

For audio temperature compensation circuits (20V, 0.1A)

2SC4137

●Features

- 1) Low saturation voltage, typically $V_{CE(sat)} = 0.2V$ at $I_C / I_E = 50mA / 5mA$.
- 2) High DC current gain.

●Packaging specifications and h_{FE}

Type	2SC4137
Package	TO-126FP
h_{FE}	VW
Code	—
Basic ordering unit (pieces)	500

●Absolute maximum ratings ($T_a = 25^\circ C$)

Parameter	Symbol	Limits	Unit
Collector-base voltage	V_{CBO}	25	V
Collector-emitter voltage	V_{CEO}	20	V
Emitter-base voltage	V_{EBO}	6	V
Collector current	I_C	100	mA (DC)
		200	mA (Pulse) *
Collector power dissipation	P_C	1	W
		4	W ($T_C = 25^\circ C$)
Junction temperature	T_J	150	$^\circ C$
Storage temperature	T_{stg}	-55~+150	$^\circ C$

* Single pulse, $P_w = 10ms$

●Electrical characteristics ($T_a = 25^\circ C$)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	BV_{CBO}	25	—	—	V	$I_C = 10 \mu A$
Collector-emitter breakdown voltage	BV_{CEO}	20	—	—	V	$I_C = 1mA$
Emitter-base breakdown voltage	BV_{EBO}	6	—	—	V	$I_E = 10 \mu A$
Collector cutoff current	I_{CBO}	—	—	0.5	μA	$V_{CB} = 15V$
Emitter cutoff current	I_{EBO}	—	—	0.5	μA	$V_{EB} = 6V$
Collector-emitter saturation voltage	$V_{CE(sat)}$	—	0.2	0.7	V	$I_C / I_E = 50mA / 5mA$
DC current transfer ratio	h_{FE}	820	—	2700	—	$V_{CE} / I_C = 3V / 10mA$
Transition frequency	f_T	—	400	—	MHz	$V_{CE} = 10V, I_E = -10mA, f = 100MHz$
Output capacitance	C_{ob}	—	3	—	pF	$V_{CB} = 10V, I_E = 0A, f = 1MHz$

(96-718-C110)

High-frequency Amplifier Transistor, RF Switching (60V, 50mA)

2SC4774 / 2SC4713K

●Features

- 1) Very low output-on resistance (R_{on}).
- 2) Low capacitance.

●Packaging specifications and h_{FE}

Type	2SC4774	2SC4713K
Package	UMT3	SMT3
h_{FE}	S	S
Marking	BM*	BM*
Code	T106	T146
Basic ordering unit (pieces)	3000	3000

* Denotes h_{FE}

●Absolute maximum ratings ($T_a = 25^\circ C$)

Parameter	Symbol	Limits	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_C	0.15	W
		0.2	W
Junction temperature	T_J	150	$^\circ C$
Storage temperature	T_{stg}	-55~+150	$^\circ C$

●Electrical characteristics ($T_a = 25^\circ C$)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	BV_{CBO}	12	—	—	V	$I_C = 10 \mu A$
Collector-emitter breakdown voltage	BV_{CEO}	6	—	—	V	$I_C = 1mA$
Emitter-base breakdown voltage	BV_{EBO}	3	—	—	V	$I_E = 10 \mu A$
Collector cutoff current	I_{CBO}	—	—	0.5	μA	$V_{CB} = 10V$
Emitter cutoff current	I_{EBO}	—	—	0.5	μA	$V_{EB} = 2V$
Collector-emitter saturation voltage	$V_{CE(sat)}$	—	0.3	—	V	$I_C / I_E = 10mA / 1mA$
DC current transfer ratio	h_{FE}	270	—	560	—	$V_{CE} / I_C = 10V / 10mA$
Transition frequency	f_T	300	800	—	MHz	$V_{CE} = 5V, I_C = 10mA$
Output capacitance	C_{ob}	—	1	1.7	pF	$V_{CB} = 10V, I_E = 0A, f = 1MHz$
Output-on resistance	R_{on}	—	2	—	Ω	$I_a = 3mA, v_i = 100mV_{rms}, f = 500KHz$

(96-183-C115)