CHENMKO ENTERPRISE CO.,LTD

2SC5663GP

Halogens free devices

SURFACE MOUNT
Low Ferquency NPN Transistor

VOLTAGE 12 Volts CURRENT 0.5 Ampere

APPLICATION

* For switching,for muting.

FEATURE

* Small surface mounting type. (SOT-723)
* High current
* Collector saturation voltage is low.
  V_{CE}(sat)<=250mA
  At Ic=200mA/I_B=10mA

CONSTRUCTION

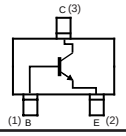
* NPN Silicon Transistor

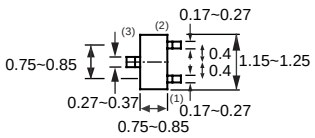
MARKING

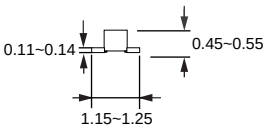
* 31

SOT-723

CIRCUIT







Dimensions in millimeters

SOT-723

MAXIMUM RATINGES (At T_A = 25°C unless otherwise noted)

RATINGS	CONDITION	SYMBOL	MIN.	MAX.	UNITS
Collector - Base Voltage	Open Emitter	V_{CBO}	-	15	Volts
Collector - Emitter Voltage	Open Base	V_{CEO}	-	12	Volts
Collector Current DC		I_C	-	500	mAmps
Peak Collector Current		I_{CM}	-	1000	mAmps
Total Power Dissipation	$T_A \leq 25^oC$; Note 1	P_{TOT}	-	150	mW
Storage Temperature		T_{STG}	-55	+150	°C
Junction Temperature		T_J	-	+150	°C
Operating Ambient Temperature		T_{AMB}	-55	+150	°C

Note

1. Transistor mounted on ceramic substrate 50mmX50mmx0.8t.

RATING CHARACTERISTICS (2SC5663GP)

THERMAL CHARACTERISTICS
CHARACTERISTICS

T_{amb} = 25 °C unless otherwise speciÞed.

SYMBOL	PARAMETER	CONDITIONS	MIN.	Typ.	MAX.	UNIT
I_{CBO}	collector cut-off current	V_{CB}=15V	–	–	0.1	uA
BV_{CBO}	collector-base breakdown voltage	I_C =10uA	15	–	–	V
BV_{CEO}	collector-emitter breakdown voltage	I_C =1mA	12	–	–	V
BV_{EBO}	emitter-base breakdown voltage	I_E =10uA	6	–	–	V
h_{FE}	DC current transfer ratio	V_{CE}=2V , I_C=10mA	270	–	680	
V_{CEsat}	collector-emitter saturation voltage	I_C/I_B=200mA/10mA	–	90	250	mV
Cob	collector output capacitance	I_E = 0; V_{CB} = 10V ; f = 1 MHz	–	7.5	–	pF
f_T	transition frequency	I_E = -10 mA; V_{CE} = 2 V; f = 30 MHz	–	320	–	MHz

Note

1. Pulse test: $t_p \leq 300\ \mu s$; $\delta \leq 0.02$.

RATING CHARACTERISTIC CURVES (2SC5663GP)

●Electrical characteristic curves

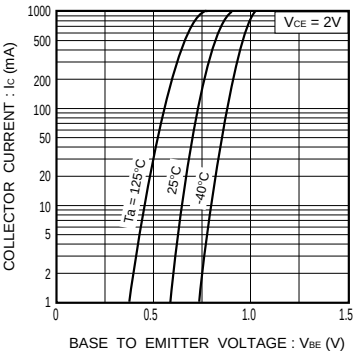


Fig.1 Grounded emitter propagation characteristics

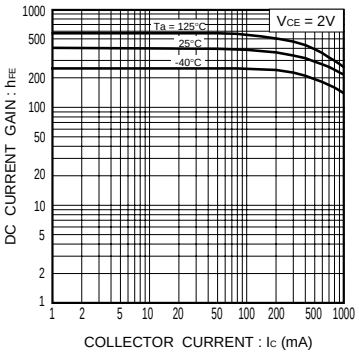


Fig.2 DC current gain vs. collector current

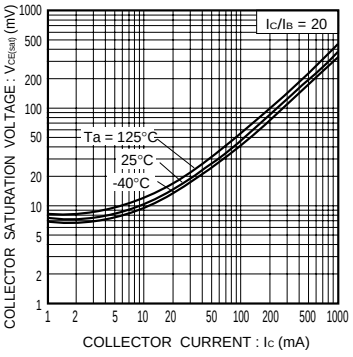


Fig.3 Collector-emitter saturation voltage vs. collector current (I)

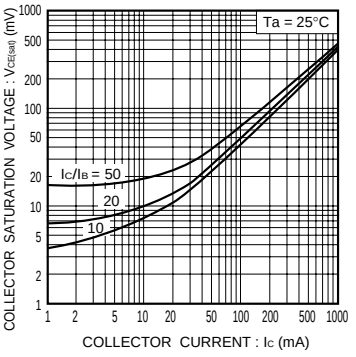


Fig.4 Collector-emitter saturation voltage vs. collector current (II)

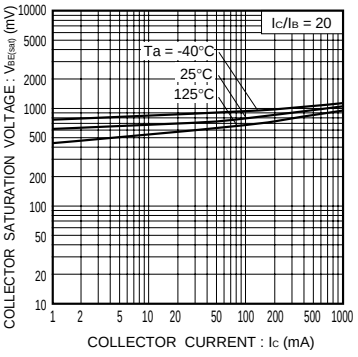


Fig.5 Base-emitter saturation voltage vs. collector current

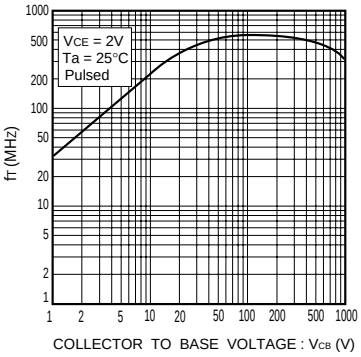


Fig.6 Collector output capacitance Emitter input capacitance vs. base voltage

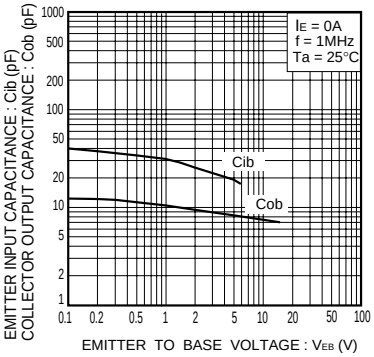


Fig.7 Collector output capacitance vs collector-base voltage Emitter input capacitance vs emitter-base voltage