BD136
BD138
BD140

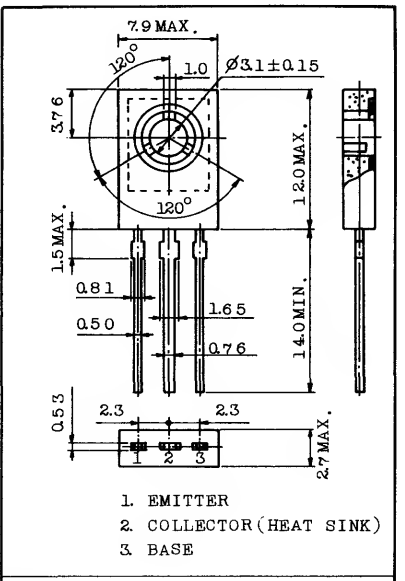
SILICON PNP EPITAXIAL TYPE (PCT PROCESS)

MEDIUM POWER AMPLIFIER APPLICATIONS.

FEATURES:

. Designed for Complementary Use with BD135, BD137 and BD139

Unit in mm



JEDEC	TO-126
EIAJ	—
TOSHIBA	2-8F1A

Weight : 0.72g

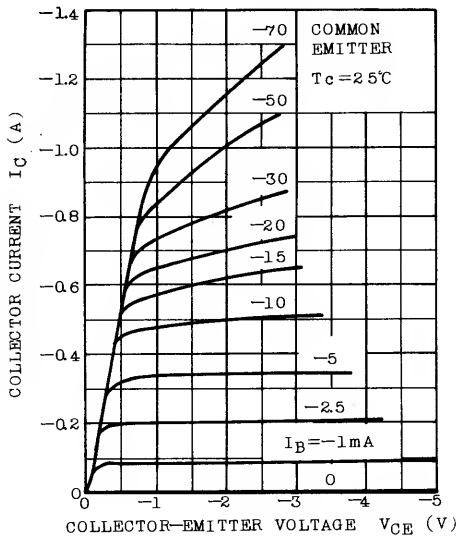
MAXIMUM RATINGS (Ta=25°C)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage	BD136	V_{CBO}	-45	V
	BD138		-60	
	BD140		-80	
Collector-Emitter Voltage	BD136	V_{CEO}	-45	V
	BD138		-60	
	BD140		-80	
Emitter-Base Voltage		V_{EBO}	-5	V
Collector Current	DC	I_C	-0.5	A
	Peak	I_{CM}	-1.5	
Collector Power Dissipation	Ta=25°C	P_C	1	W
	Tc≦60°C		6.5	
Junction Temperature		T_j	150	°C
Storage Temperature Range		T_{stg}	-55~150	°C

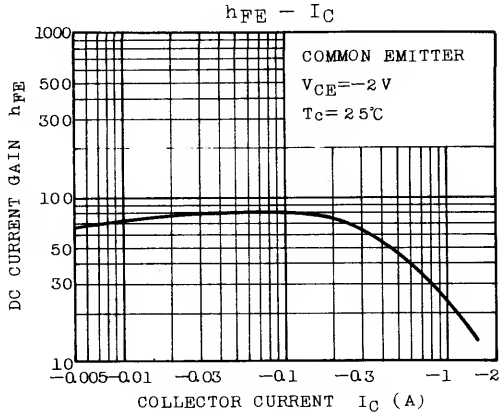
ELECTRICAL CHARACTERISTICS (Ta=25°C)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		I_{CBO}	V_{CB}=-30V, I_E=0	-	-	-0.1	μA
			V_{CB}=-30V, I_E=0, Ta=125°C	-	-	-10	
Emitter Cut-off Current		I_{EBO}	V_{EB}=-5V, I_C=0	-	-	-10	μA
Collector-Emitter Breakdown Voltage	BD136	$V_{(BR)CEO}$	I_C=-30mA, I_B=0	-45	-	-	V
	BD138			-60	-	-	
	BD140			-80	-	-	
DC Current Gain		$h_{FE(1)}$	V_{CE}=-2V, I_C=-5mA	25	-	-	
		$h_{FE(2)}$	V_{CE}=-2V, I_C=-150mA	40	-	250	
		$h_{FE(3)}$	V_{CE}=-2V, I_C=-500mA	25	-	-	
Collector-Emitter Saturation Voltage		$V_{CE(sat)}$	I_C=-500mA, I_B=-50mA	-	-	-0.5	V
Base-Emitter Voltage		V_{BE}	V_{CE}=-2V, I_C=-500mA	-	-	-1.0	V
Transition Frequency		f_T	V_{CE}=-2V, I_C=-50mA	-	100	-	MHz

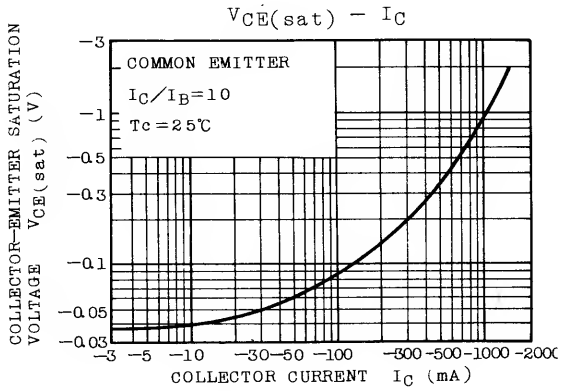
$I_C - V_{CE}$



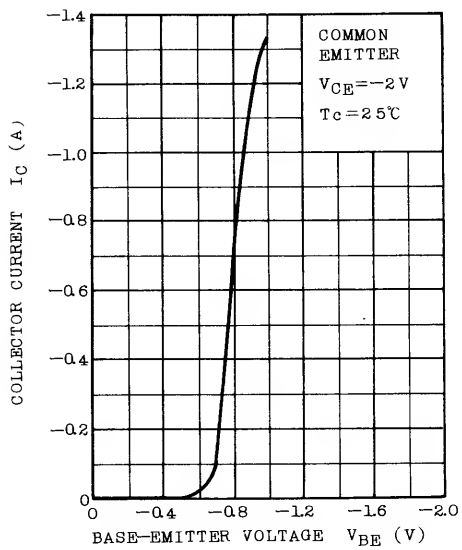
$h_{FE} - I_C$



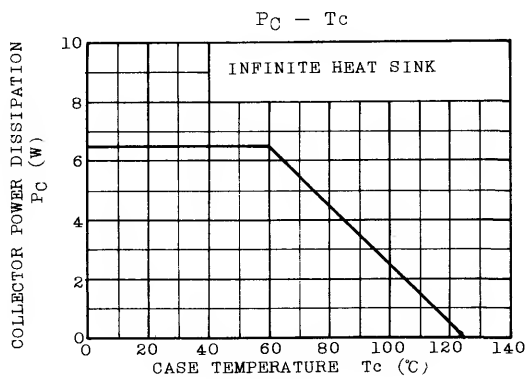
$V_{CE(sat)} - I_C$



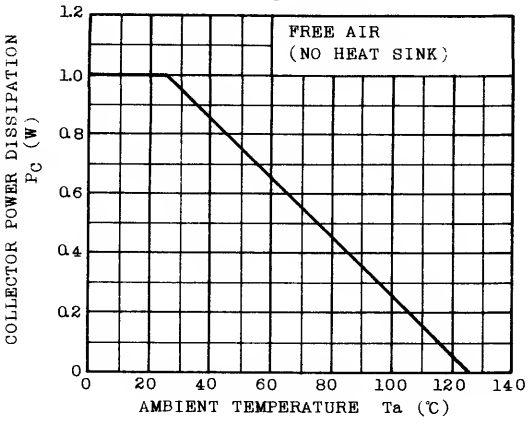
$I_C - V_{BE}$



$P_C - T_c$



P_C – Ta



SAFE OPERATING AREA