



# D45H5 D45H8 \ D45H11

## PNP SILICON POWER TRANSISTORS

- STMicroelectronics PREFERRED SALESTYPES
- LOW COLLECTOR-EMITTER SATURATION VOLTAGE
- FAST SWITCHING SPEED

### APPLICATIONS

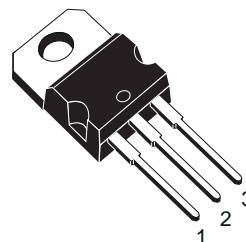
- GENERAL PURPOSE SWITCHING AND AMPLIFIER

### DESCRIPTION

The D45H5, D45H8 and D45H11 are silicon Multi-Epitaxial Planar PNP transistors mounted in Jedec TO-220 plastic package.

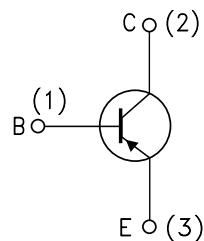
They are intended for various switching and general purpose applications.

D45H8, D45H11 are complementary with D44H8, D44H11.



TO-220

### INTERNAL SCHEMATIC DIAGRAM



SC08810

### ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value			Unit
		D45H5	D45H8	D45H11	
$V_{CEO}$	Collector-Emitter Voltage ( $I_B = 0$ )	-45	-60	-80	V
$V_{EBO}$	Emitter-Base Voltage ( $I_C = 0$ )	-5			V
$I_C$	Collector Current	-10			A
$I_{CM}$	Collector Peak Current	-20			A
$I_B$	Base Current	-5			A
$P_{tot}$	Total Dissipation at $T_c \leq 25^\circ\text{C}$	50			W
$T_{stg}$	Storage Temperature	-65 to 150			$^\circ\text{C}$
$T_j$	Max. Operating Junction Temperature	150			$^\circ\text{C}$

D45H5/D45H8/D45H11

THERMAL DATA

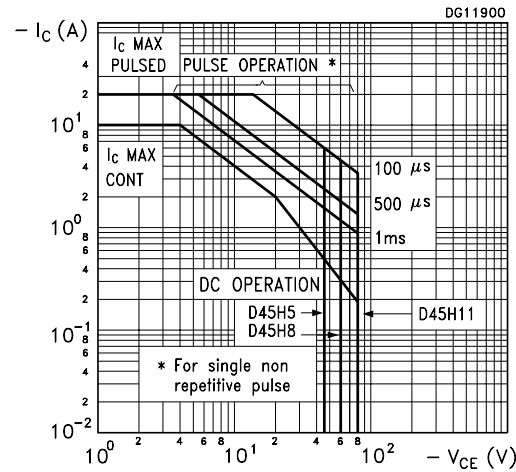
R <sub>thj-case</sub>	Thermal Resistance Junction-case	Max	2.5	°C/W
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ELECTRICAL CHARACTERISTICS (T<sub>case</sub> = 25 °C unless otherwise specified)

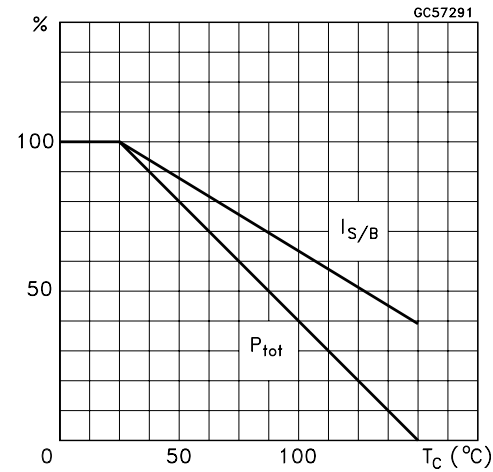
Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I <sub>CBO</sub>	Collector Cut-off Current (I <sub>E</sub> = 0)	V <sub>CB</sub> = rated V <sub>CEO</sub>			-10	μA
I <sub>EBO</sub>	Emitter Cut-off Current (I <sub>C</sub> = 0)	V <sub>EB</sub> = -5V			-100	μA
V <sub>CEO(sus)*</sub>	Collector-Emitter Sustaining Voltage (I <sub>B</sub> = 0)	I <sub>C</sub> = -100 mA for <b>D45H5</b> for <b>D45H8</b> for <b>D45H11</b>	-45 -60 -80			V V
V <sub>CE(sat)*</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = -8 A    I <sub>B</sub> = -0.4 A I <sub>C</sub> = -8 A    I <sub>B</sub> = -0.8 A			-1 -1	V V
V <sub>BE(sat)*</sub>	Base-Emitter Saturation Voltage	I <sub>C</sub> = -8 A    I <sub>B</sub> = -0.8 A			-1.5	V
h <sub>FE</sub> *	DC Current Gain	I <sub>C</sub> = -2 A    V <sub>CE</sub> = -1 V I <sub>C</sub> = -4 A    V <sub>CE</sub> = -1 V	60 40	120 70		

\* Pulsed: Pulse duration = 300 μs, duty cycle ≤ 2 %

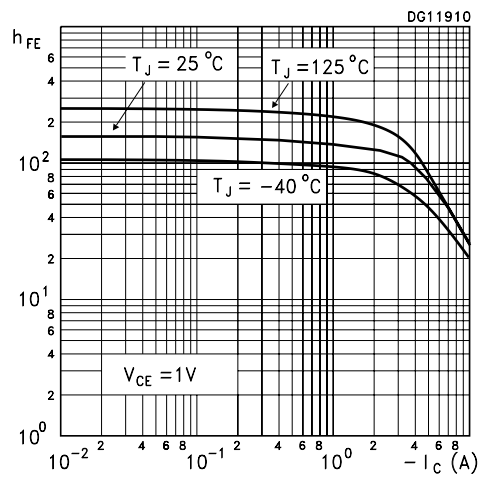
Safe Operating Area



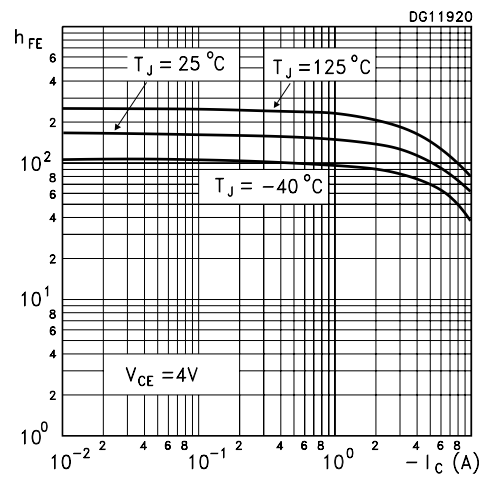
Derating Curves



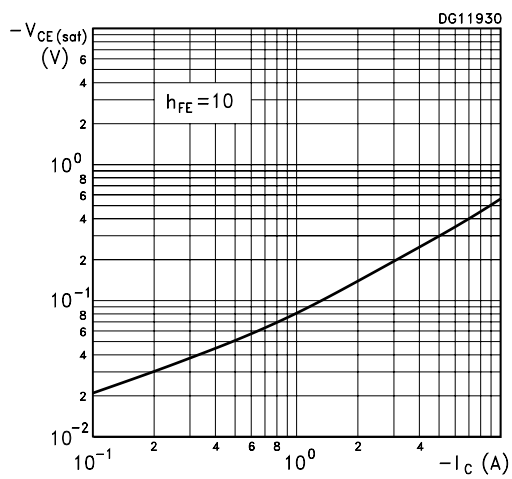
### DC Current Gain



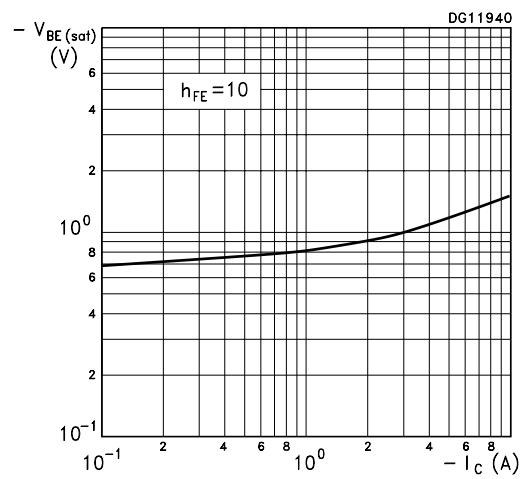
### DC Current Gain



### Collector-Emitter Saturation Voltage

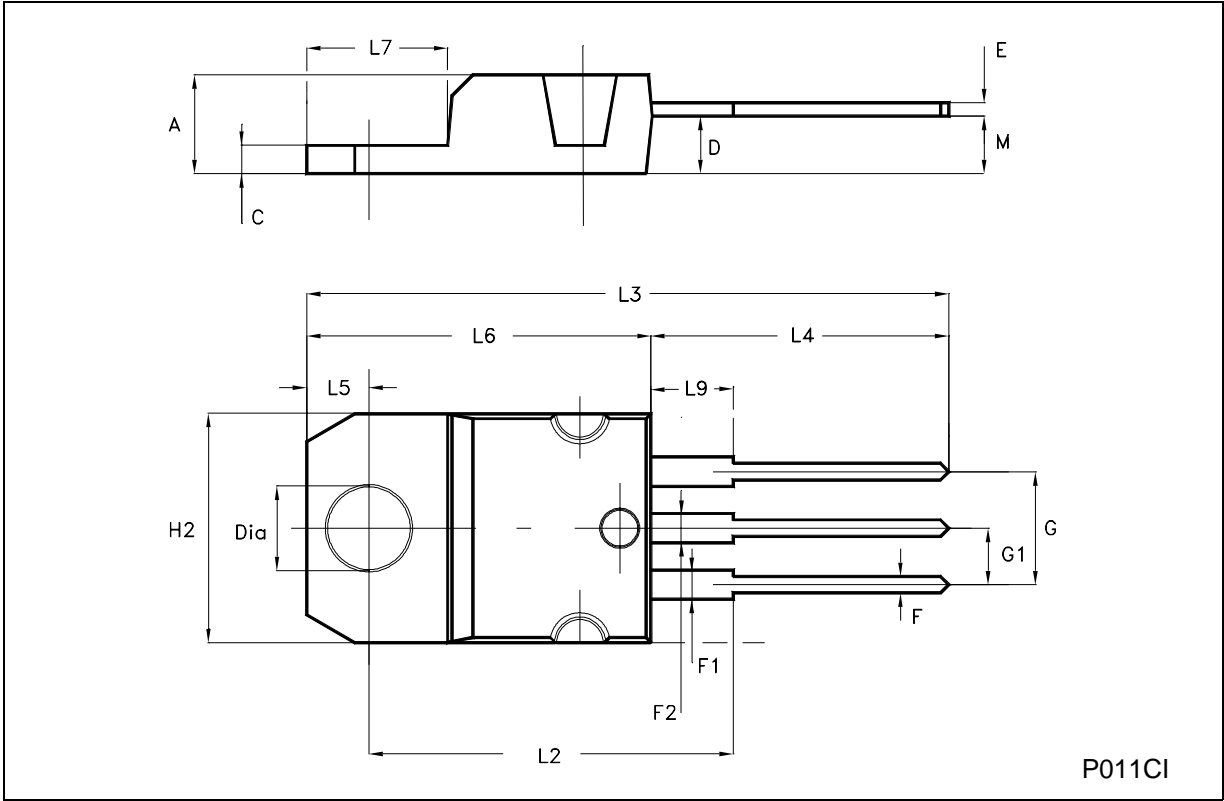


### Base-Emitter Saturation Voltage



TO-220 MECHANICAL DATA

DIM.	mm			inch		
	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
A	4.40		4.60	0.173		0.181
C	1.23		1.32	0.048		0.052
D	2.40		2.72	0.094		0.107
E	0.49		0.70	0.019		0.027
F	0.61		0.88	0.024		0.034
F1	1.14		1.70	0.044		0.067
F2	1.14		1.70	0.044		0.067
G	4.95		5.15	0.194		0.202
G1	2.40		2.70	0.094		0.106
H2	10.00		10.40	0.394		0.409
L2		16.40			0.645	
L4	13.00		14.00	0.511		0.551
L5	2.65		2.95	0.104		0.116
L6	15.25		15.75	0.600		0.620
L7	6.20		6.60	0.244		0.260
L9	3.50		3.93	0.137		0.154
M		2.60			0.102	
DIA.	3.75		3.85	0.147		0.151



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