

**FEATURES**

High Breakdown Voltage  
Complement to MMBTA44

Marking : 4D

MAXIMUM RATINGS (TA=25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Collector-Base Voltage	$V_{CBO}$	-400	V
DCollector-Emitter Voltage	$V_{CEO}$	-400	V
Emitter-Base Voltage	$V_{EBO}$	-5	V
Collector Current -Continuous	$I_C$	-200	mA
Collector Current -Pulsed	$I_{CM}$	-300	mA
Collector Power Dissipation	$P_C$	350	mW
Thermal Resistance From Junction To Ambient	$R_{JA}$	357	°C/W
Junction Temperature	$T_j$	150	°C
Storage Temperature	$T_{stg}$	-55 to +150	°C

**MMBTA94(PNP)**


ELECTRICAL CHARACTERISTICS (Tamb=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{CBO}$	$I_C=-100\mu A, I_E=0$	-400			V
Collector-emitter breakdown voltage	$V_{CEO}$	$I_C=-1mA, I_B=0$	-400			V
Emitter-base breakdown voltage	$V_{EBO}$	$I_E=-100\mu A, I_C=0$	-5			V
Collector cut-off current	$I_{CBO}$	$V_{CB}=-400V, I_E=0$			-0.1	$\mu A$
Collector cut-off current	$I_{CEO}$	$V_{CE}=-400V, I_B=0$			-5	$\mu A$
Emitter cut-off current	$I_{EBO}$	$V_{EB}=-4V, I_C=0$			-0.1	$\mu A$
DC current gain	$h_{FE(1)}$	$V_{CE}=-10V, I_C=-10mA$	80		300	
	$h_{FE(2)}$	$V_{CE}=-10V, I_C=-1mA$	70			
	$h_{FE(3)}$	$V_{CE}=-10V, I_C=-100mA$	40			
	$h_{FE(4)}$	$V_{CE}=-10V, I_C=-50mA$	40			
Collector-emitter saturation voltage	$V_{CE(sat)1}$	$I_C=-10mA, I_B=-1mA$			-0.2	V
	$V_{CE(sat)2}$	$I_C=-50mA, I_B=-5mA$			-0.3	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=-10mA, I_B=-1mA$			-0.75	V
Transition frequency	$f_T$	$V_{CE}=-20V, I_C=-10mA, f=30MHz$	50			MHz

**MMBTA94** Typical Characteristics

