Medium Power Transistor (50V,0.5A)

2SD1949 / 2SD1484K

● Features

1) High current.(I_C=5A)
2) Low saturation voltage, typically $V_{CE(sat)}$=0.1V at I_C / I_B=150mA / 15mA.

●Absolute maximum rationgs (Ta=25℃)

Parameter	Symbol	Limits	Unit
Collector-base voltage	V_{CBO}	50	V
Collector-emitter voltage	V_{CEO}	50	V
Emitter-base voltage	V_{EBO}	5	V
Collector current	I_C	0.5	A
Collector power dissipation	P_C	0.2	W
Junction temperature	Tj	150	℃
Storage temperature	Tstg	−55 to +150	℃

●Electrical characteristics (Ta=25℃)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	BV_{CBO}	50	–	–	V	I_C=100μA
Collector-emitter breakdown voltage	BV_{CEO}	50	–	–	V	I_C=1mA
Emitter-base breakdown voltage	BV_{EBO}	5	–	–	V	I_E=100μA
Collector outoff current	I_{CBO}	–	–	0.5	μA	V_{CB}=30V
Emitter cutoff current	I_{EBO}	–	–	0.5	μA	V_{EB}=4V
DC current rransfer ratio	h_{FE}	120	–	390	–	V_{CE}/I_C=3V/0.01A
Collector-emitter saturation voltage	$V_{CE(sat)}$	–	–	0.4	V	I_C/I_B=150mA/15mA
Transition frequency	f_T	–	250	–	MHz	V_{CE}=5V , I_E= −20mA , f=100MHz
Output capacitance	Cob	–	6.5	–	pF	V_{CB}=10V , I_E=0A , f=1MHz

●Packaging specifications and h_{FE}

Type	2SD1949	2SD1484K
Package	UMT3	SMT3
h_{FE}	QR	QR
Marking	Y＊	Y＊
Code	T106	T146
Basic ordering unit (pleces)	3000	3000

＊Danotes h_{FE}

●Electrical characteristic curves

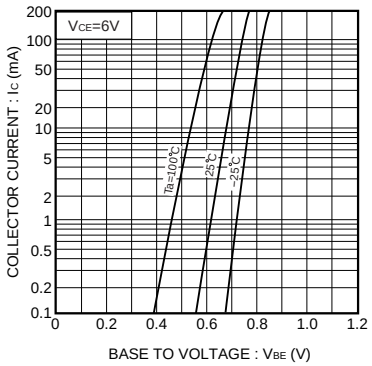

Fig.1 Ground emitter propagation characteristics

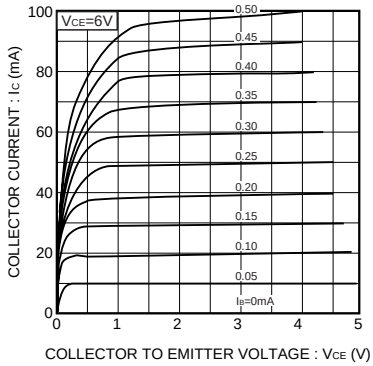

Fig.2 Ground emitter output characteristics

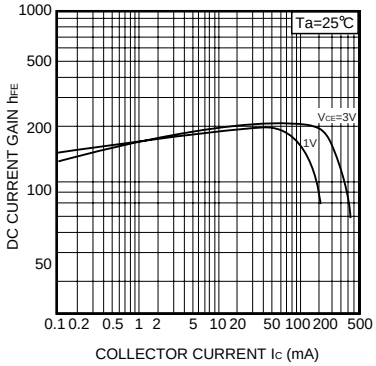

Fig.3 DC current gain vs. Collector current (Ⅰ)

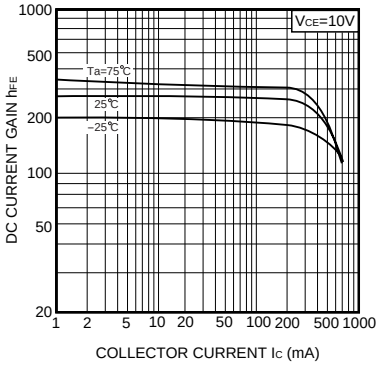

Fig.4 DC current gain vs. Collector currnet (Ⅱ)

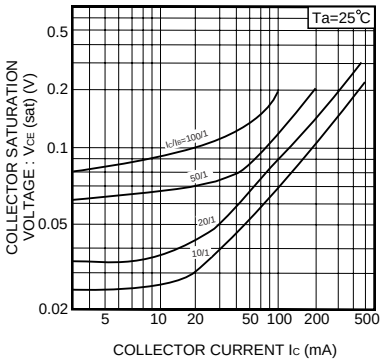

Fig.5 Collector-emitter saturation voltage vs. Collector current

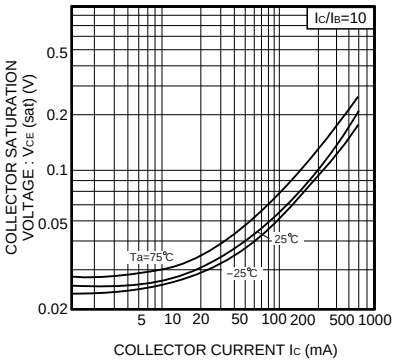

Fig.6 Collector-emitter saturation voltage vs. collector current

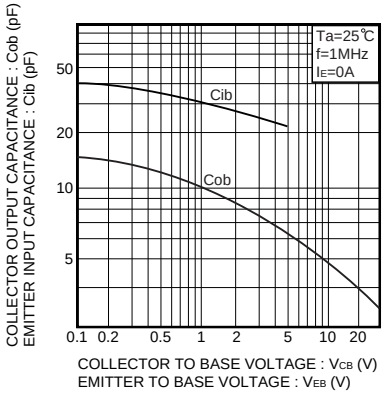

Fig.7 Input-and-output capacity vs.voltage characteristic

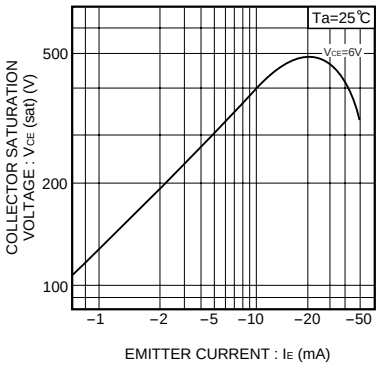

Fig.8 Transition frequency vs.emitter current

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