D45H5
D45H8 \ D45H11

PNP SILICON POWER TRANSISTORS

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

APPLICATIONS

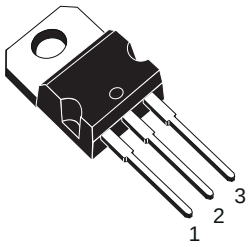
- GENERAL PURPOSE SWITCHING AND AMPLIFIER

DESCRIPTION

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

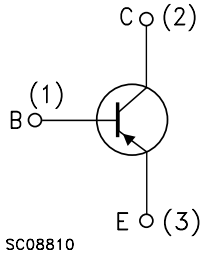
They are inteded for various switching and general purpose applications.

D45H8, D45H11 are complementary with D44H8, D44H11.



TO-220

INTERNAL SCHEMATIC DIAGRAM



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 $T_c \leq 25\ ^oC$	50			W
T_{stg}	Storage Temperature	-65 to 150			^oC
T_j	Max. Operating Junction Temperature	150			^oC

THERMAL DATA

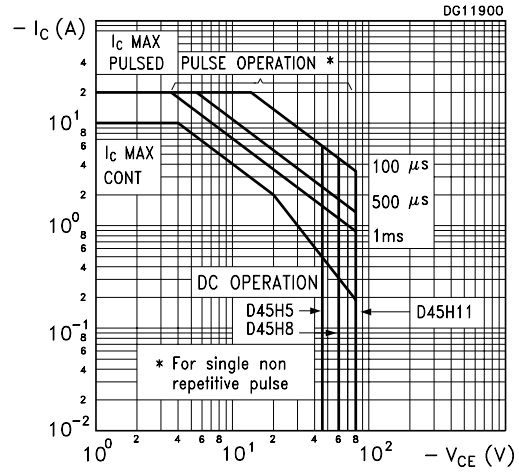
$R_{thj\text{-}case}$	Thermal Resistance Junction-case	Max	2.5	°C/W

ELECTRICAL CHARACTERISTICS (T_{case} = 25 °C unless otherwise specified)

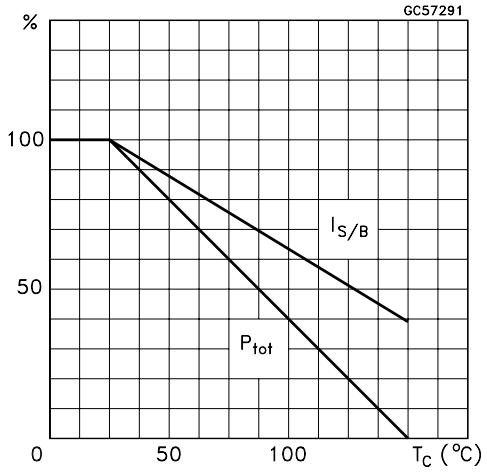
Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I_{CBO}	Collector Cut-off Current (I_E = 0)	V_{CB} = rated V_{CEO}			-10	µA
I_{EBO}	Emitter Cut-off Current (I_C = 0)	V_{EB} = -5V			-100	µA
$V_{CEO(sus)}$*	Collector-Emitter Sustaining Voltage (I_B = 0)	I_C = -100 mA for **D45H5** for **D45H8** for **D45H11**	 -45 -60 -80			 V V
$V_{CE(sat)}$*	Collector-Emitter Saturation Voltage	I_C = -8 A I_B = -0.4 A I_C = -8 A I_B = -0.8 A			-1 -1	V V
$V_{BE(sat)}$*	Base-Emitter Saturation Voltage	I_C = -8 A I_B = -0.8 A			-1.5	V
h_{FE}*	DC Current Gain	I_C = -2 A V_{CE} = -1 V I_C = -4 A V_{CE} = -1 V	60 40	120 70		

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

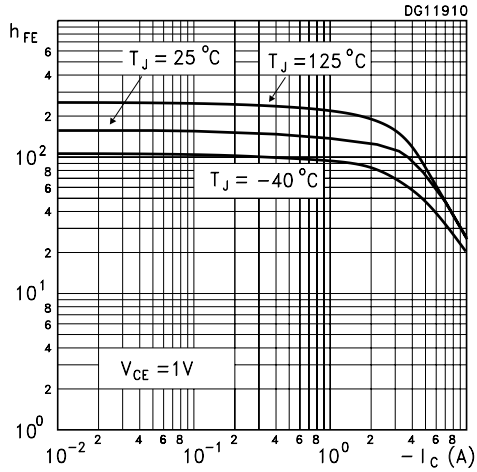
Safe Operating Area



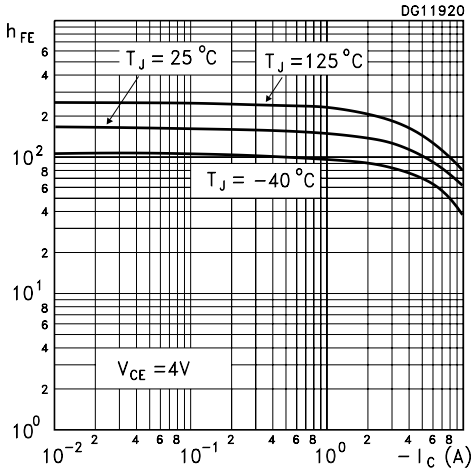
Derating Curves



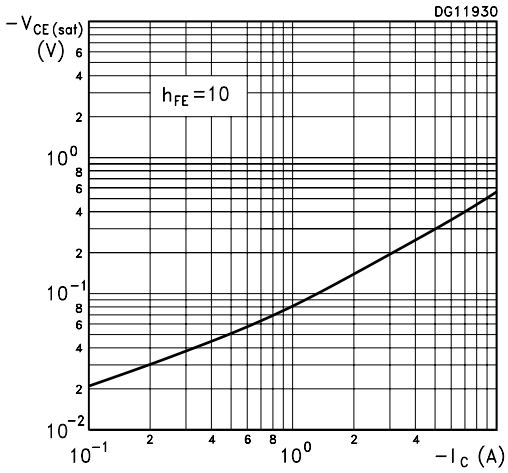
DC Current Gain



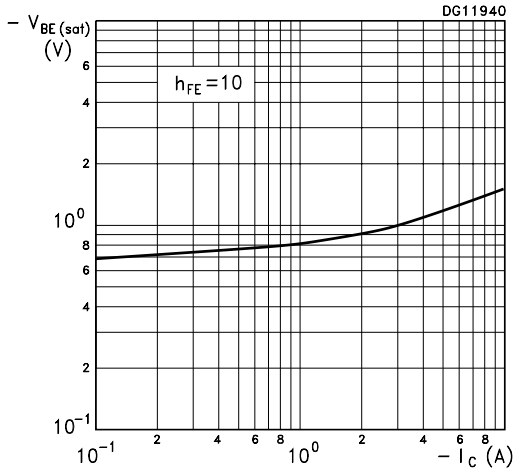
DC Current Gain



Collector-Emitter Saturation Voltage

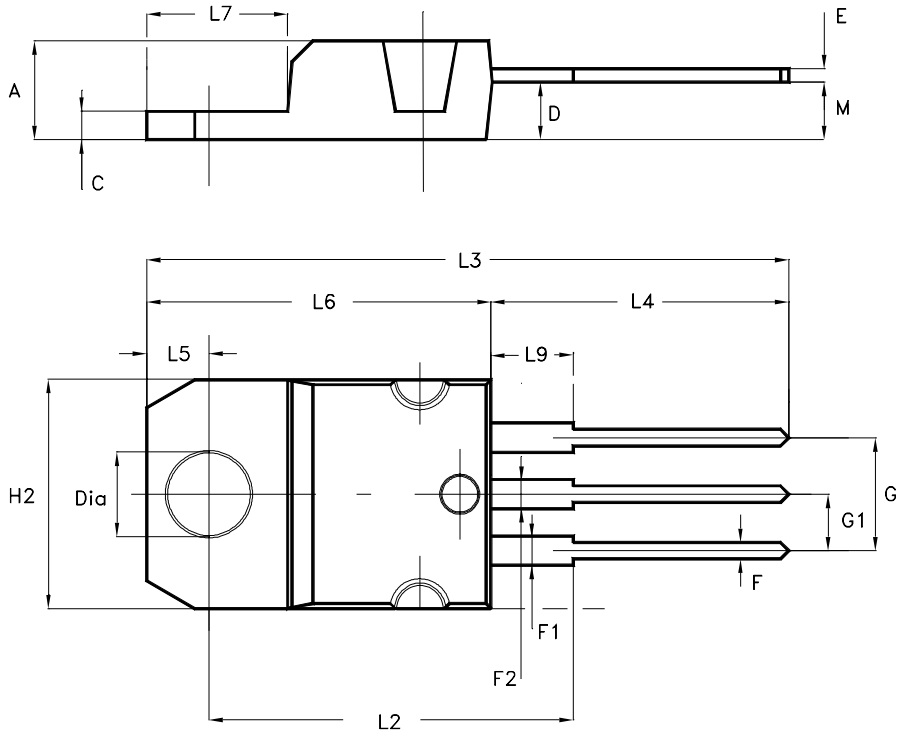


Base-Emitter Saturation Voltage



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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