CHENMKO ENTERPRISE CO.,LTD

2SC6114T1GP

Halogens free devices

SURFACE MOUNT
Transistor

VOLTAGE 50 Volts CURRENT 0.1 Ampere

APPLICATION

* Small signal low frequency amplifier.

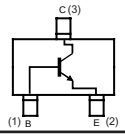
FEATURE

* Surface mount package. (SOT-923)
* Low cob. Cob=0.2pF(Typ.)
* P_C= 150mW

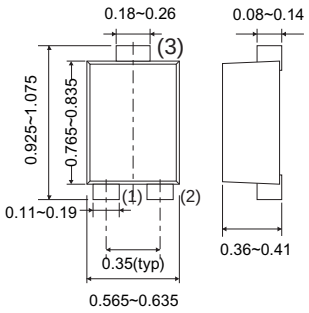
CONSTRUCTION

* NPN Silicon Transistor

CIRCUIT



SOT-923



Dimensions in millimeters

SOT-923

LIMITING VALUES

In accordance with the Absolute Maximum Rating System (IEC 60134).

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
V_{CBO}	collector-base voltage	open emitter	–	50	V
V_{CEO}	collector-emitter voltage	open base	–	50	V
V_{EBO}	emitter-base voltage	open collector	–	5	V
I_C	collector current DC		–	100	mA
I_{CP}	peak collector current Pw=1ms Single pulse		–	200	mA
P_{tot}	total power dissipation	$T_{amb} \leq 25$ °C; note 1	–	150	mW
T_{stg}	storage temperature		–55	+150	°C
T_j	junction temperature		–	+150	°C

Note

1. Transistor mounted on an FR4 printed-circuit board.

ELECTRICAL CHARACTERISTICS (2SC6114T1GP)

ELECTRICAL CHARACTERISTICS (At T_A = 25°C unless otherwise noted)

SYMBOL	PARAMETER	CONDITIONS	MIN.	Typ.	MAX.	UNIT
I_{CBO}	collector cut-off current	V_{CB}=15V	–	–	0.1	uA
I_{EBO}	emitter cut-off current	V_{EB}=5V	–	–	0.1	uA
BV_{CBO}	collector-base breakdown voltage	I_C =50uA	50	–	–	V
BV_{CEO}	collector-emitter breakdown voltage	I_C =1mA	50	–	–	V
BV_{EBO}	emitter-base breakdown voltage	I_E =50uA	5	–	–	V
h_{FE}	DC current transfer ratio	V_{CE}=6V , I_C=2mA	120	–	390	
V_{CEsat}	collector-emitter saturation voltage	I_C/I_B=25mA/2.5mA	–	–	300	mV
Cob	collector output capacitance	I_E = 0; V_{CE} = 10V ; f = 1 MHz	–	1.0	–	pF
f_T	transition frequency	I_E = -1 mA; V_{CE} = 10V; f = 100 MHz	–	130	–	MHz

Note

1. h_{FE}: Classification Q: 120 to 270, R: 180 to 390

RATING CHARACTERISTIC CURVES (2SC6114T1GP)

●Electrical characteristic curves

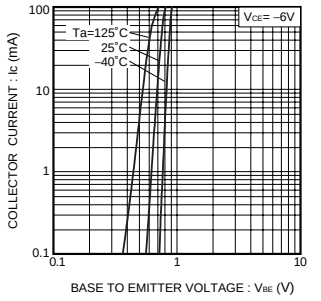


Fig.1 Grounded emitter propagation characteristics

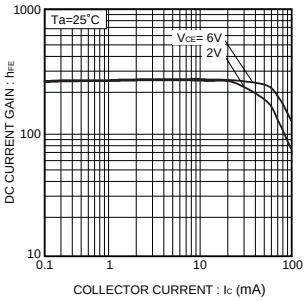


Fig.2 DC current gain vs. collector current (I)

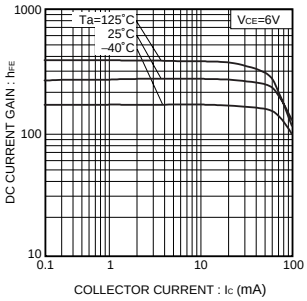


Fig.3 DC current gain vs. collector current (II)

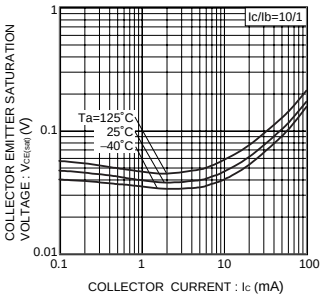


Fig.4 Collector-emitter saturation voltage vs. collector current

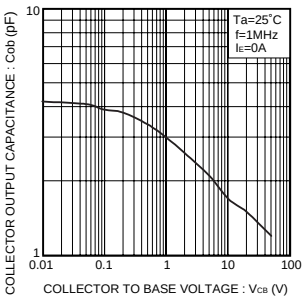


Fig.5 Collector output capacitance

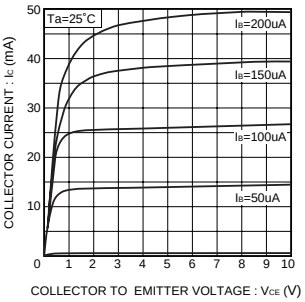


Fig.6 Typical output characteristics

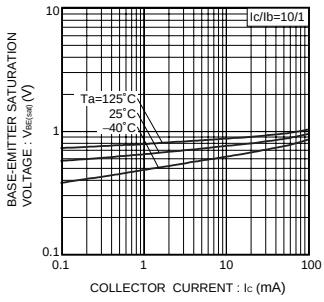


Fig.7 Base-emitter saturation voltage vs. collector current

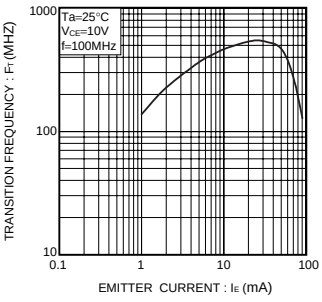


Fig.8 Transition frequency