CHENMKO ENTERPRISE CO.,LTD

2SC4774PT

Lead free devices

SURFACE MOUNT
High frequency amplifier Transistor
VOLTAGE 6 Volts CURRENT 50 mAmpere

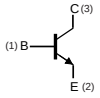
APPLICATION
* Small Signal Amplifier .

FEATURE
* Surface mount package. (SC-70/SOT-323)
* Low saturation voltage $V_{CE(sat)}$=0.3V(max.)
* Low cob. Cob=1.0pF(Typ.)
* P_C= 200mW (mounted on ceramic substrate).
* High saturation current capability.

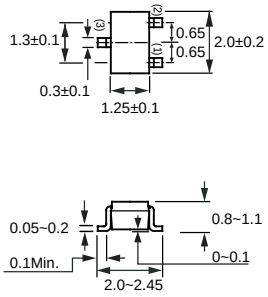
CONSTRUCTION
* NPN Silicon Transistor
* Epitaxial planner type

MARKING
* UW

CIRCUIT



SC-70/SOT-323



Dimensions in millimeters

SC-70/SOT-323

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

RATINGS	CONDITION	SYMBOL	MIN.	MAX.	UNITS
Collector - Base Voltage	Open Emitter	V_{CBO}	-	12	Volts
Collector - Emitter Voltage	Open Base	V_{CEO}	-	6	Volts
Emitter - Base Voltage	Open Collector	V_{EBO}	-	3	Volts
Collector Current DC		I_C	-	50	mAmps
Total Power Dissipation	$T_A \leq 25^oC$; Note 1	P_{TOT}	-	250	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.
2. Measured at Pulse Width 300 us, Duty Cycle 2%.

2004-11

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RATING CHARACTERISTICS (2SC4774PT)

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

PARAMETERS	CONDITION	SYMBOL	MIN.	TYPE	MAX.	UNITS
Collector Cut-off Current	I_E=0; V_{CB}=10V	I_{CBO}	-	-	0.5	uA
Emitter Cut-off Current	I_C=0; V_{EB}=7V	I_{CEO}	-	-	0.5	uA
DC Current Gain	V_{CE}/I_C=5V/5mA	h_{FE}	270	-	560	
Collector-Emitter Saturation Voltage	I_C=10mA; I_B=1mA	V_{CEsat}	-	-	0.3	Volts
Output-on resistance	I_B=3mA; VI=100mVrms f=500KHz	Ron	-	2	-	Ω
Output Collector Capacitance	I_E=ie=0; V_{CB}=10V; f=1MHz	C_{ob}	-	1	1.7	pF
Transition Frequency	I_C=-10mA; V_{CE}=5V; f=200MHz	f_T	300	800	-	MHz

Note :
1. Pulse test: tp ≤ 300uSec; δ ≤ 0.02.

RATING CHARACTERISTIC CURVES (2SC4774PT)

●Electrical characteristic curves

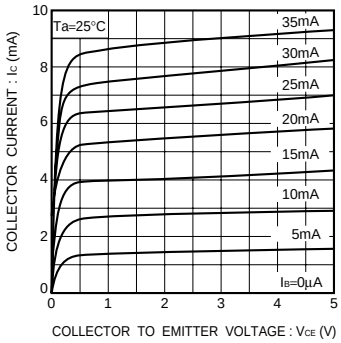

Fig.1 Grounded emitter output characteristics (I)

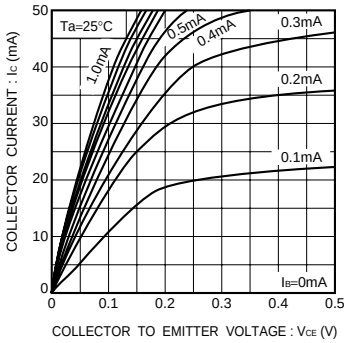

Fig.2 Grounded emitter output characteristics (II)

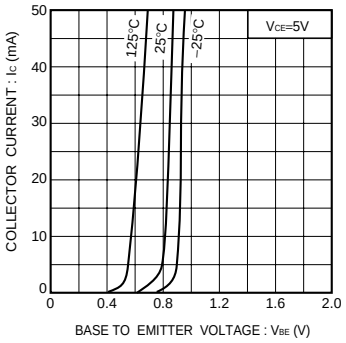

Fig.3 Grounded emitter propagation characteristics

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RATING CHARACTERISTIC CURVES (2SC4774PT)

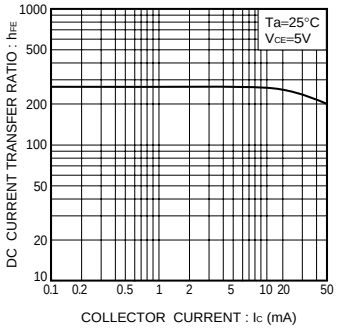

Fig.4 DC current gain vs. collector current

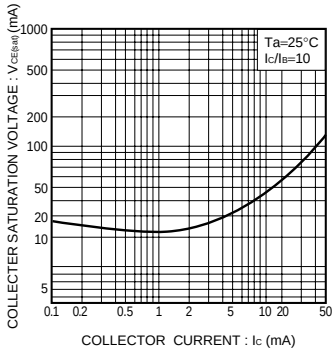

Fig.5 Collector-emitter saturation voltage vs. collector current

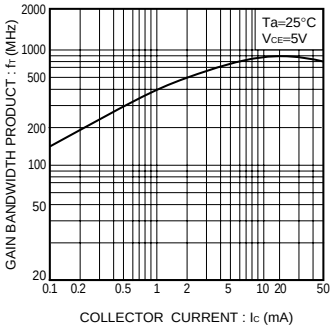

Fig.6 Gain bandwidth product vs. collector current

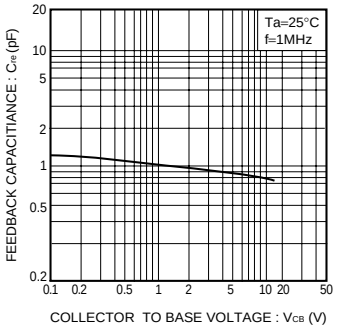

Fig.7 Collector output capacitance vs. voltage

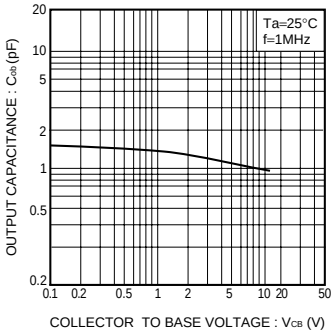

Fig.8 Back capacitance voltage

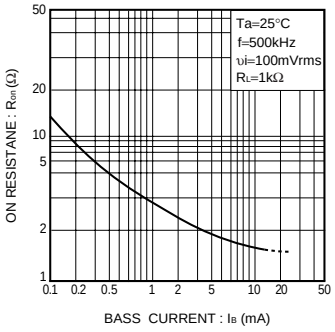

Fig.9 Output-on resistance vs. base current

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