

Medium Power Transistor (50V, 0.5A)

2SD1949 / 2SD1484K / 2SC1741AS

●Features

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

●Packaging specifications and hFE

Type	2SD1949	2SD1484K	2SC1741AS
Package	UMT3	SMT3	SPT
hFE	QR	QR	QR
Marking	Y*	Y*	—
Code	T106	T146	TP
Basic ordering unit (pieces)	3000	3000	5000

* Denotes hFE

●Absolute maximum ratings (Ta=25°C)

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
		0.3	
Junction temperature	T_J	150	°C
Storage temperature	T_{stg}	-55~+150	°C

●Electrical characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	BV_{CBO}	50	—	—	V	$I_C=100\mu A$
Collector-emitter breakdown voltage	BV_{CEO}	50	—	—	V	$I_C=1mA$
Emitter-base breakdown voltage	BV_{EBO}	5	—	—	V	$I_E=100\mu A$
Collector cutoff current	I_{CBO}	—	—	0.5	μA	$V_{CB}=30V$
Emitter cutoff current	I_{EBO}	—	—	0.5	μA	$V_{EB}=4V$
DC current transfer ratio	hFE	120	—	560	—	$V_{CE}/I_C=3V/0.1A$
Collector-emitter saturation voltage	$V_{CE(sat)}$	—	—	0.4	V	$I_C/I_E=150mA/15mA$
Transition frequency	f_T	—	250	—	MHz	$V_{CE}=5V, I_E=-20mA, f=100MHz$
Output capacitance	C_{ob}	—	6.5	—	pF	$V_{CB}=10V, I_E=0A, f=1MHz$

(96-678-D15)

Power Transistor (80V, 0.3A)

2SC3359S

●Features

- 1) High breakdown voltage, $BV_{CEO}=80V$.
- 2) Low saturation voltage, typically $V_{CE(sat)}=0.2V$ at $I_C / I_B=0.3A / 0.03A$.

●Packaging specifications and hFE

Type	2SC3359S
Package	SPT
hFE	QR
Code	TP
Basic ordering unit (pieces)	5000

●Absolute maximum ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Collector-base voltage	V_{CBO}	80	V
Collector-emitter voltage	V_{CEO}	80	V
Emitter-base voltage	V_{EBO}	5	V
Collector current	I_C	0.3	A
Collector power dissipation	P_C	0.3	W
Junction temperature	T_J	150	°C
Storage temperature	T_{stg}	-55~+150	°C

●Electrical characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-emitter breakdown voltage	BV_{CEO}	80	—	—	V	$I_C=1mA$
Collector-base breakdown voltage	BV_{CBO}	80	—	—	V	$I_C=50\mu A$
Emitter-base breakdown voltage	BV_{EBO}	5	—	—	V	$I_E=50\mu A$
Collector cutoff current	I_{CBO}	—	—	0.5	μA	$V_{CB}=80V$
Emitter cutoff current	I_{EBO}	—	—	0.5	μA	$V_{EB}=4V$
Collector-emitter saturation voltage	$V_{CE(sat)}$	—	0.2	0.5	V	$I_C/I_E=0.3/0.03A$
DC current transfer ratio	hFE	120	—	390	—	$V_{CE}=3V, I_C=0.1A$
Transition frequency	f_T	50	150	—	MHz	$V_{CE}=5V, I_E=0.01A, f=100MHz$
Output capacitance	C_{ob}	—	5	8	pF	$V_{CB}=10V, I_E=0A, f=1MHz$

(SPEC-D16)