



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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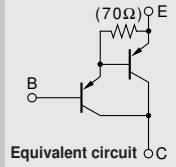
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Darlington

2SB1559



Silicon PNP Epitaxial Planar Transistor (Complement to type 2SD2389)

Application : Audio, Series Regulator and General Purpose

Absolute maximum ratings (Ta=25°C)

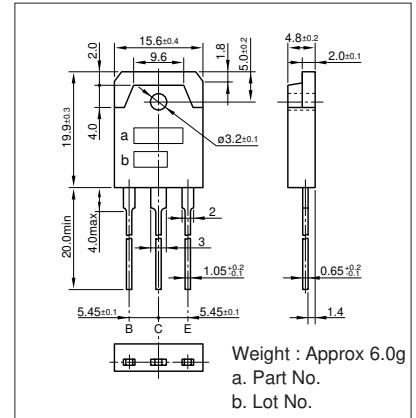
Symbol	Ratings	Unit
V _{CB0}	-160	V
V _{CE0}	-150	V
V _{EB0}	-5	V
I _c	-8	A
I _b	-1	A
P _c	80(T _c =25°C)	W
T _J	150	°C
T _{stg}	-55 to +150	°C

Electrical Characteristics (Ta=25°C)

Symbol	Conditions	Ratings	Unit
I _{CB0}	V _{CB} =-160V	-100max	μA
I _{EB0}	V _{EB} =-5V	-100max	μA
V _{(BR)CEO}	I _c =-30mA	-150min	V
h _{FE}	V _{CE} =-4V, I _c =-6A	5000min*	
V _{CE(sat)}	I _c =-6A, I _b =-6mA	-2.5max	V
V _{BE(sat)}	I _c =-6A, I _b =-6mA	-3.0max	V
f _r	V _{CE} =-12V, I _E =1A	65typ	MHz
C _{OB}	V _{CB} =-10V, f=1MHz	160typ	pF

*h_{FE} Rank ○(5000 to 12000), P(6500 to 20000), Y(15000 to 30000)

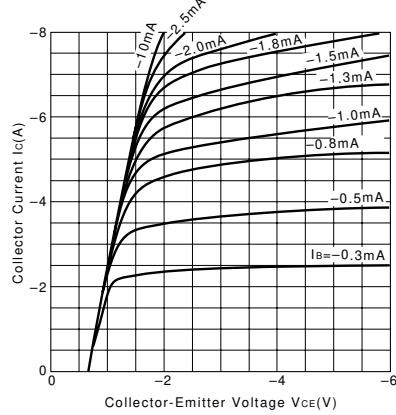
External Dimensions MT-100(TO3P)



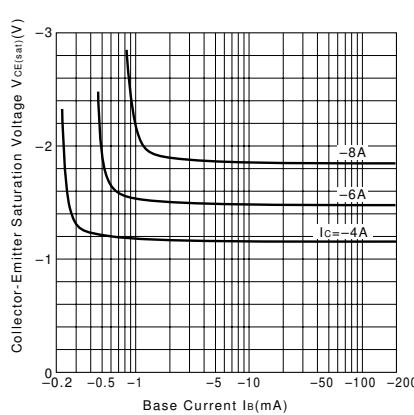
Typical Switching Characteristics (Common Emitter)

V _{CC} (V)	R _L (Ω)	I _c (A)	V _{BB1} (V)	V _{BB2} (V)	I _{b1} (mA)	I _{b2} (mA)	t _{on} (μs)	t _{stg} (μs)	t _f (μs)
-60	10	-6	-10	5	-6	6	0.7typ	3.6typ	0.9typ

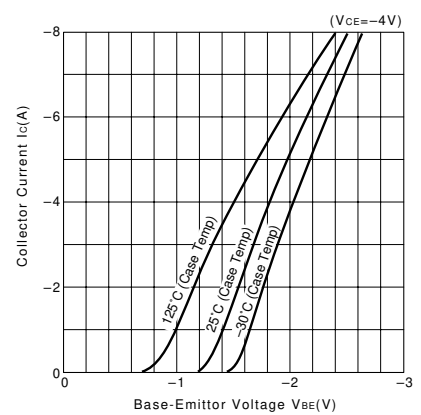
I_c-V_{CE} Characteristics (Typical)



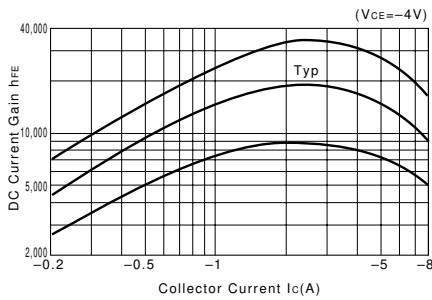
V_{CE(sat)}-I_b Characteristics (Typical)



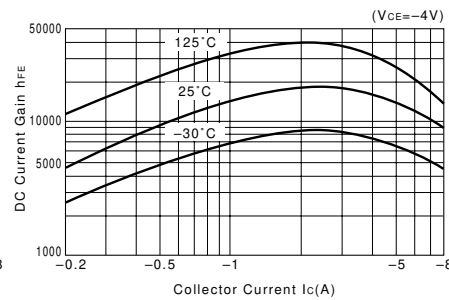
I_c-V_{BE} Temperature Characteristics (Typical)



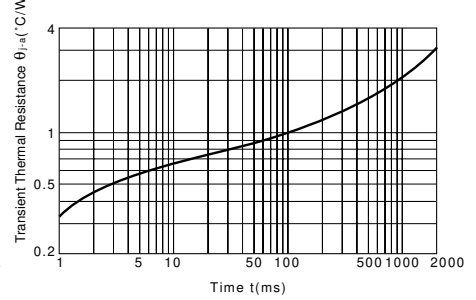
h_{FE}-I_c Characteristics (Typical)



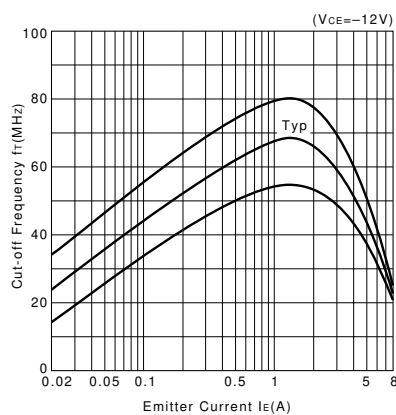
h_{FE}-I_c Temperature Characteristics (Typical)



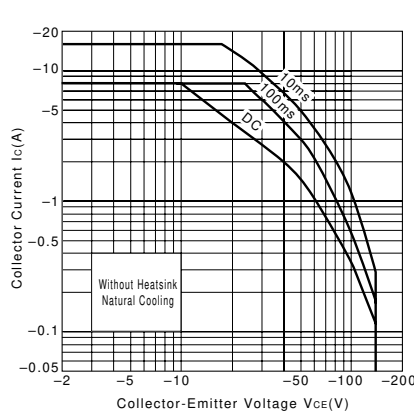
θ_{J-a}-t Characteristics



f_r-I_E Characteristics (Typical)



Safe Operating Area (Single Pulse)



P_c-T_a Derating

