

Medium Power Transistor (25V, 1.2A)

2SD2537 / 2SD2171S

●Features

- 1) High DC current gain.
- 2) High emitter-base voltage. ($V_{CE0}=12V$ Min.)
- 3) Low $V_{CE(sat)}$. (Max. 0.3V at $I_C/I_E=500/10mA$)

●Packaging specifications and h_{FE}

Type	2SD2537	2SD2171S
Package	MPT3	SPT
h_{FE}	VW	V
Marking	DV *	—
Code	T100	TP
Basic ordering unit (pieces)	1000	5000

* Denotes h_{FE}

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

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	BV_{CBO}	30	—	—	V	$I_C=10\mu A$
Collector-emitter breakdown voltage	BV_{CEO}	25	—	—	V	$I_C=1mA$
Emitter-base breakdown voltage	BV_{EBO}	12	—	—	V	$I_E=10\mu A$
Collector cutoff current	I_{CBO}	—	—	0.3	μA	$V_{CB}=30V$
Emitter cutoff current	I_{EBO}	—	—	0.3	μA	$V_{EB}=12V$
Collector-emitter saturation voltage	$V_{CE(sat)}$	—	—	0.3	V	$I_C/I_E=500mA/10mA$ *
DC current transfer ratio	h_{FE}	820	—	2700	—	$V_{CE}/I_C=5V/0.5A$
Transition frequency	f_T	—	200	—	MHz	$V_{CE}=10V, I_E=-50mA, f=100MHz$ *
Output capacitance	C_{ob}	—	20	—	pF	$V_{CB}=10V, I_E=0A, f=1MHz$

* Measured using pulse current.

(94L-1061-D212)

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

Parameter	Symbol	Limits	Unit
Collector-base voltage	V_{CBO}	30	V
Collector-emitter voltage	V_{CEO}	25	V
Emitter-base voltage	V_{EBO}	12	V
Collector current	I_C	1.2	A (DC)
		2	A (Pulse) *1
Collector power dissipation	P_C	2	W
		0.3	W *2
Junction temperature	T_J	150	$^{\circ}C$
Storage temperature	T_{stg}	-55~150	$^{\circ}C$

*1 Single pulse $P_w=100ms$

*2 On 40 x 40 x 0.7 mm ceramic board.

General Purpose Transistor (50V, 0.15A)

2SD2351 / 2SD2226K / 2SD2227S

●Features

- 1) High DC current gain.
- 2) High emitter-base voltage. ($V_{CE0}=12V$ Min.)
- 3) Low $V_{CE(sat)}$. (Typ. 0.3V at $I_C/I_E=50/5mA$)

●Packaging specifications and h_{FE}

Type	2SD2351	2SD2226K	2SD2227S
Package	UMT3	SMT3	SPT
h_{FE}	VW	VW	W
Marking	BJ *	BJ *	—
Code	T106	T146	TP
Basic ordering unit (pieces)	3000	3000	5000

* Denotes h_{FE}

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

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	BV_{CBO}	60	—	—	V	$I_C=10\mu A$
Collector-emitter breakdown voltage	BV_{CEO}	50	—	—	V	$I_C=1mA$
Emitter-base breakdown voltage	BV_{EBO}	12	—	—	V	$I_E=10\mu A$
Collector cutoff current	I_{CBO}	—	—	0.3	μA	$V_{CB}=50V$
Emitter cutoff current	I_{EBO}	—	—	0.3	μA	$V_{EB}=12V$
Collector-emitter saturation voltage	$V_{CE(sat)}$	—	—	0.3	V	$I_C/I_E=50mA/5mA$ *
DC current transfer ratio	h_{FE}	560	—	2700	—	$V_{CE}/I_C=5V/1mA$ *
Transition frequency	f_T	—	250	—	MHz	$V_{CE}=5V, I_E=-10mA, f=100MHz$ *
Output capacitance	C_{ob}	—	3.5	—	pF	$V_{CB}=5V, I_E=0A, f=1MHz$

* Measured using pulse current.

(94S-374-D215)

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

Parameter	Symbol	Limits	Unit
Collector-base voltage	V_{CBO}	60	V
Collector-emitter voltage	V_{CEO}	50	V
Emitter-base voltage	V_{EBO}	12	V
Collector current	I_C	0.15	A (DC)
		0.2	A (Pulse) *
Collector power dissipation	P_C	0.2	W
		0.3	W
Junction temperature	T_J	150	$^{\circ}C$
Storage temperature	T_{stg}	-55~150	$^{\circ}C$

* Single pulse $P_w=100ms$

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