

High  $h_{FE}$   
Low  $V_{CE(sat)}$

# 2SC4495

Silicon NPN Triple Diffused Planar Transistor

Application : Audio Temperature Compensation and General Purpose

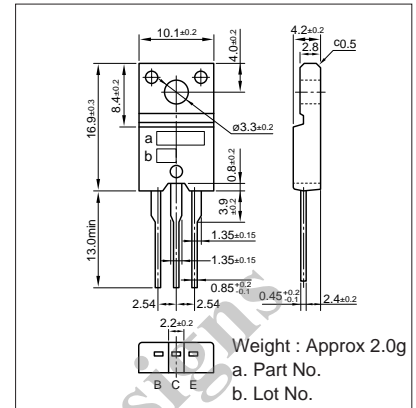
■ Absolute maximum ratings ( $T_a=25^\circ\text{C}$ )

Symbol	Ratings	Unit
$V_{CBO}$	80	V
$V_{CEO}$	50	V
$V_{EBO}$	6	V
$I_C$	3	A
$I_B$	1	A
$P_c$	25( $T_c=25^\circ\text{C}$ )	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	Ratings	Unit
$I_{CBO}$	$V_{CB}=80\text{V}$	10max	$\mu\text{A}$
$I_{EBO}$	$V_{EB}=6\text{V}$	10max	$\mu\text{A}$
$V_{(BR)CEO}$	$I_C=25\text{mA}$	50min	V
$h_{FE}$	$V_{CE}=4\text{V}, I_C=0.5\text{A}$	500min	
$V_{CE(sat)}$	$I_C=1\text{A}, I_B=20\text{mA}$	0.5max	V
$f_T$	$V_{CE}=12\text{V}, I_E=-0.1\text{A}$	40typ	MHz
COB	$V_{CB}=10\text{V}, f=1\text{MHz}$	30typ	pF

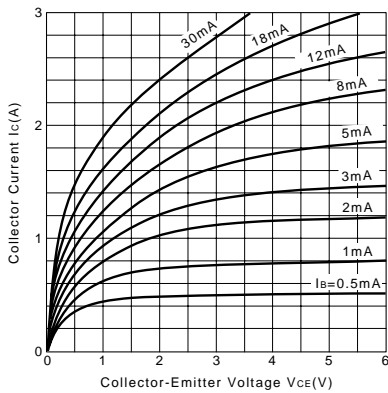
External Dimensions FM20(TO220F)



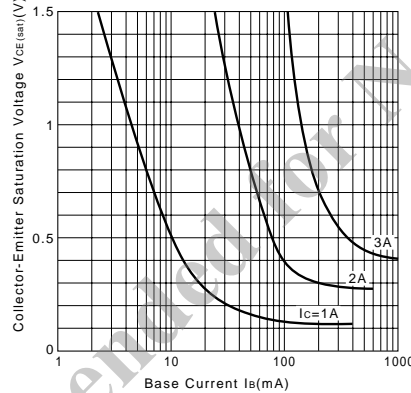
■ Typical Switching Characteristics (Common Emitter)

$V_{CC}$ (V)	$R_L$ ( $\Omega$ )	$I_C$ (A)	$V_{BB1}$ (V)	$V_{BB2}$ (V)	$I_{B1}$ (mA)	$I_{B2}$ (mA)	$t_{on}$ ( $\mu\text{s}$ )	$t_{stg}$ ( $\mu\text{s}$ )	$t_f$ ( $\mu\text{s}$ )
20	20	1	10	-5	15	-30	0.45typ	1.60typ	0.85typ

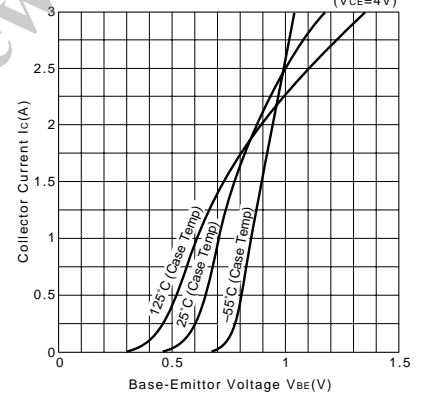
$I_C-V_{CE}$  Characteristics (Typical)



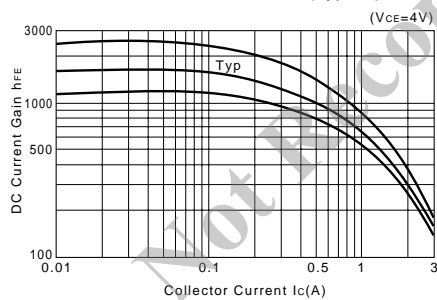
$V_{CE(sat)}-I_B$  Characteristics (Typical)



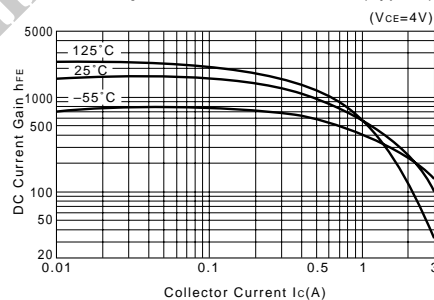
$I_C-V_{BE}$  Temperature Characteristics (Typical)



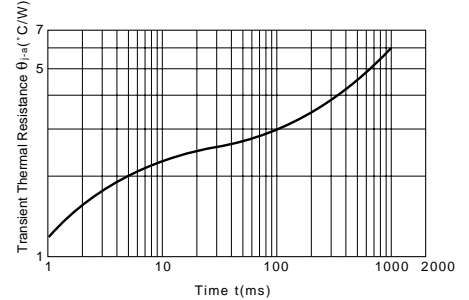
$h_{FE}-I_C$  Characteristics (Typical)



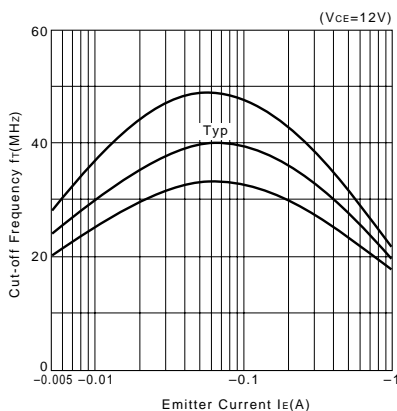
$h_{FE}-I_C$  Temperature Characteristics (Typical)



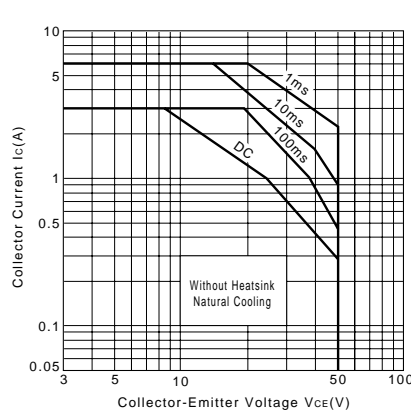
$\theta_{j-a}-t$  Characteristics



$f_T-I_E$  Characteristics (Typical)



Safe Operating Area (Single Pulse)



$P_c-T_a$  Derating

