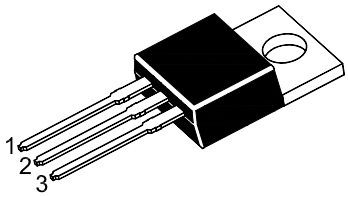
ST BD910 / ST BD912

PNP Complementary Silicon Power Transistors



1.Base 2.Collector 3.Emitter

TO-220 Plastic Package

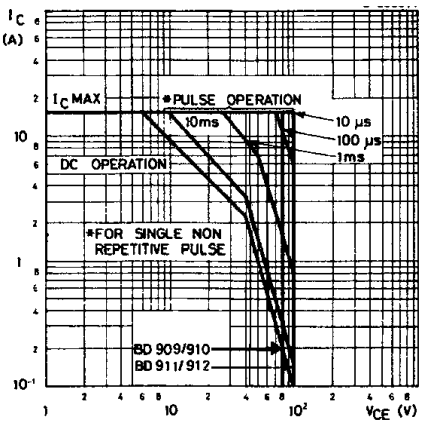
Absolute Maximum Ratings (T_a = 25 °C)

Parameter	Symbol	Value		Unit
		ST BD910	ST BD912	
Collector Base Voltage	$-V_{CBO}$	80	100	V
Collector Emitter Voltage	$-V_{CEO}$	80	100	V
Emitter Base Voltage	$-V_{EBO}$	5		V
Collector Current	$-I_C$	15		A
Base Current	$-I_B$	5		A
Total Power Dissipation @ $T_C \leq 25$ °C	P_{tot}	90		W
Operating Junction Temperature Range	T_J	150		°C
Storage Junction Temperature Range	T_J, T_s	-65 to +150		°C
Thermal Resistance, Junction to Case	$R_{\theta JC}$	1.4		°C/W

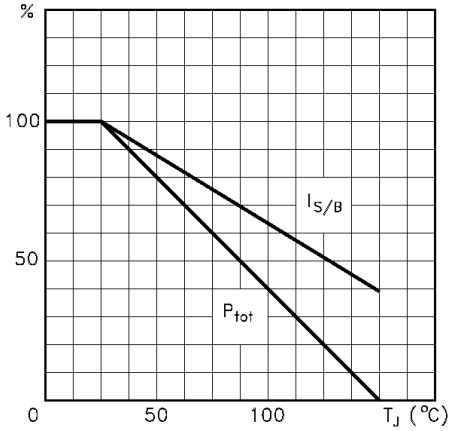
Characteristics at T_C = 25 °C

Parameter		Symbol	Min.	Max.	Unit
DC Current Gain					
at $-V_{CE}$ = 4 V, $-I_C$ = 0.5 A		h_{FE}	40	250	-
at $-V_{CE}$ = 4 V, $-I_C$ = 5 A		h_{FE}	15	150	-
at $-V_{CE}$ = 4 V, $-I_C$ = 10 A		h_{FE}	5	-	-
Collector Emitter Sustaining Voltage					
at $-I_C$ = 100 mA	ST BD910	$-V_{CEO(sus)}$	80	-	V
	ST BD912		100	-	
Collector Cutoff Current					
at $-V_{CB}$ = 80 V	ST BD910	$-I_{CBO}$	-	0.5	mA
at $-V_{CB}$ = 100 V	ST BD912	$-I_{CBO}$	-	0.5	mA
Collector Cutoff Current					
at $-V_{CE}$ = 40 V	ST BD910	$-I_{CEO}$	-	1	mA
at $-V_{CE}$ = 50 V	ST BD912	$-I_{CEO}$	-	1	mA
Emitter Cutoff Current					
at $-V_{EB}$ = 5 V		$-I_{EBO}$	-	1	mA
Collector Emitter Saturation Voltage					
at $-I_C$ = 5 A, $-I_B$ = 0.5 A		$-V_{CE(sat)}$	-	1	V
at $-I_C$ = 10 A, $-I_B$ = 2.5 A		$-V_{CE(sat)}$	-	3	V
Base Emitter Saturation Voltage					
at $-I_C$ = 10 A, $-I_B$ = 2.5 A		$-V_{BE(sat)}$	-	2.5	V
Base Emitter Voltage					
at $-I_C$ = 5 A, $-V_{CE}$ = 4 V		$-V_{BE}$	-	1.5	V
Transition Frequecy					
at $-V_{CE}$ = 4 V, $-I_C$ = 0.5 A,		f_T	3	-	MHz

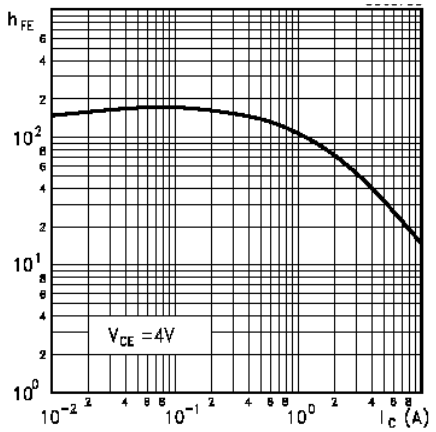
Safe Operating Area



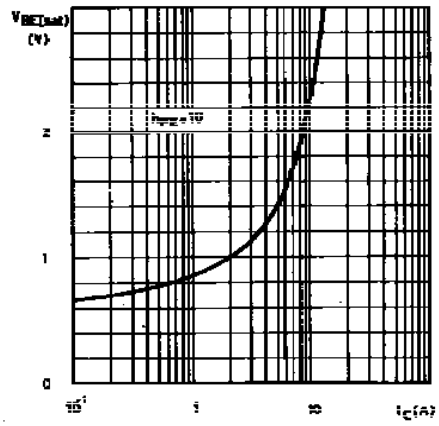
Derating Curves



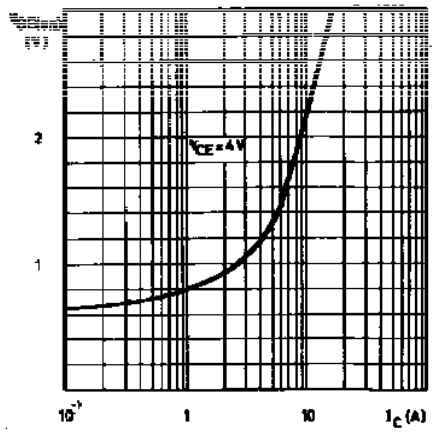
DC Current Gain



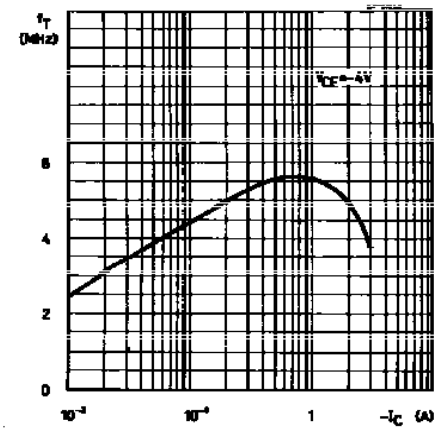
Base-Emitter Saturation Voltage



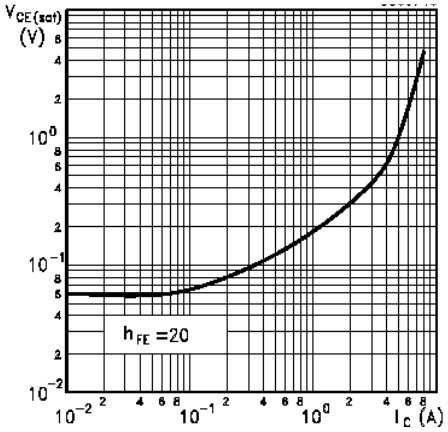
DC Transconductance



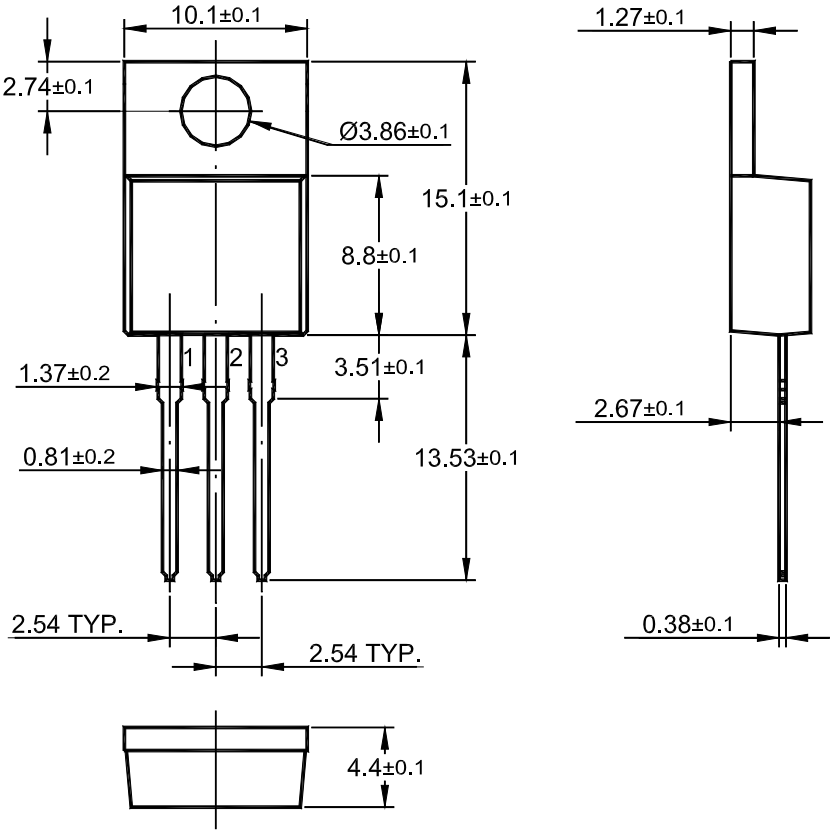
Transition Frequency



Collector-Emitter Saturation Voltage



TO-220 PACKAGE OUTLINE



Dimensions in mm