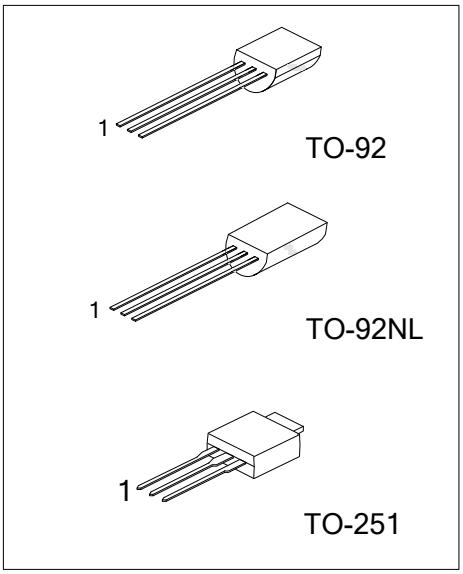
2SD1857

NPN EPITAXIAL SILICON TRANSISTOR

POWER TRANSISTOR



■ FEATURES

* High breakdown voltage.(BV_{CEO}=120V)
* Low collector output capacitance.(Typ.20pF at V_{CB}=10V)
* High transition frequency.(f_T=80MHz)

■ ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
2SD1857L-x-T92-B	2SD1857G-x-T92-B	TO-92	E	C	B	Tape Box
2SD1857L-x-T92-K	2SD1857G-x-T92-K	TO-92	E	C	B	Bulk
2SD1857L-x- T92-R	2SD1857G-x- T92-R	TO-92	E	C	B	Tape Reel
2SD1857L-x-T9N-B	2SD1857G-x-T9N-B	TO-92NL	E	C	B	Tape Box
2SD1857L-x-T9N-K	2SD1857G-x-T9N-K	TO-92NL	E	C	B	Bulk
2SD1857L-x-TM3-T	2SD1857G-x-TM3-T	TO-251	E	C	B	Tube

Note: Pin Assignment: E: EMITTER C: COLLECTOR B: BASE

2SD1857L-x-T92-B

(1)Packing Type
(2)Package Type
(3)Rank
(4)Lead Free

(1) B: Tape Box, K: Bulk, T: Tape Reel

(2) T92:TO-92, T9N: TO-92NL, TM3: TO-251

(3) x: refer to Classification of h_{FE}

(4) G: Halogen Free, L: Lead Free

■ ABSOLUTE MAXIMUM RATING (T_A=25℃, unless otherwise specified)

PARAMETER		SYMBOL	RATINGS	UNIT
Collector-Base Voltage		V_{CBO}	120	V
Collector-Emitter Voltage		V_{CEO}	120	V
Emitter-Base Voltage		V_{EBO}	5	V
Collector Power Dissipation	TO-92NL	P_C	0.5	W
	TO-92		1	
	TO-251		2	
Collector Current		I_C	2	A
Collector Current		I_{CP}	3	A
Junction Temperature		T_J	+150	℃
Storage Temperature		T_{STG}	-40 ~ +150	℃

Note: 1. Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.

■ ELECTRICAL CHARACTERISTICS (T_A=25℃)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-Base Breakdown Voltage	BV_{CBO}	I_C=50μA	120			V
Collector-Emitter Breakdown Voltage	BV_{CEO}	I_C=1mA	120			V
Emitter-Base Breakdown Voltage	BV_{EBO}	I_E=50μA	5			V
Collector Cut-Off Current	I_{CBO}	V_{CB}=100V			1	μA
Emitter Cut-Off Current	I_{EBO}	V_{EB}=4V			1	μA
DC Current Transfer Ratio	h_{FE}	V_{CE}=5V, I_C=0.1A	82		390	
Collector-Emitter Saturation Voltage	$V_{CE(SAT)}$	I_C=/I_B=1A/0.1A (Note)			0.4	V
Transition Frequency	f_T	V_{CE}=5V, I_E= -0.1A, f=30MHz.		80		MHz
Output Capacitance	C_{OB}	V_{CB}=10V, I_E=0A, f=1MHz (Note)		20		pF

Note: Measured using pulse current.

■ CLASSIFICATION OF h_{FE}

RANK	P	Q	R
RANGE	82-180	120-270	180-390

■ TYPICAL CHARACTERISTICS