MPS8050S

EPITAXIAL PLANAR NPN TRANSISTOR

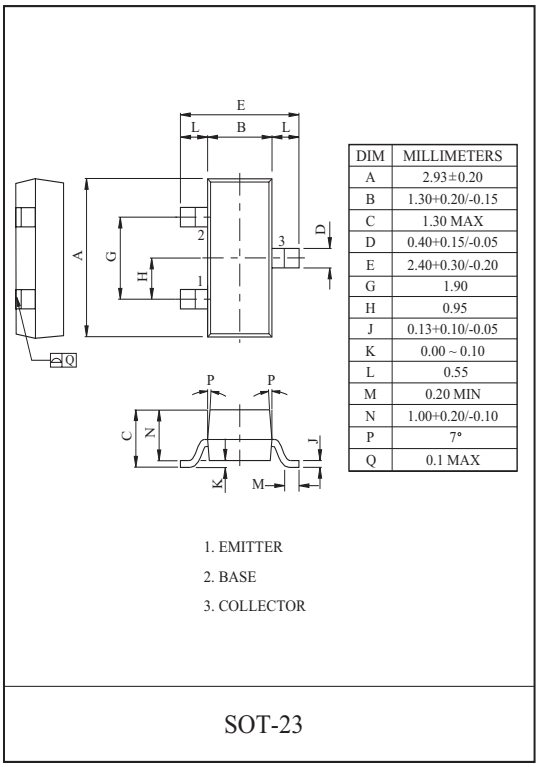
HIGH CURRENT APPLICATION.

FEATURE

· Complementary to MPS8550S.

· Suffix U : Qualified to AEC-Q101.

ex) MPS8050S-RTK/HU



DIM	MILLIMETERS
A	2.93±0.20
B	1.30+0.20/-0.15
C	1.30 MAX
D	0.40+0.15/-0.05
E	2.40+0.30/-0.20
G	1.90
H	0.95
J	0.13+0.10/-0.05
K	0.00 ~ 0.10
L	0.55
M	0.20 MIN
N	1.00+0.20/-0.10
P	7°
Q	0.1 MAX

1. EMITTER
2. BASE
3. COLLECTOR

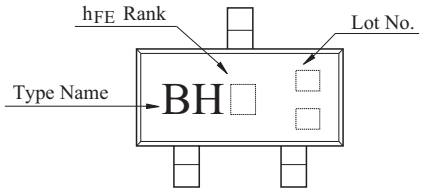
SOT-23

MAXIMUM RATING (Ta=25℃)

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	℃
Storage Temperature Range	T_{stg}	-55 150	℃

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

Marking

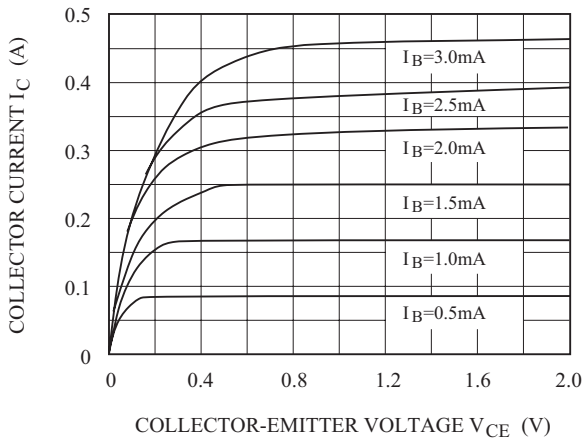


ELECTRICAL CHARACTERISTICS (Ta=25℃)

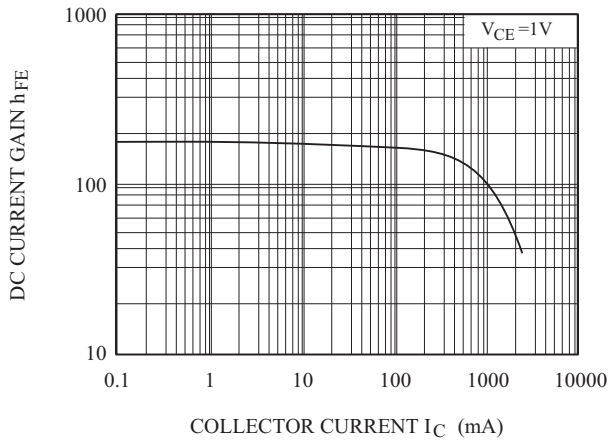
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I_{CBO}	V_{CB}=35V, I_E=0	-	-	100	nA
Emitter Cut-off Current	I_{EBO}	V_{EB}=6V, I_C=0	-	-	100	nA
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	I_C=100 μA, I_E=0	40	-	-	V
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	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

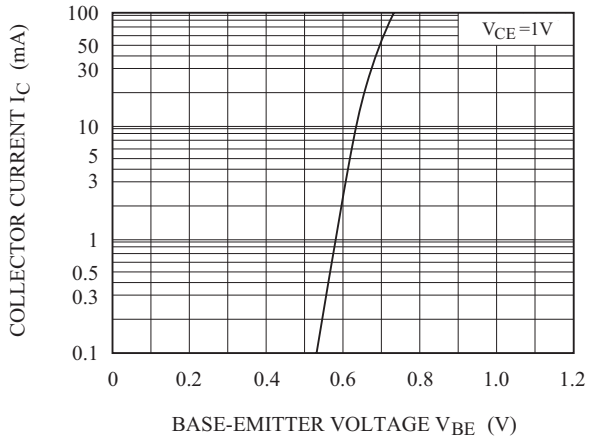
I_C - V_{CE}



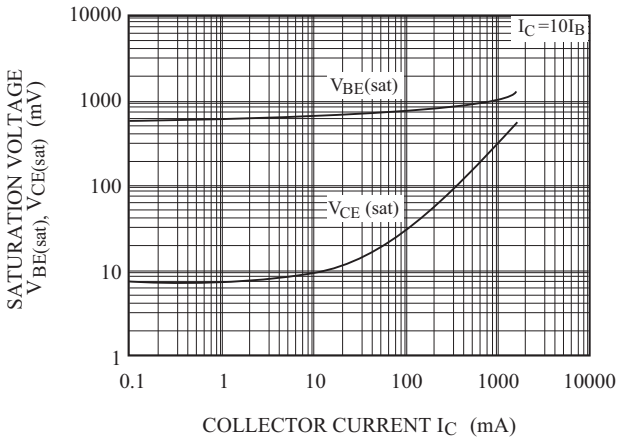
h_{FE} - I_C



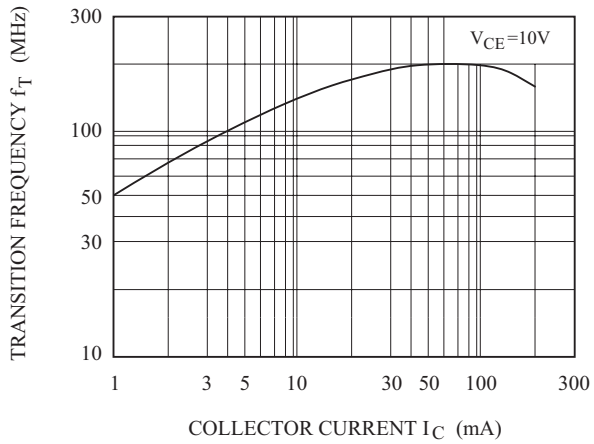
I_C - V_{BE}



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



f_T - I_C



C_{ob} - V_{CB}