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

2SC4137

●Features

1) Low saturation voltage, typically $V_{CE(sat)}$ =0.2V at I_C / I_B=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 (Ta=25℃)

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℃)
Junction temperature	Tj	150	℃
Storage temperature	Tstg	−55~+150	℃

✻ Single pulse, Pw=10ms

●Electrical characteristics (Ta=25℃)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	BV_{CBO}	25	—	—	V	I_C=10 μA
Collector-emitter breakdown voltage	BV_{CEO}	20	—	—	V	I_C=1mA
Emitter-base breakdown voltage	BV_{EBO}	6	—	—	V	I_E=10 μA
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_B=50mA/5mA
DC current transfer ratio	h_{FE}	820	—	2700	—	V_{CE}/I_C=3V/10mA
Transition frequency	fT	—	400	—	MHz	V_{CE}=10V , I_E=−10mA , f=100MHz
Output capacitance	Cob	—	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 (Ron).
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 (Ta=25℃)

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	2SC4774	P_C	0.15	W
	2SC4713K		0.2	
Junction temperature		Tj	150	℃
Storage temperature		Tstg	−55~+150	℃

●Electrical characteristics (Ta=25℃)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	BV_{CBO}	12	—	—	V	I_C=10 μA
Collector-emitter breakdown voltage	BV_{CEO}	6	—	—	V	I_C=1mA
Emitter-base breakdown voltage	BV_{EBO}	3	—	—	V	I_E=10 μA
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_B=10mA/1mA
DC current transfer ratio	h_{FE}	270	—	560	—	V_{CE}/I_C=10V/10mA
Transition frequency	fT	300	800	—	MHz	V_{CE}=5V , I_C=10mA
Output capacitance	Cob	—	1	1.7	pF	V_{CB}=10V , I_E=0A , f=1MHz
Output-on resistance	Ron	—	2	—	Ω	I_B=3mA , vi=100mVrms , f=500KHz

(96-183-C115)