



CHENMKO ENTERPRISE CO.,LTD

2SC4774PT

SURFACE MOUNT

High frequency amplifier Transistor

VOLTAGE 6 Volts CURRENT 50 mAmpere

Lead free devices

APPLICATION

* Small Signal Amplifier .

FEATURE

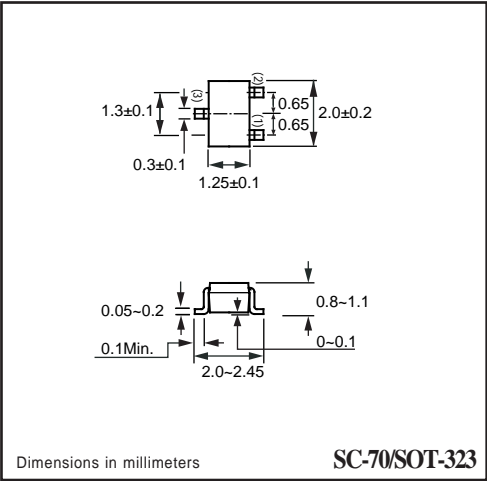
- * Surface mount package. (SC-70/SOT-323)
- * Low saturation voltage $V_{CE(sat)}=0.3V(max.)$
- * Low cob. $C_{ob}=1.0pF(Typ.)$
- * $P_C= 200mW$ (mounted on ceramic substrate).
- * High saturation current capability.

CONSTRUCTION

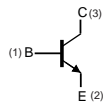
- * NPN Silicon Transistor
- * Epitaxial planner type

MARKING

* UW



CIRCUIT



MAXIMUM RATINGS (At $T_A = 25^{\circ}C$ unless otherwise noted)

RATINGS	CONDITION	SYMBOL	MIN.	MAX.	UNITS
Collector - Base Voltage	Open Emitter	V_{CB0}	-	12	Volts
Collector - Emitter Voltage	Open Base	V_{CE0}	-	6	Volts
Emitter - Base Voltage	Open Collector	V_{EB0}	-	3	Volts
Collector Current DC		I_C	-	50	mAmps
Total Power Dissipation	$T_A \leq 25^{\circ}C$; Note 1	P_{TOT}	-	250	mW
Storage Temperature		T_{STG}	-55	+150	$^{\circ}C$
Junction Temperature		T_J	-	+150	$^{\circ}C$
Operating Ambient Temperature		T_{AMB}	-55	+150	$^{\circ}C$

Note

1. Transistor mounted on ceramic substrate 50mmX50mmX0.8t.
2. Measured at Pulse Width 300 us, Duty Cycle 2%.

RATING CHARACTERISTICS (2SC4774PT)

ELECTRICAL CHARACTERISTICS (At $T_A = 25^\circ\text{C}$ unless otherwise noted)

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

Note :

1. Pulse test: $t_p \leq 300\mu\text{Sec}$; $\delta \leq 0.02$.

RATING CHARACTERISTIC CURVES (2SC4774PT)

●Electrical characteristic curves

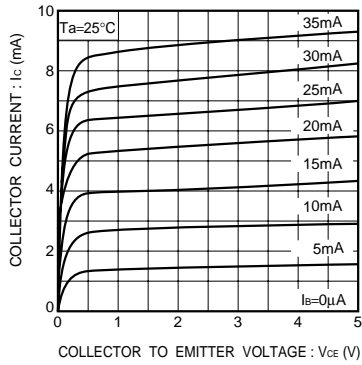


Fig.1 Grounded emitter output characteristics (I)

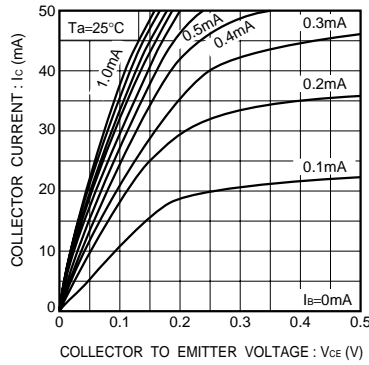


Fig.2 Grounded emitter output characteristics (II)

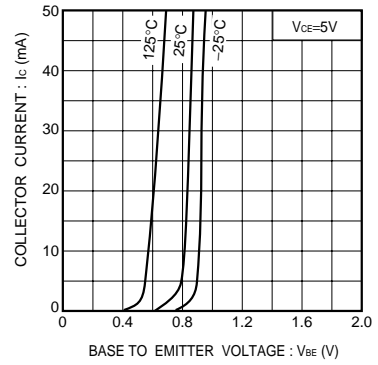


Fig.3 Grounded emitter propagation characteristics

RATING CHARACTERISTIC CURVES (2SC4774PT)

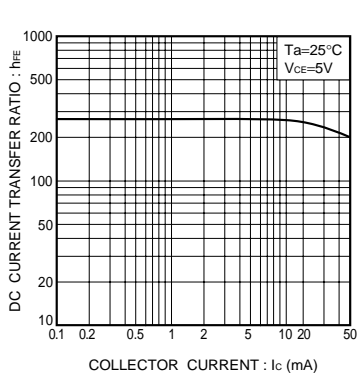


Fig.4 DC current gain vs. collector current

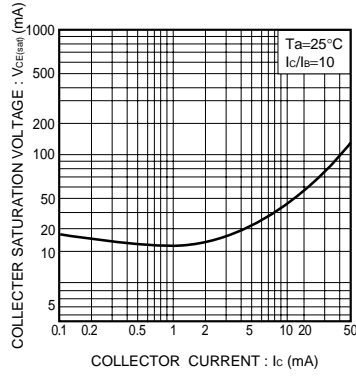


Fig.5 Collector-emitter saturation voltage vs. collector current

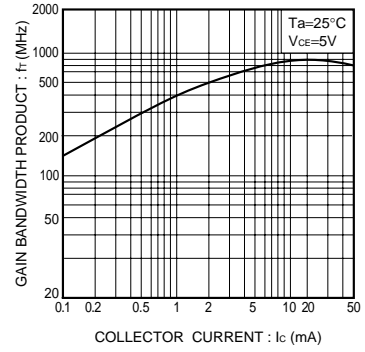


Fig.6 Gain bandwidth product vs. collector current

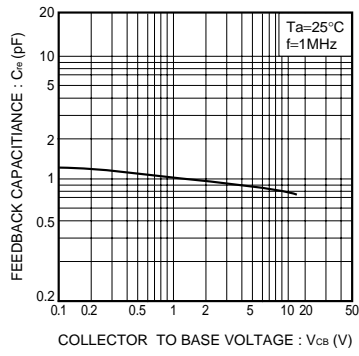


Fig.7 Collector output capacitance vs. voltage

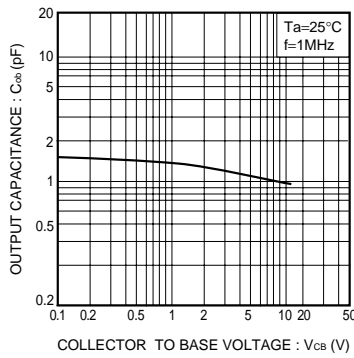


Fig.8 Back capacitance voltage vs. collector to base voltage

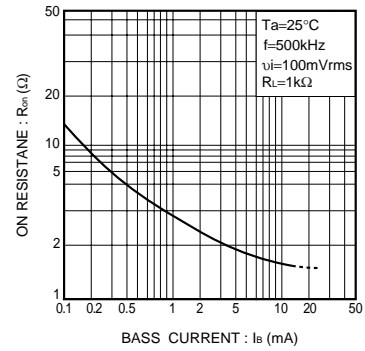


Fig.9 Output-on resistance vs. base current