MPS3638A PNP Silicon Epitaxial Planar Transistor

for switching and amplifier applications.

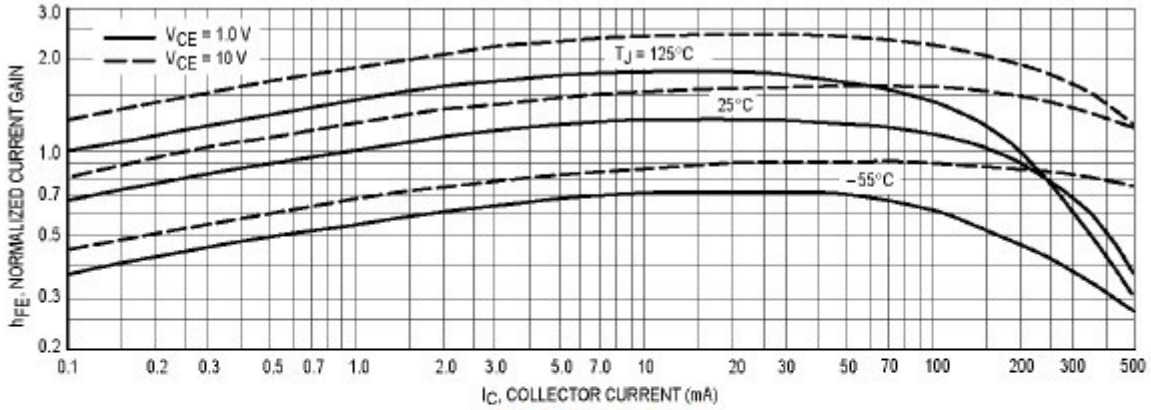
1. Emitter 2.Base 3.Collector
TO-92 Plastic Package
Weight approx. 0.19g

Absolute Maximum Ratings (T_a = 25 °C)

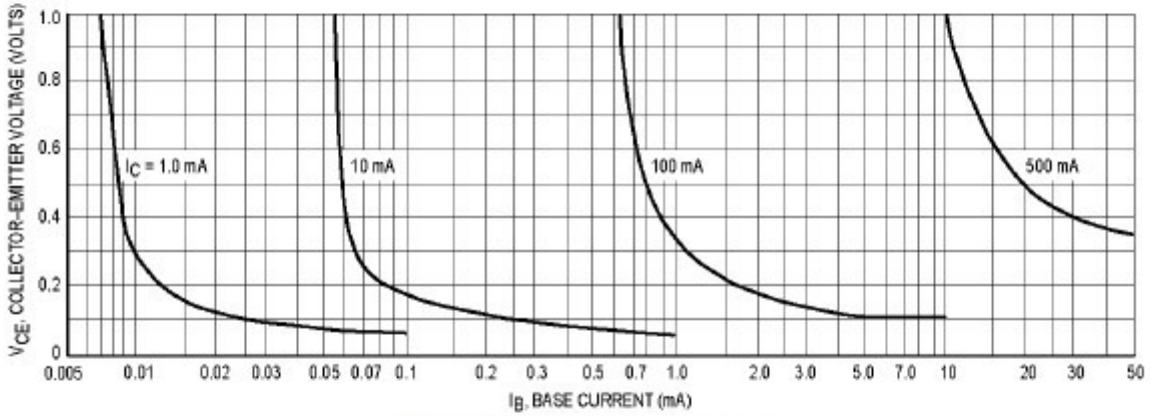
Parameter	Symbol	Value	Unit
Collector Base Voltage	$-V_{CBO}$	25	V
Collector Emitter Voltage	$-V_{CEO}$	25	V
Emitter Base Voltage	$-V_{EBO}$	4	V
Collector Current	$-I_C$	500	mA
Power Dissipation	P_{tot}	625	mW
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_S	- 55 to + 150	°C

Characteristics at T_a = 25 °C

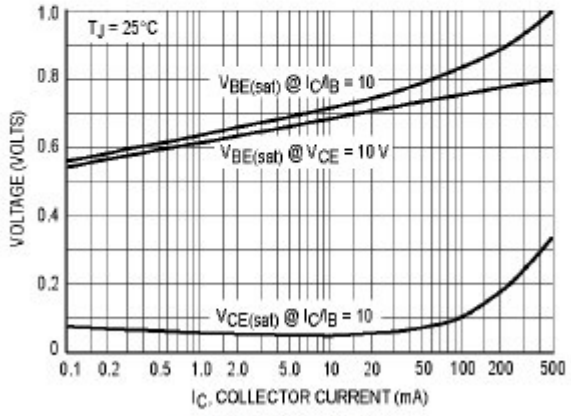
Parameter	Symbol	Min.	Max.	Unit
DC Current Gain at $-V_{CE}$ = 10 V, $-I_C$ = 1 mA at $-V_{CE}$ = 10 V, $-I_C$ = 10 mA at $-V_{CE}$ = 1 V, $-I_C$ = 50 mA at $-V_{CE}$ = 2 V, $-I_C$ = 300 mA	 h_{FE} h_{FE} h_{FE} h_{FE}	 80 100 100 20	 - - - -	 - - - -
Collector Cutoff Current at $-V_{CE}$ = 15 V	$-I_{CES}$	-	35	nA
Emitter Cutoff Current at $-V_{EB}$ = 3 V	$-I_{EBO}$	-	35	nA
Collector Base Breakdown Voltage at $-I_C$ = 100 µA	$-V_{(BR)CBO}$	25	-	V
Collector Emitter Breakdown Voltage at $-I_C$ = 10 mA	$-V_{(BR)CEO}$	25	-	V
Emitter Base Breakdown Voltage at $-I_E$ = 100 µA	$-V_{(BR)EBO}$	4	-	V
Collector Emitter Saturation Voltage at $-I_C$ = 50 mA, $-I_B$ = 2.5 mA at $-I_C$ = 300 mA, $-I_B$ = 30 mA	 $-V_{CEsat}$ $-V_{CEsat}$	 - -	 0.25 1	 V V
Base Emitter Saturation Voltage at $-I_C$ = 50 mA, $-I_B$ = 2.5 mA at $-I_C$ = 300 mA, $-I_B$ = 30 mA	 $-V_{BEsat}$ $-V_{BEsat}$	 - 0.8	 1.1 2	 V V
Gain Bandwidth Product at $-V_{CE}$ = 3 V, $-I_C$ = 50 mA, f = 100 MHz	f_T	150	-	MHz
Output Capacitance at $-V_{CB}$ = 10 V, f = 1 MHz	C_{cbo}	-	10	pF



DC Current Gain



Collector Saturation Region



"On" Voltages