

HIGH CURRENT APPLICATION.

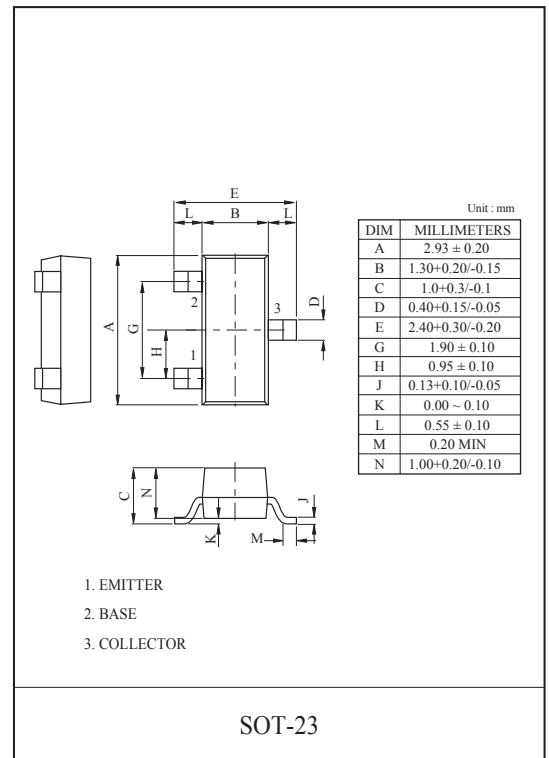
FEATURE

- Complementary to MPS8550S.
- Suffix U : Qualified to AEC-Q101.
ex) MPS8050S-B-RTK/PU

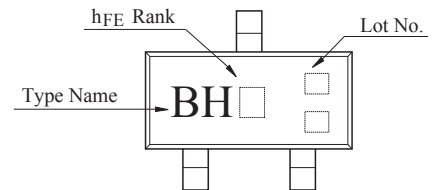
MAXIMUM RATING (Ta=25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	40	V
Collector-Emitter Voltage	V_{CEO}	25	V
Emitter-Base Voltage	V_{EBO}	6	V
Collector Current	I_C	1.5	A
Collector Power Dissipation	P_C^*	350	mW
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	-55 ~ 150	°C

* P_C : Package Mounted On 99.5% Alumina (10 × 8 × 0.6mm)



Marking



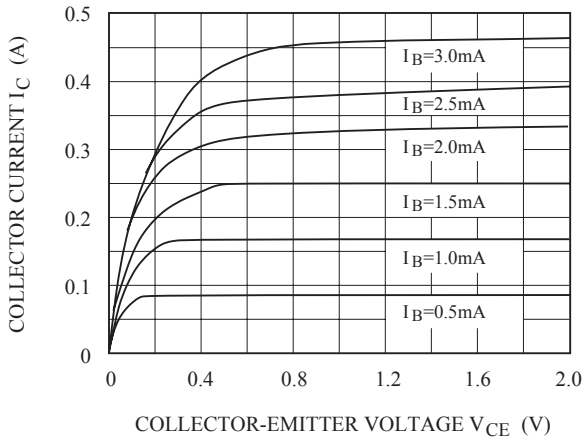
ELECTRICAL CHARACTERISTICS (Ta=25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I_{CBO}	$V_{CB}=35V, I_E=0$	-	-	100	nA
Emitter Cut-off Current	I_{EBO}	$V_{EB}=6V, I_C=0$	-	-	100	nA
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=100\mu A, I_E=0$	40	-	-	V
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=2mA, I_B=0$	25	-	-	V
DC Current Gain	$h_{FE(1)}$	$V_{CE}=1V, I_C=5mA$	45	135	-	
	$h_{FE(2)}$ (Note)	$V_{CE}=1V, I_C=100mA$	85	160	300	
	$h_{FE(3)}$	$V_{CE}=1V, I_C=800mA$	40	110	-	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=800mA, I_B=80mA$	-	0.28	0.5	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=800mA, I_B=80mA$	-	0.98	1.2	V
Base-Emitter Voltage	V_{BE}	$V_{CE}=1V, I_C=10mA$	-	0.66	1.0	V
Transition Frequency	f_T	$V_{CE}=10V, I_C=50mA$	100	190	-	MHz
Collector Output Capacitance	C_{ob}	$V_{CB}=10V, f=1MHz, I_E=0$	-	9	-	pF

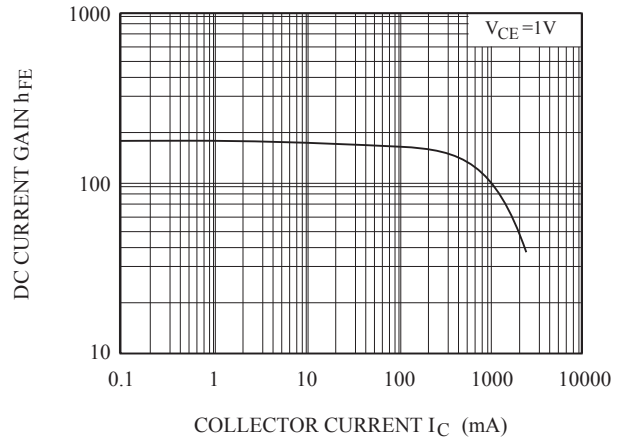
Note : $h_{FE(2)}$ Classification B:85 ~ 160, C : 120 ~ 200, D : 160 ~ 300

MPS8050S

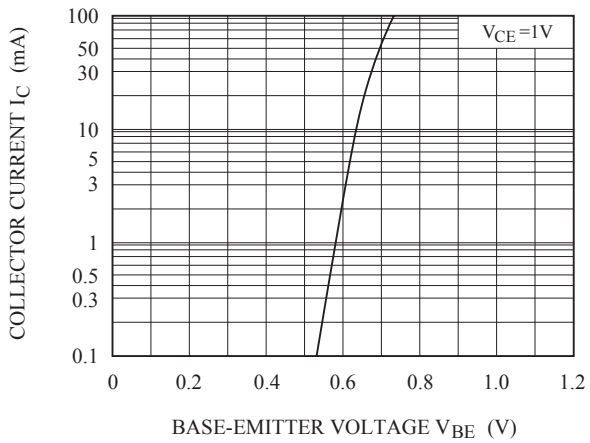
$I_C - V_{CE}$



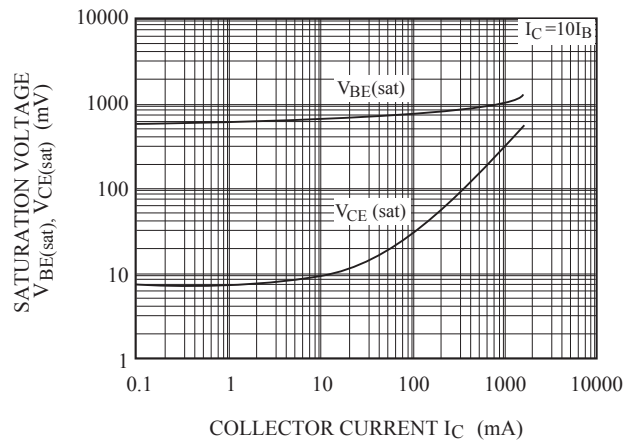
$h_{FE} - I_C$



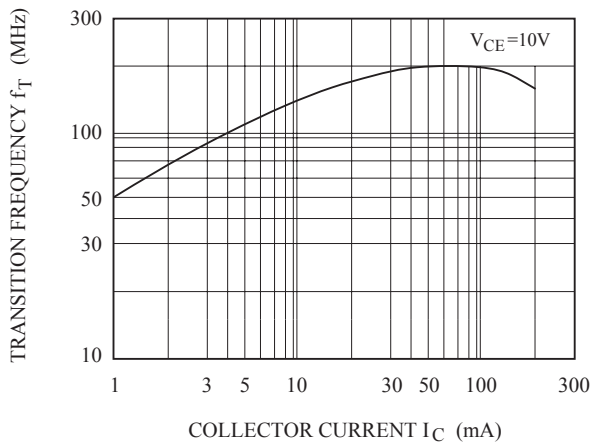
$I_C - V_{BE}$



$V_{BE(sat)}, V_{CE(sat)} - I_C$



$f_T - I_C$



$C_{ob} - V_{CB}$

