

2SC4713K 2SC4774

Transistor, NPN

Features

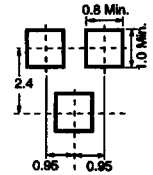
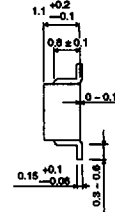
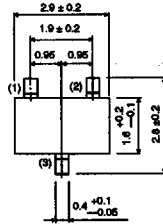
- available in SMT3 (SMT, SC-59) and UMT3 (UMT, SC-70) packages
- package marking: 2SC4713K and 2SC4774; BM★, where ★ is h_{FE} code
- very low output on state resistance
- low capacitance

Applications

- radio frequency amplifier

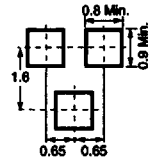
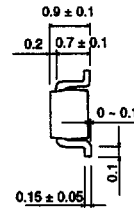
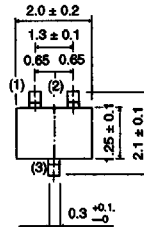
Dimensions (Units : mm)

2SC4713K (SMT)



- (1) Emitter
(2) Base
(3) Collector

2SC4774 (UMT)



- (1) Emitter
(2) Base
(3) Collector

Absolute maximum ratings ($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Limits	Unit
Collector-to-base voltage	V_{CBO}	12	V
Collector-to-emitter voltage	V_{CEO}	6	V
Emitter-to-base voltage	V_{EBO}	3	V
Collector current	I_C	50	mA
Collector dissipation	2SC4713K	200	mW
	2SC4774	150	
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 ~ +150	$^\circ\text{C}$

Electrical characteristics (unless otherwise noted, unless otherwise noted, $T_a = 25^\circ\text{C}$)

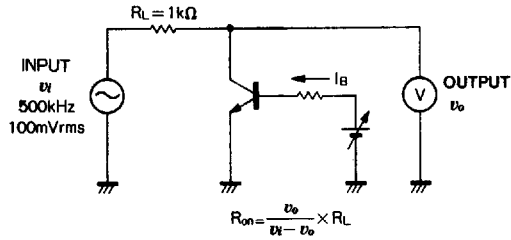
Parameter	Symbol	Min	Typical	Max	Unit	Conditions
Collector-to-base breakdown voltage	BV_{CBO}	12			V	$I_C = 10 \mu\text{A}$
Collector-to-emitter breakdown voltage	BV_{CEO}	6			V	$I_C = 1 \text{ mA}$
Emitter-to-base breakdown voltage	BV_{EBO}	3			V	$I_E = 10 \mu\text{A}$
Collector cutoff current	I_{CBO}			0.5	μA	$V_{CB} = 10 \text{ V}$
Emitter cutoff current	I_{EBO}			0.5	μA	$V_{EB} = 2 \text{ V}$
DC current gain	h_{FE}	180		560		$V_{CE} = 5 \text{ V}, I_C = 5 \text{ mA}$
Collector-to-emitter saturation voltage	$V_{CE(sat)}$			0.3	V	$I_C/I_B = 10 \text{ mA}/1 \text{ mA}$
Transition frequency	f_T	300	800		MHz	$V_{CB} = 5 \text{ V}, I_C = 10 \text{ mA}$
Output capacitance	C_{ob}		1.0	1.7	pF	$V_{CB} = 10 \text{ V}, I_E = 0 \text{ A}, f = 1 \text{ MHz}$
Turn on resistance	R_{on}		2.0		Ω	$I_B = 3 \text{ mA}, v_i = 100 \text{ mV}_{rms}, f = 500 \text{ kHz}$

 h_{FE} rankings

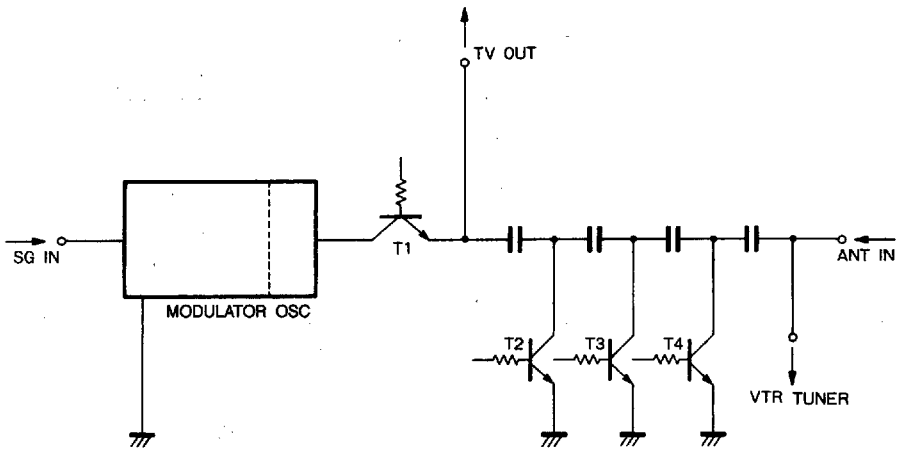
Item	R	S
h_{FE}	180 ~ 390	270 ~ 560

2SC4713K, 2SC4774 Transistor, NPN, 2SC Series

R_{on} measurement circuit diagram



Application example



Electrical characteristic curves

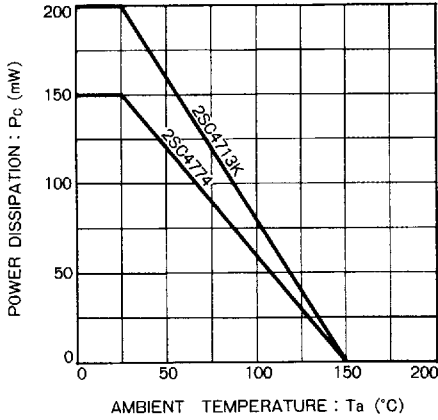


Figure 1

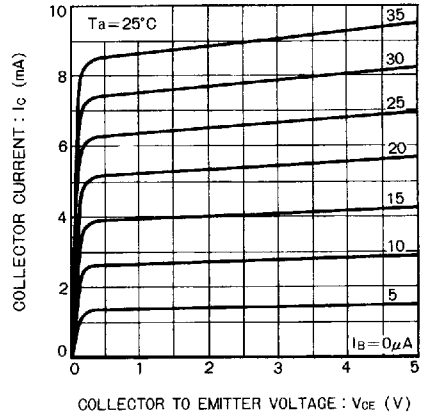


Figure 2

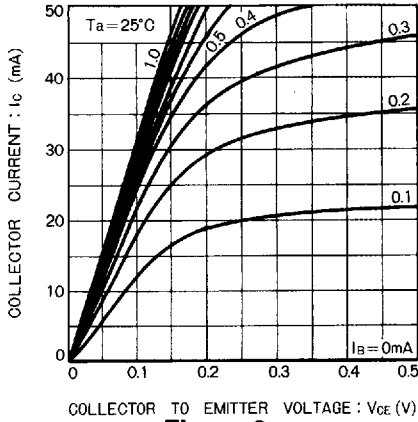


Figure 3

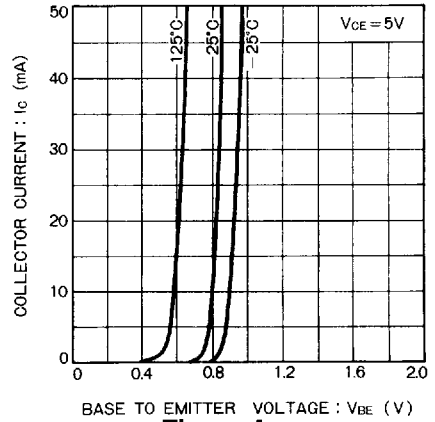


Figure 4

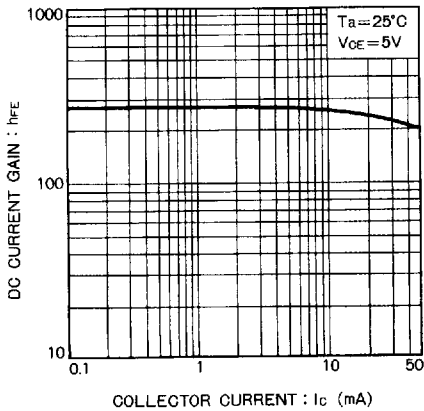


Figure 5

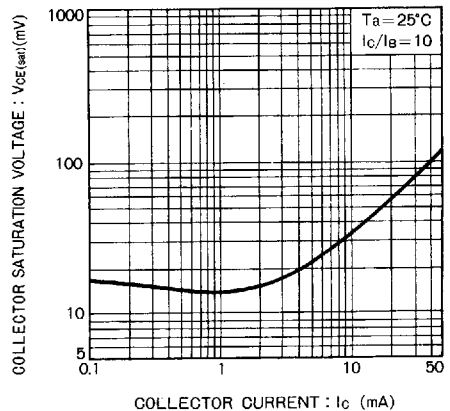


Figure 6

2SC4713K, 2SC4774 Transistor, NPN, 2SC Series

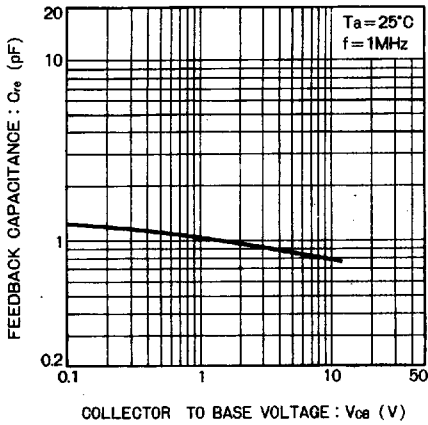


Figure 7

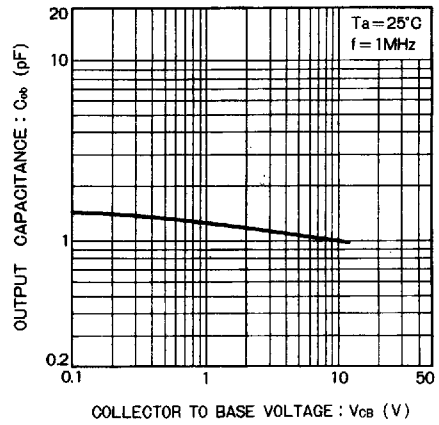


Figure 8

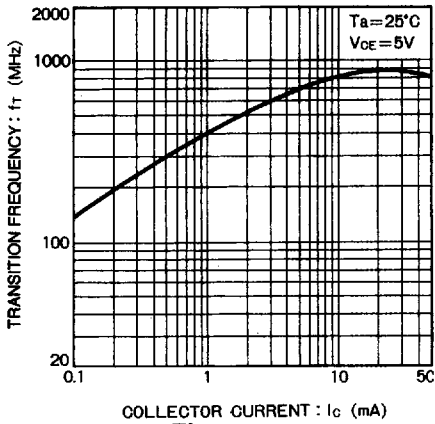


Figure 9

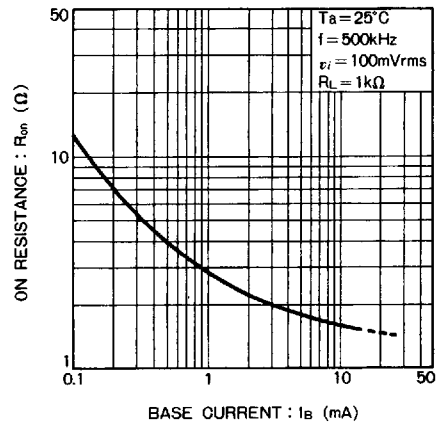


Figure 10

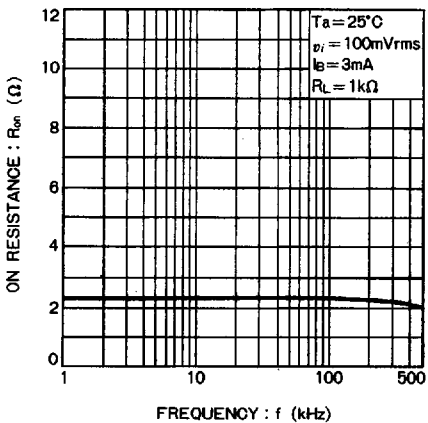


Figure 11

Ordering information

Package	Tape	
	T146	T106
Code		
Basic order quantity	3000	3000
2SC4713 K	★	
2SC4774		★
★ = Standard, ☆ = Semi-standard, * = Special order		