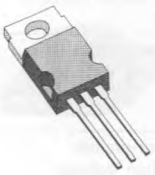
SGS-THOMSON MICROELECTRONICS

D45H1/4/7/10
D45H2/5/8

PNP LOW VOLTAGE TRANSISTOR

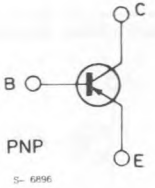
PRELIMINARY DATA

- LOW COLLECTOR SATURATION VOLTAGE
- EXCELLENT LINEARITY



TO-220

INTERNAL SCHEMATIC DIAGRAM



S- 6896

DESCRIPTION

The D45H1, D45H2, D45H4, D45H5, D45H7, D45H8 and D45H10 are silicon multiepitaxial planar PNP transistors in TO-220 plastic package, intended for switching and general purpose applications.

The complementary NPN types are the D44H1, D44H2, D44H4, D44H5, D44H7, D44H8 and D44H10 respectively.

ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value				Unit
		D45H1 D45H2	D45H4 D45H5	D45H7 D45H8	D45H10	
V_{CBO}	Collector-base Voltage (I_E = 0)	– 30	– 45	– 60	– 80	V
V_{CEO}	Collector-emitter Voltage (I_B = 0)	– 30	– 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				mA
P_{tot}	Total Dissipation at T_c < 25°C	50				W
T_{stg}	Storage Temperature	– 55 to 150				°C
T_j	Max. Operating Junction Temperature	150				°C

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 Cutoff Current (I_E = 0)	V_{CB} = – 30V for **D45H1/2**			– 10	µA
		V_{CB} = – 45V for **D45H4/5**			– 10	µA
		V_{CB} = – 60V for **D45H7/8**			– 10	µA
		V_{CB} = – 80V for **D45H10**			– 10	µA
I_{EBO}	Emitter Cutoff Current (I_C = 0)	V_{EB} = – 5V			– 0.1	mA
$V_{CEO(sus)}$*	Collector-emitter Sustaining Voltage	I_C = – 0.1A for **D45H1/2**	– 30			V
		for **D45H4/5**	– 45			V
		for **D45H7/8**	– 60			V
		for **D45H10**	– 80			V
$V_{CE(sat)}$*	Collector-emitter Saturation Voltage	I_C = – 8A I_B = – 0.4A for **D45H2/5/8**			– 1	V
		I_C = – 8A I_B = – 0.8A for **D45H1/4/7/10**			– 1	V
$V_{BE(sat)}$*	Base-emitter Saturation Voltage	I_C = – 8A I_B = – 0.8A			– 1.5	V
h_{FE}*	DC Current Gain	I_C = – 2A V_{CE} = – 1V for **D45H2/5/8**	60	120		
		for **D45H1/4/7/10**	35	60		
		I_C = – 4A V_{CE} = – 1V for **D45H2/5/8**	40	70		
		for **D45H1/4/7/10**	20	50		

* Pulsed : Pulse duration = 300µs, duty cycle = 1.5%.