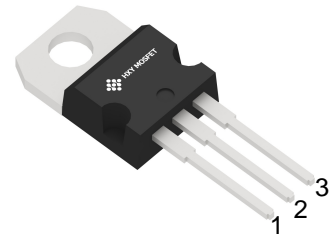




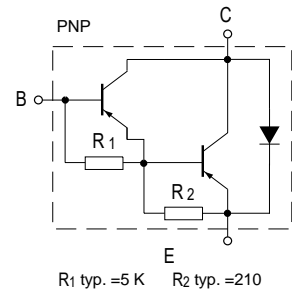
Features

- Monolithic Darlington Configuration
- Integrated Antiparallel Collector-Emitter Diode



TO-220S

- 1.BASE
2.COLLECTOR
3.EMITTER



Maximum Ratings (Ta=25 unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	-100	V
V_{CEO}	Collector-Emitter Voltage	-100	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current	-10	A
P_C	Collector Power Dissipation	2	W
$R_{\theta JA}$	Thermal Resistance from Junction to Ambient	62.5	°C/W
T_J, T_{stg}	Operation Junction and Storage Temperature Range	-55~+150	°C

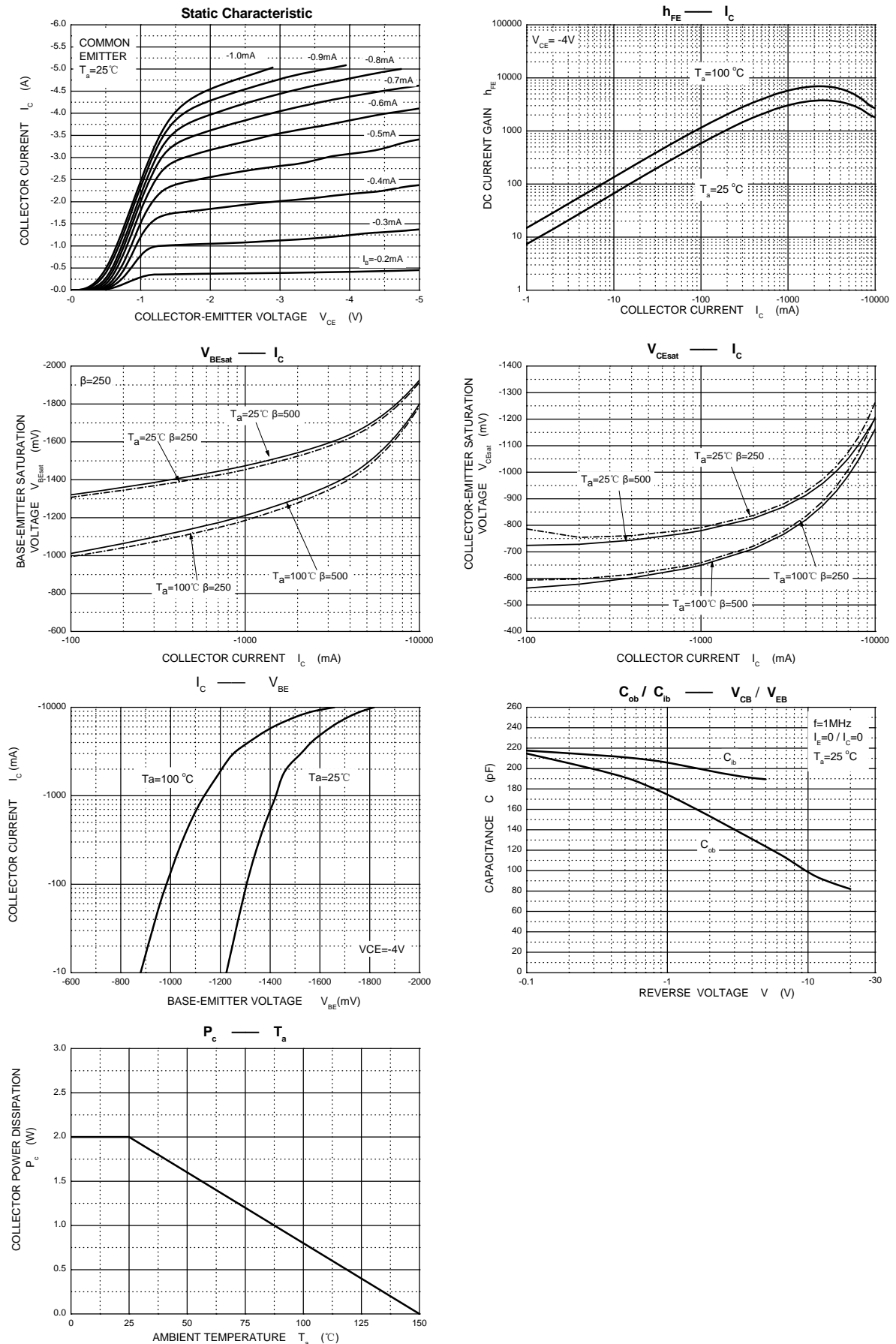
Electrical Characteristics (Ta=25 unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=-1mA, I_E=0$	-100			V
Collector-emitter sustaining voltage	$V_{CEO(sus)}^*$	$I_C=-30mA, I_B=0$	-100			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=-10mA, I_C=0$	-5			V
Collector cut-off current	I_{CBO}	$V_{CB}=-100V, I_E=0$			-1	mA
Collector cut-off current	I_{CEO}	$V_{CE}=-50V, I_C=0$			-2	mA
Emitter cut-off current	I_{EBO}	$V_{EB}=-5V, I_C=0$			-2	mA
DC current gain	$h_{FE(1)}$	$V_{CE}=-4V, I_C=-5A$	1000		12000	
	$h_{FE(2)}$	$V_{CE}=-4V, I_C=-10A$	50			
Collector-emitter saturation voltage	$V_{CE(sat)(1)}$	$I_C=-5A, I_B=-10mA$			-2	V
	$V_{CE(sat)(2)}$	$I_C=-10A, I_B=-40mA$			-3	V
Base-emitter voltage	V_{BE}	$V_{CE}=-4V, I_C=-10A$			-3	V

*Pulse test: pulse width $\leq 300\mu s$, duty cycles $\leq 2.0\%$.

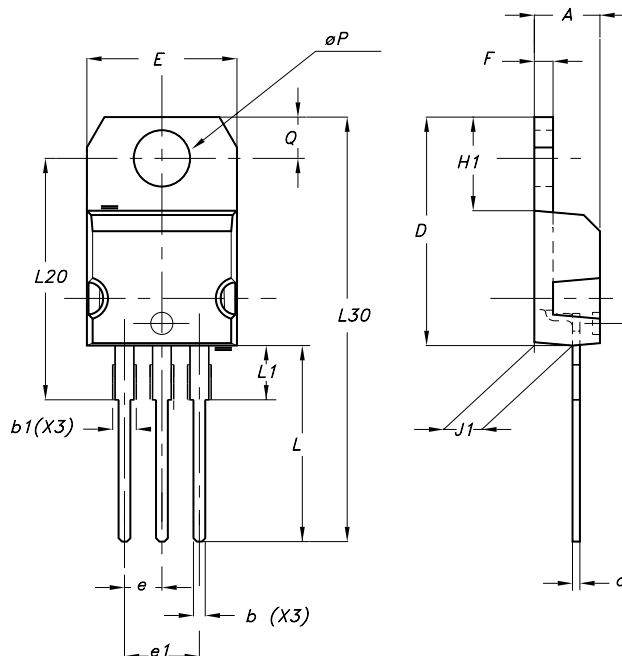


Typical Characteristics





Package Information TO-220S



DIM.	mm.			inch		
	MIN.	TYP	MAX.	MIN.	TYP.	MAX.
A	4.40		4.60	0.173		0.181
b	0.61		0.88	0.024		0.034
b1	1.15		1.70	0.045		0.066
c	0.49		0.70	0.019		0.027
D	15.25		15.75	0.60		0.620
E	10		10.40	0.393		0.409
e	2.40		2.70	0.094		0.106
e1	4.95		5.15	0.194		0.202
F	1.23		1.32	0.048		0.052
H1	6.20		6.60	0.244		0.256
J1	2.40		2.72	0.094		0.107
L	13		14	0.511		0.551
L1	3.50		3.93	0.137		0.154
L20		16.40			0.645	
L30		28.90			1.137	
øP	3.75		3.85	0.147		0.151
Q	2.65		2.95	0.104		0.116



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