Regulator and General Purpose

Absolute maximum ratings (Ta=25°C)

Symbol	Ratings	Unit
VCBO	110	V
VCEO	110	V
VEBO	5	V
IC	6	A
IB	1	A
PC	30(Tc=25°C)	W
Tj	150	°C
Tstg	-55 to +150	°C

Electrical Characteristics (Ta=25°C)

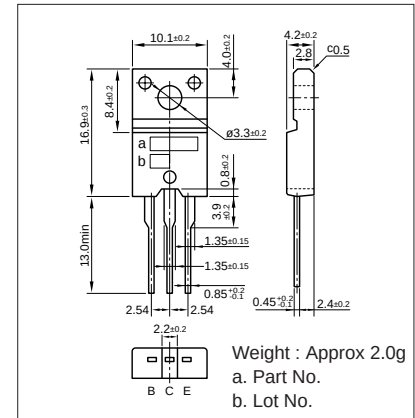
Symbol	Conditions	Ratings	Unit
ICBO	V _{CB} =110V	100max	μA
IEBO	V _{EB} =5V	100max	μA
V(BR)CEO	I _C =30mA	110min	V
hFE	V _{CE} =4V, I _C =5A	5000min*	
VCE(sat)	I _C =5A, I _B =5mA	2.5max	V
VBE(sat)	I _C =5A, I _B =5mA	3.0max	V
f _T	V _{CE} =12V, I _E =-0.5A	60typ	MHz
COB	V _{CB} =10V, f=1MHz	55typ	pF

*hFE Rank $\bar{O}$ (5000 to 12000), P(6500 to 20000), Y(15000 to 30000)

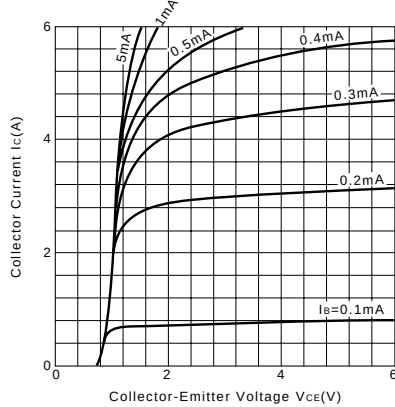
Typical Switching Characteristics (Common Emitter)

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	6	5	10	-5	5	-5	0.8typ	6.2typ	1.1typ

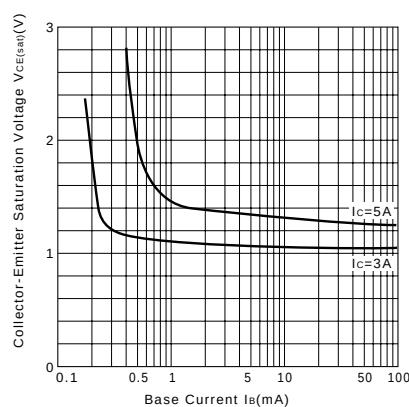
External Dimensions FM20(TO220F)



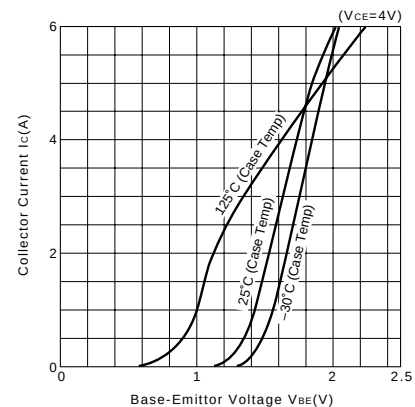
I_C-V_{CE} Characteristics (Typical)



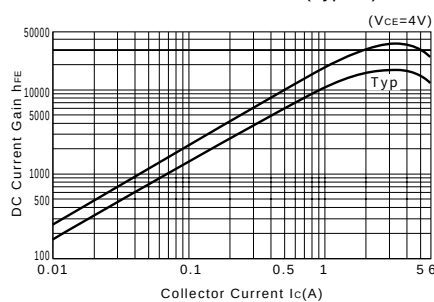
V_{CE(sat)}-I_B Characteristics (Typical)



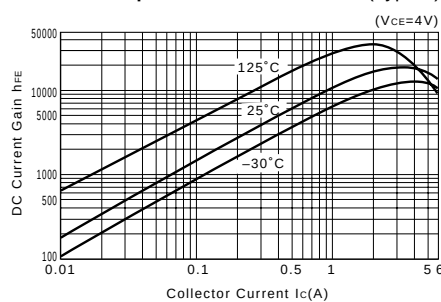
I_C-V_{BE} Temperature Characteristics (Typical)



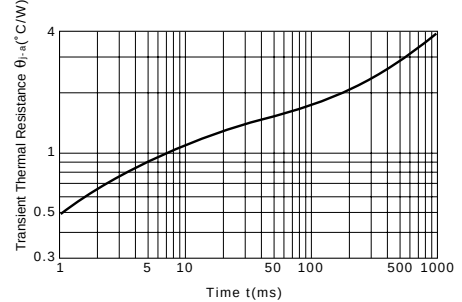
h_{FE}-I_C Characteristics (Typical)



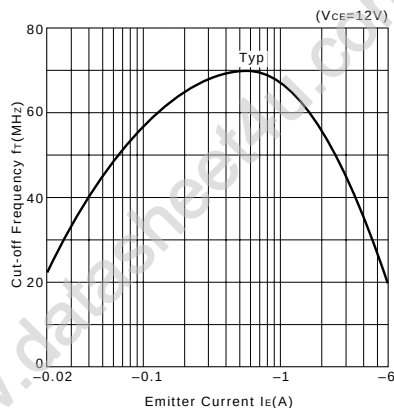
h_{FE}-I_C Temperature Characteristics (Typical)



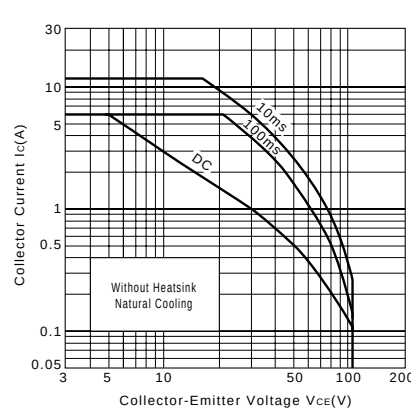
θ_{JA}-t Characteristics



f_T-I_E Characteristics (Typical)



Safe Operating Area (Single Pulse)



P_C-T_a Derating

