

# 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	$\mu A$	$V_{CB}=30V$
Emitter cutoff current	$I_{EBO}$	—	—	0.5	$\mu A$	$V_{EB}=4V$
DC current transfer ratio	hFE	120	—	560	—	$V_{CE}/I_C=3V/0.1A$
Collector-emitter saturation voltage	$V_{CE(sat)}$	—	—	0.4	V	$I_C/I_B=150mA/15mA$
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	$\mu A$	$V_{CB}=80V$
Emitter cutoff current	$I_{EBO}$	—	—	0.5	$\mu A$	$V_{EB}=4V$
Collector-emitter saturation voltage	$V_{CE(sat)}$	—	0.2	0.5	V	$I_C/I_B=0.3/0.03A$
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)