

Low  $V_{CE}$  (sat)

# 2SA1567

Silicon PNP Epitaxial Planar Transistor (Complement to type 2SC4064)

Application : DC Motor Driver, Chopper Regulator and General Purpose

**Absolute maximum ratings** ( $T_a=25^\circ\text{C}$ )

Symbol	2SA1567	Unit
$V_{CBO}$	-50	V
$V_{CEO}$	-50	V
$V_{EBO}$	-6	V
$I_c$	-12	A
$I_B$	-3	A
$P_c$	35( $T_c=25^\circ\text{C}$ )	W
$T_j$	150	$^\circ\text{C}$
$T_{stg}$	-55 to +150	$^\circ\text{C}$

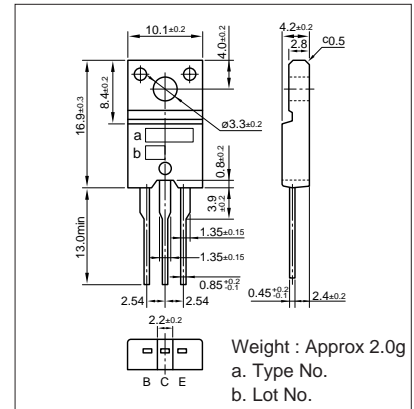
**Electrical Characteristics** ( $T_a=25^\circ\text{C}$ )

Symbol	Conditions	2SA1567	Unit
$I_{CBO}$	$V_{CB}=-50\text{V}$	-100max	$\mu\text{A}$
$I_{EBO}$	$V_{EB}=-6\text{V}$	-100max	$\mu\text{A}$
$V_{(BR)CEO}$	$I_c=-25\text{mA}$	-50min	V
$h_{FE}$	$V_{CE}=-1\text{V}, I_c=-6\text{A}$	50min	
$V_{CE(sat)}$	$I_c=-6\text{A}, I_B=-0.3\text{A}$	-0.35max	V
$f_r$	$V_{CE}=-12\text{V}, I_E=0.5\text{A}$	40typ	MHz
$COB$	$V_{CB}=-10\text{V}, f=1\text{MHz}$	330typ	pF

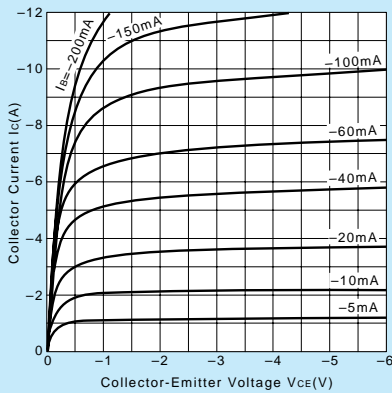
**Typical Switching Characteristics (Common Emitter)**

$V_{CC}$ (V)	$R_L$ ( $\Omega$ )	$I_c$ (A)	$V_{BB1}$ (V)	$V_{BB2}$ (V)	$I_{B1}$ (mA)	$I_{B2}$ (mA)	$t_{on}$ ( $\mu\text{s}$ )	$t_{stg}$ ( $\mu\text{s}$ )	$t_f$ ( $\mu\text{s}$ )
-24	4	-6	-10	5	-120	120	0.4typ	0.4typ	0.2typ

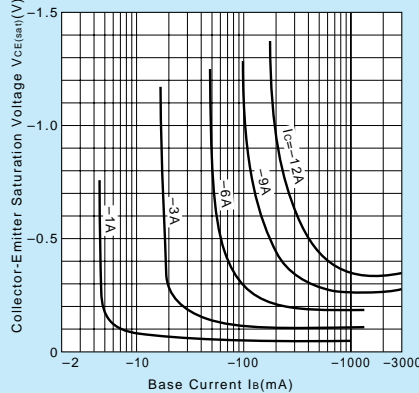
**External Dimensions FM20 (TO220F)**



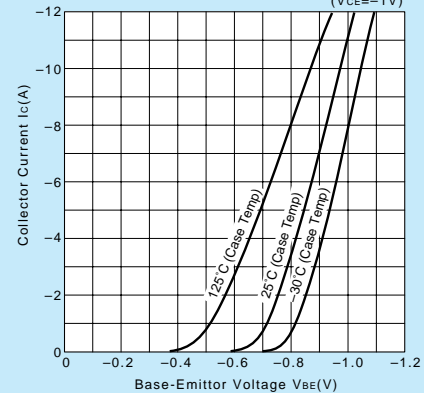
**$I_c-V_{CE}$  Characteristics (Typical)**



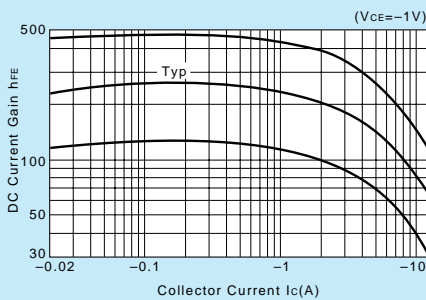
**$V_{CE(sat)}-I_B$  Characteristics (Typical)**



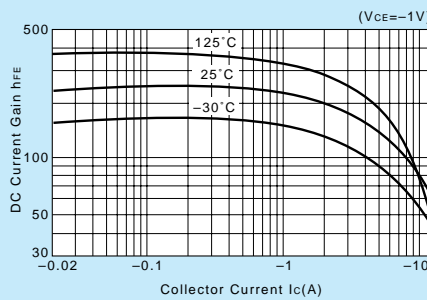
**$I_c-V_{BE}$  Temperature Characteristics (Typical)**



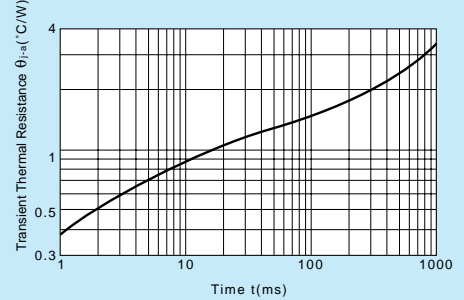
**$h_{FE}-I_c$  Characteristics (Typical)**



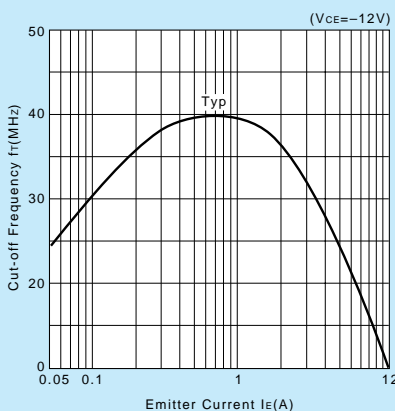
**$h_{FE}-I_c$  Temperature Characteristics (Typical)**



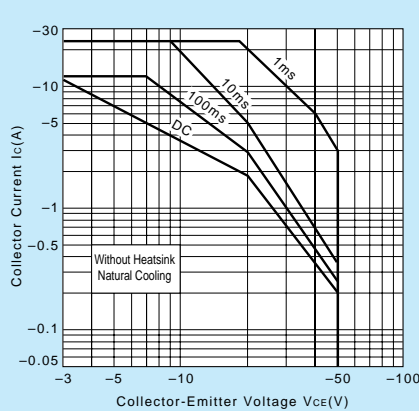
**$\theta_{j-a}-t$  Characteristics**



**$f_T-I_E$  Characteristics (Typical)**



**Safe Operating Area (Single Pulse)**



**$P_c-T_a$  Derating**

