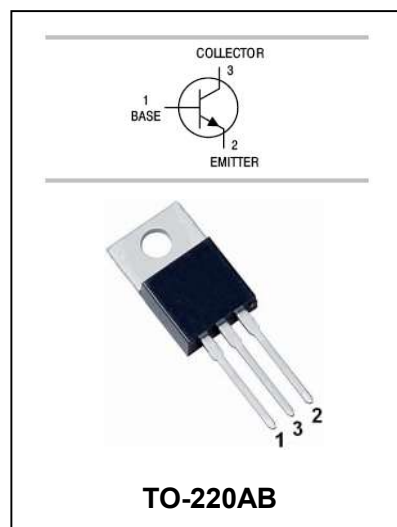


## High Voltage Darlington Power Transistors

## 2SD1088

### FEATURES

- Collector-emitter Sustaining Voltage  
 $V_{CEO(SUS)}=250V(\text{Min})$ .
- Collector-Emitter Saturation Voltage  
 $V_{CE(sat0)}=2V(\text{Max})@I_C=4A, I_B=40\text{mA}$ .
- High DC Current Gain  
 $h_{FE}=2000(\text{Min})@I_C=2A, V_{CE}=2V$ .



### MAXIMUM RATING operating temperature range applies unless otherwise specified

Symbol	Parameter	Value	Unit
$V_{CBO}$	Collector-Base Voltage	300	V
$V_{CEO}$	Collector-Emitter Voltage	250	V
$V_{EBO}$	Emitter-Base Voltage	5	V
$I_C$	Collector Current	6 10	A
	Continuous Peak		
$I_B$	Base Current	1	A
$P_C$	Collector Dissipation	2 30	W
	$T_a=25^\circ\text{C}$ $T_c=25^\circ\text{C}$		
$T_j, T_{stg}$	Junction and Storage Temperature	-55 to +150	$^\circ\text{C}$

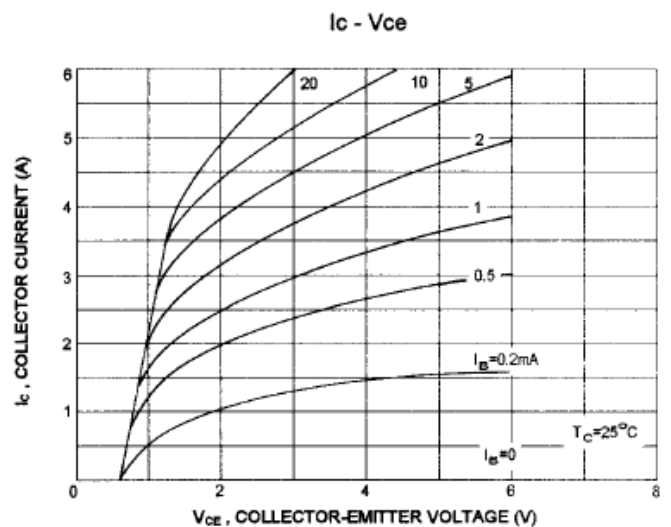
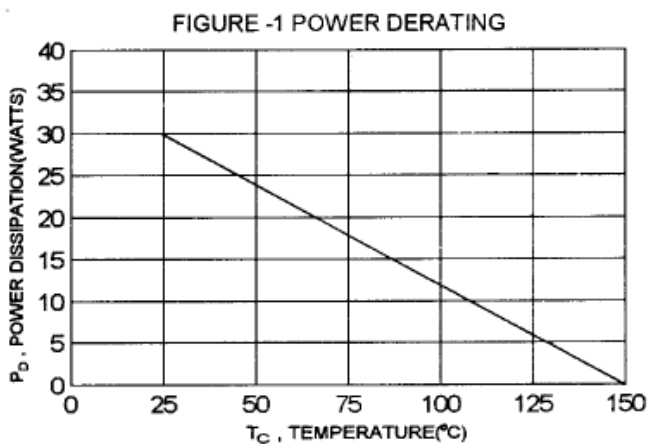
## High Voltage Darlington Power Transistors

## 2SD1088

ELECTRICAL CHARACTERISTICS Ratings at 25°C ambient temperature unless otherwise specified.

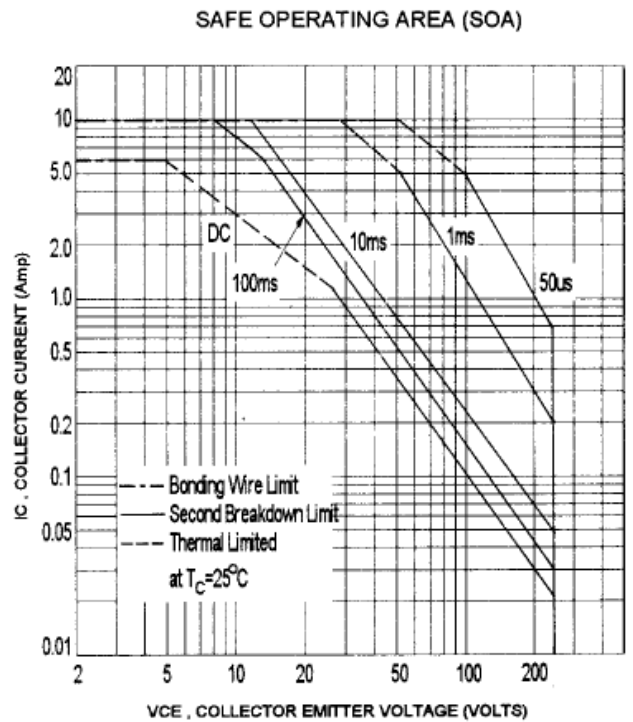
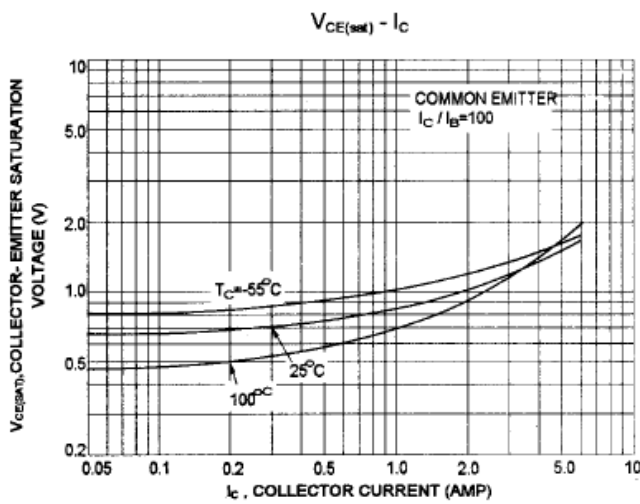
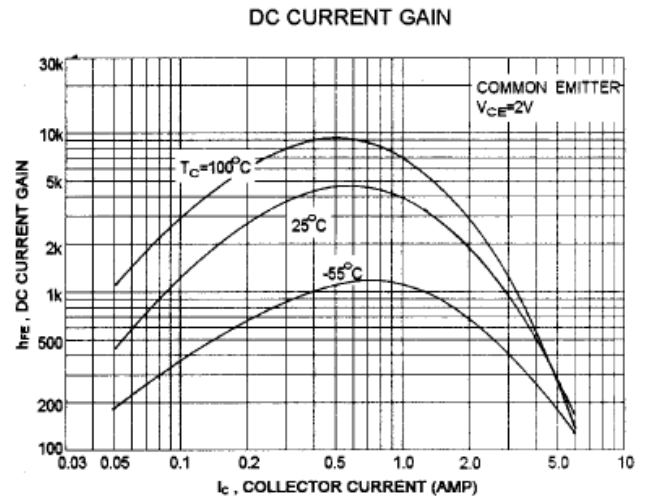
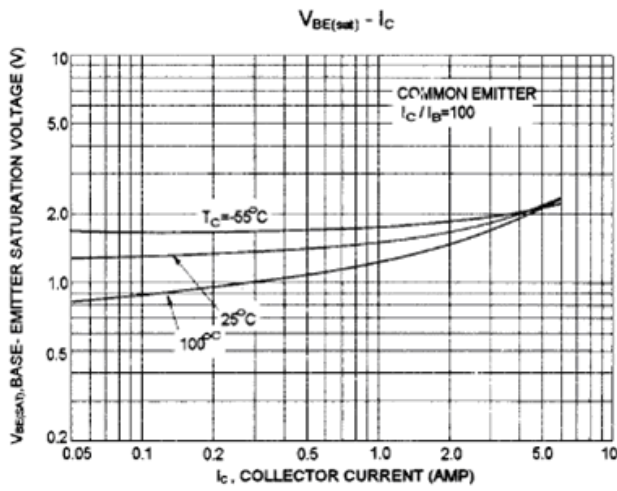
Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-Emitter Sustaining Voltage	$V_{CEO(SUS)}$	$I_C=0.5A, L=40mH$	250			V
Collector Cut-off Current	$I_{CBO}$	$V_{CB}=300V, I_E=0$			500	$\mu A$
Emitter Cut-off Current	$I_{EBO}$	$V_{EB}=5V, I_C=0$			500	$\mu A$
DC Current Gain	$h_{FE}$	$V_{CE}=2V, I_C=2A$	2000			
		$V_{CE}=2V, I_C=4A$	200			
Collector-emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=4A, I_B=40mA$			2.0	V
Base-emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=4A, I_B=40mA$			2.5	V
Transition Frequency	$f_T$	$V_{CE}=10V, I_C=20mA$	50	70		MHz
Turn-on Time	$t_{on}$	$V_{CC}=100V, I_C=4A$ $I_{B1}=I_{B2}40mA$ $R_L=25\Omega$		1		$\mu s$
Storage Time	$t_s$			8		$\mu s$
Fall Time	$t_f$			5		$\mu s$

TYPICAL CHARACTERISTICS @  $T_a=25^\circ C$  unless otherwise specified



High Voltage Darlington Power Transistors

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**High Voltage Darlington Power Transistors**

**2SD1088**

**PACKAGE OUTLINE**

Plastic surface mounted package

TO-220AB

