

**Type 2N2857UB**  
**Geometry 0011**  
**Polarity NPN**  
**Qual Level: JAN - JANS**

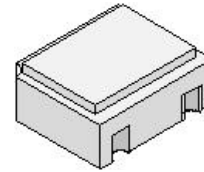
**Generic Part Number:**  
**2N2857**

**REF: MIL-PRF-19500/343**

**Features:**

[Request Quotation](#)

- Low power, ultra-high frequency transistor.
- Housed in a [cersot](#) case.
- Also available in chip form using the [0011](#) chip geometry.
- The Min and Max limits shown are per [MIL-PRF-19500/343](#) which Semicoa meets in all cases.



Cersot

**Maximum Ratings**

$T_C = 25^{\circ}\text{C}$  unless otherwise specified

Rating	Symbol	Rating	Unit
Collector-Emitter Voltage	$V_{CEO}$	15	V
Collector-Base Voltage	$V_{CBO}$	30	V
Emitter-Base Voltage	$V_{EBO}$	3.0	V
Collector Current, Continuous	$I_C$	40	mA
Operating Junction Temperature	$T_J$	-65 to +200	$^{\circ}\text{C}$
Storage Temperature	$T_{STG}$	-65 to +200	$^{\circ}\text{C}$

### Electrical Characteristics

$T_C = 25^\circ\text{C}$  unless otherwise specified

OFF Characteristics	Symbol	Min	Max	Unit
Collector-Base Breakdown Voltage $I_C = 1 \mu\text{A}$	$V_{(BR)CBO}$	30	---	V
Collector-Emitter Breakdown Voltage $I_C = 3 \text{ mA}$	$V_{(BR)CEO}$	15	---	V
Emitter-Base Breakdown Voltage $I_E = 10 \mu\text{A}$	$V_{(BR)EBO}$	3.0	---	V
Collector-Emitter Cutoff Current $V_{CB} = 15 \text{ V}$	$I_{CES}$	---	100	nA
Collector-Base Cutoff Current $V_{CB} = 15 \text{ V}$	$I_{CBO}$	---	10	nA

ON Characteristics	Symbol	Min	Max	Unit
<b>Collector-Emitter Saturation Voltage</b> $I_C = 10 \text{ mA}, I_B = 1 \text{ mA}$	$V_{CE(sat)}$	---	0.4	V dc
<b>Base-Emitter Saturation Voltage</b> $I_C = 150 \text{ mA}, I_B = 1 \text{ mA}$	$V_{BE(sat)}$	---	1.0	V dc

Small Signal Characteristics	Symbol	Min	Max	Unit
<del>Forward Current Transfer Ratio</del> $I_C = 3 \text{ mA}, V_{CE} = 1 \text{ V}$	$h_{FE}$	30	150	---
<del>DC Current Transfer Ratio</del> $I_{CCE} = 2 \text{ mA}, V_{CE}$ base lead floating	$h_{FE}$	50	220	---
<i>Magnitude of Common Emitter Short Circuit</i> Forward Current Transfer Ratio $V_{CE} = 6 \text{ V}, I_C = 5 \text{ mA}, f = 100 \text{ MHz}$	$ h_{FE} $	10	21	---
Small Signal Power Gain	$G_E$	15	2	dB
<del>Collector-Base Feedback Capacitance</del> $V_{CB} = 10 \text{ V}, I_E = 2 \text{ mA}, 100 \text{ kHz} < f < 1 \text{ MHz}$	$C_{CB}$	---	1.0	pF
<del>Collector-Base Time Constant</del> $V_{CE} = 6 \text{ V}, I_E = 2 \text{ mA}, f = 31.9 \text{ MHz}$	$r_b C_C$	4.0	15	ps
<i>Noise Figure</i> $V_{CE} = 6 \text{ V}, I_C = 1.5 \text{ mA}, r_g = 50 \text{ ohms}, 450 \text{ MHz}$	NF	---	4.5	dB