



CHENMKO ENTERPRISE CO.,LTD

**SURFACE MOUNT
Transistor**

VOLTAGE 50 Volts CURRENT 0.1 Ampere

2SC6114T1GP

Halogens free devices

APPLICATION

* Small signal low frequency amplifier.

FEATURE

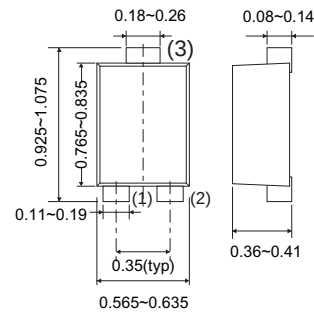
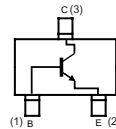
- * Surface mount package. (SOT-923)
- * Low cob. Cob=0.2pF(Typ.)
- * Pc= 150mW

CONSTRUCTION

* NPN Silicon Transistor

SOT-923

CIRCUIT



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} ≤ 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 TA = 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
C_{ob}	collector output capacitance	$I_E = 0$; $V_{CE} = 10V$; $f = 1\text{ MHz}$	–	1.0	–	pF
f_T	transition frequency	$I_E = -1\text{ mA}$; $V_{CE} = 10V$; $f = 100\text{ MHz}$	–	130	–	MHz

Note

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

RATING CHARACTERISTIC CURVES (2SC6114T1GP)

●Electrical characteristic curves

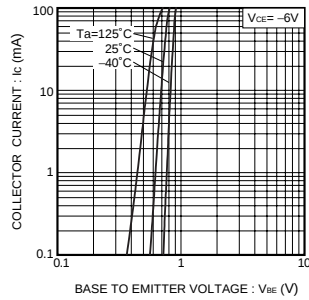


Fig.1 Grounded emitter propagation characteristics

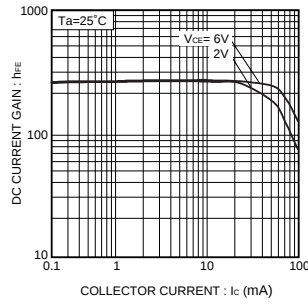


Fig.2 DC current gain vs. collector current (I)

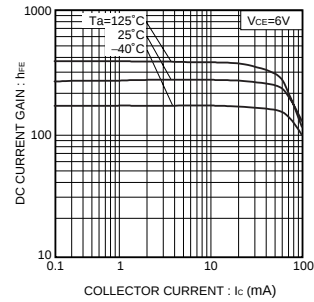


Fig.3 DC current gain vs. collector current (II)

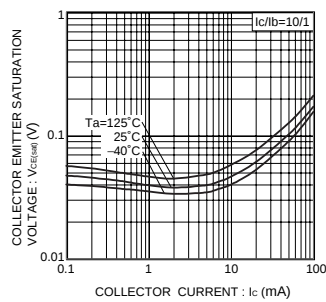


Fig.4 Collector-emitter saturation voltage vs. collector current

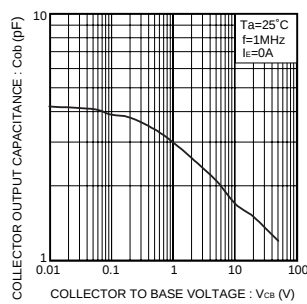


Fig.5 Collector output capacitance

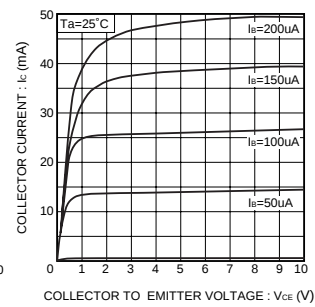


Fig.6 Typical output characteristics

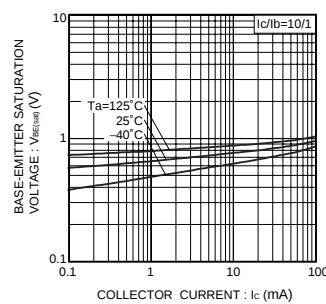


Fig.7 Base-emitter saturation voltage vs. collector current

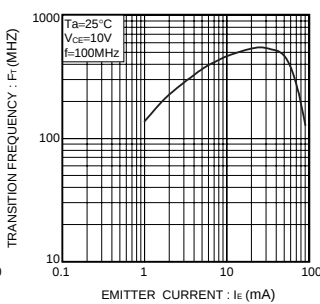


Fig.8 Transition frequency