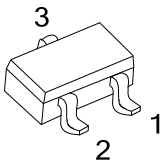
2SC4774

NPN SILICON TRANSISTOR

HIGH FREQUENCY AMPLIFIER TRANSISTOR, RF SWITCHING (6V, 50mA)



SOT-323

■ FEATURES

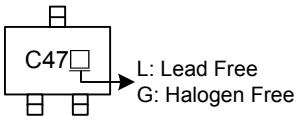
* Very low output-on resistance (R_{ON}).
* Low capacitance.

■ ORDERING INFORMATION

Order Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
2SC4774L-AL3-R	2SC4774G-AL3-R	SOT-323	E	B	C	Tape Reel

2SC4774G-AL3-R (1) Packing Type (2) Package Type (3) Lead Plating	(1) R: Tape Reel (2) AL3: SOT-323 (3) G: Halogen Free, L: Lead Free

■ MARKING



■ ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

PARAMETER	SYMBOL	RATINGS	UNIT
Collector-Base Voltage	V_{CBO}	12	V
Collector-Emitter Voltage	V_{CEO}	6	V
Emitter-Base Voltage	V_{EBO}	3	V
Collector Current	I_C	50	mA
Collector Power Dissipation	P_D	0.2	W
Junction Temperature	T_J	+150	°C
Storage Temperature	T_{STG}	-40 ~ +150	°C

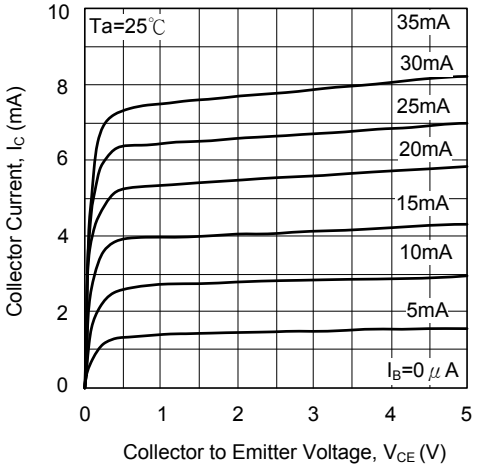
Note Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.

■ ELECTRICAL SPECIFICATIONS (Ta=25°C)

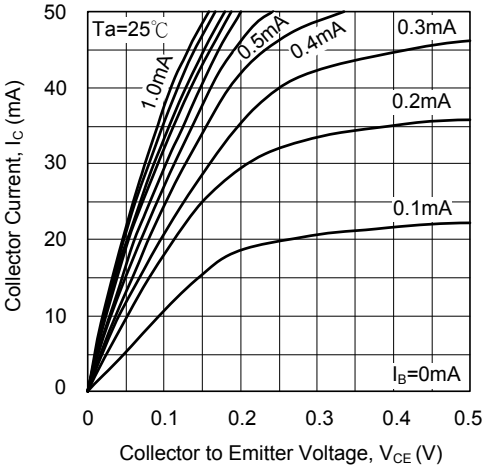
PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-Base Breakdown Voltage	BV_{CBO}	I_C =10μA	12			V
Collector-Emitter Breakdown Voltage	BV_{CEO}	I_C =1mA	6			V
Emitter-Base Breakdown Voltage	BV_{EBO}	I_E =10μA	3			V
Collector-Emitter Saturation Voltage	$V_{CE(SAT)}$	I_C/I_B =10mA/1mA			0.3	V
Collector Cutoff Current	I_{CBO}	V_{CB} =10V			0.5	μA
Emitter Cutoff Current	I_{EBO}	V_{EB} =2V			0.5	μA
DC Current Transfer Ratio	h_{FE}	V_{CE}/I_C =5V/5mA	270		560	
Transition Frequency	f_T	V_{CE} =5V, I_E = −10mA, f=200MHz	300	800		MHz
Output Capacitance	C_{ob}	V_{CB} =10V, I_E =0A, f=1MHz		1	1.7	pF
Output-On Resistance	R_{ON}	I_B =3mA, V_{IN} =100mVrms, f=500kHz		2		Ω

■ TYPICAL CHARACTERISTIC

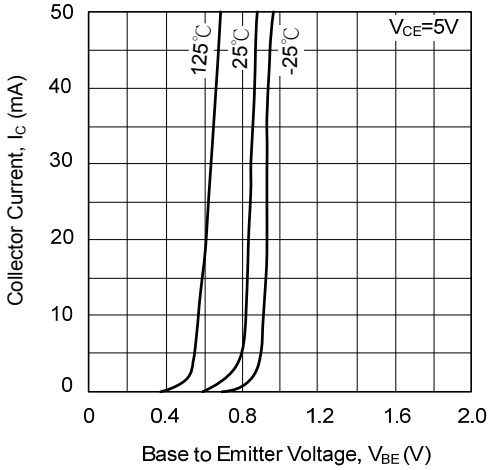
Grounded Emitter Output Characteristics (Ⅰ)



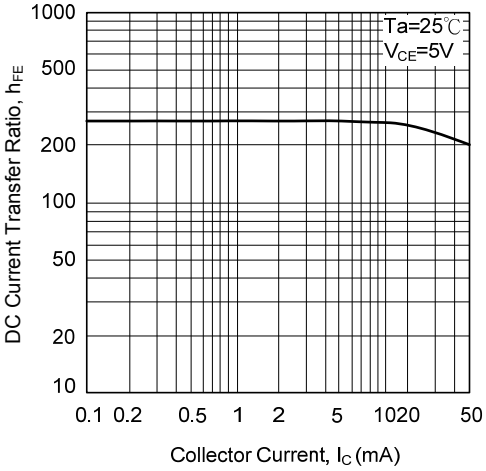
Grounded Emitter Output Characteristics (Ⅱ)



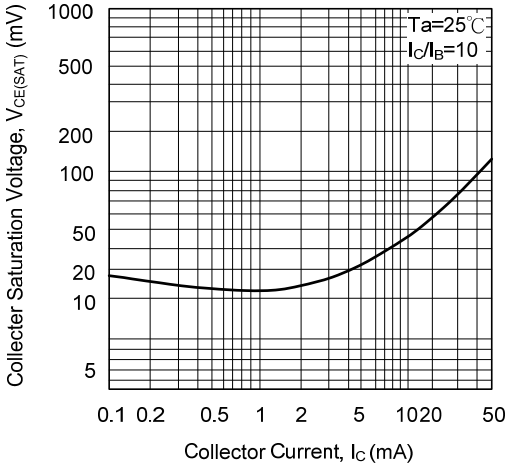
Grounded Emitter Propagation Characteristics



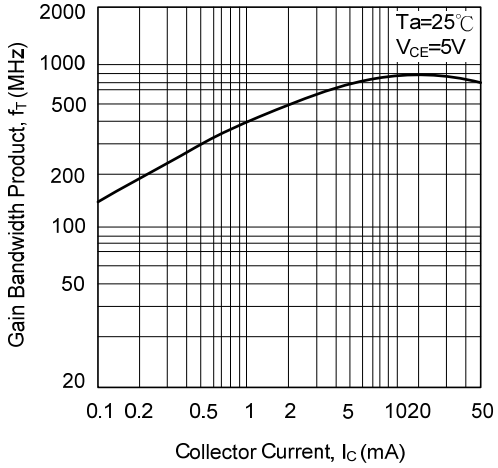
DC Current Gain vs. Collector Current



Collector-Emitter Saturation Voltage vs. Collector Current

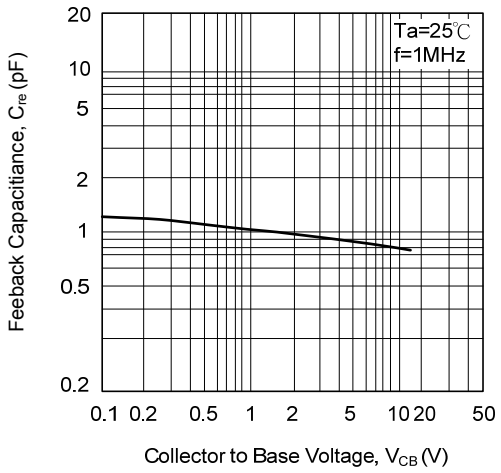


Gain Bandwidth Product vs. Collector Current

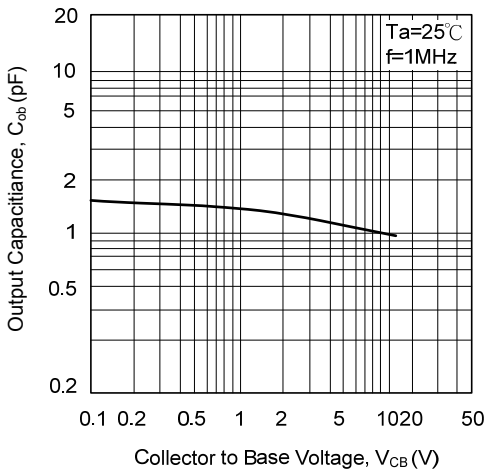


■ TYPICAL CHARACTERISTIC(Cont.)

Collector Output Capacitance vs. Voltage



Back Capacitance Voltage



Output-on Resistance vs. Base Current