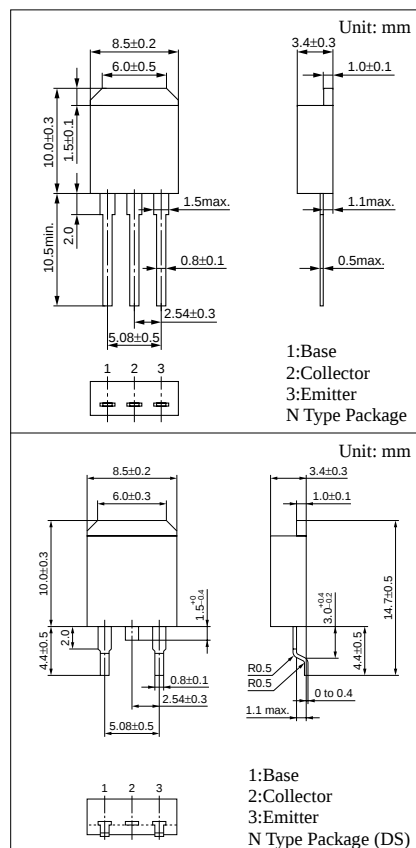


Silicon NPN epitaxial planar type

Complementary to 2SB934

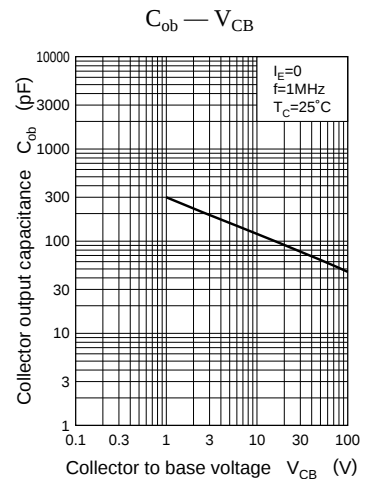
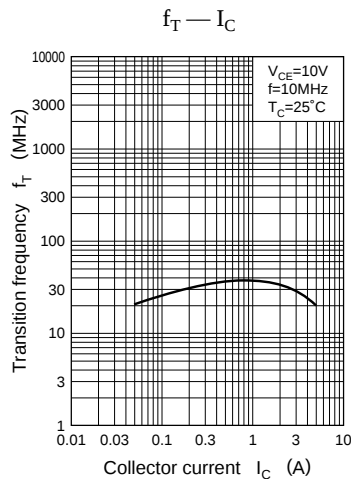
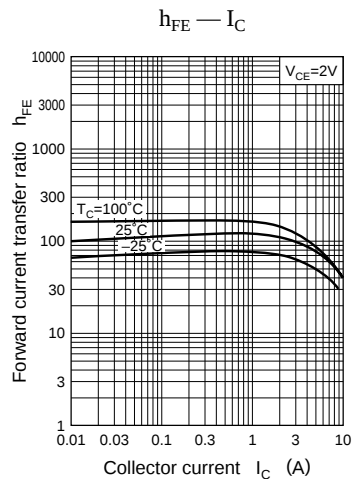
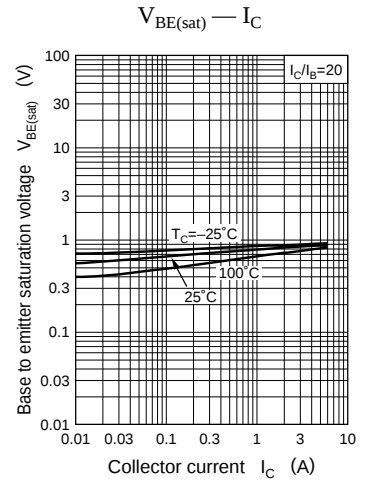
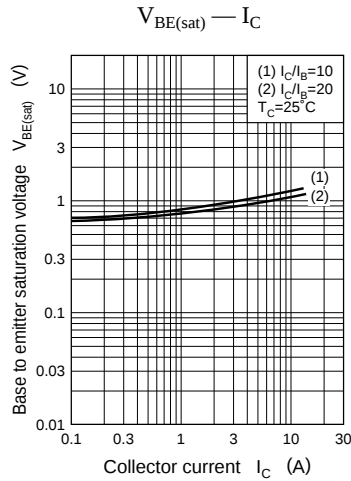
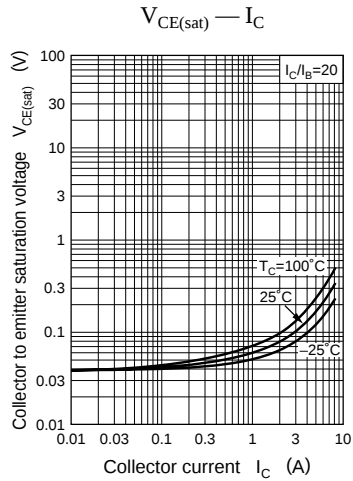
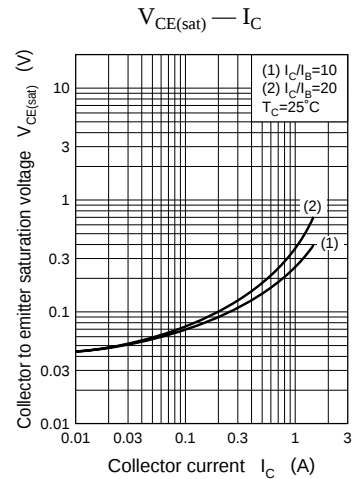
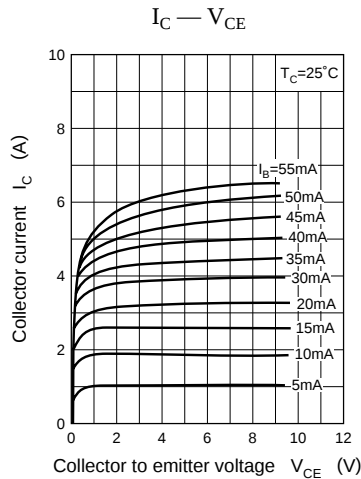
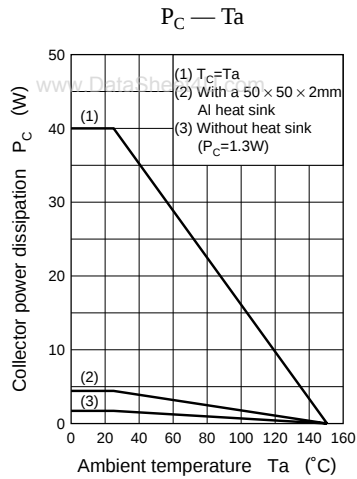
- Low collector to emitter saturation voltage $V_{CE(sat)}$
- Satisfactory linearity of forward current transfer ratio h_{FE}
- Large collector current I_C
- N type package enabling direct soldering of the radiating fin to the printed circuit board, etc. of small electronic equipment.

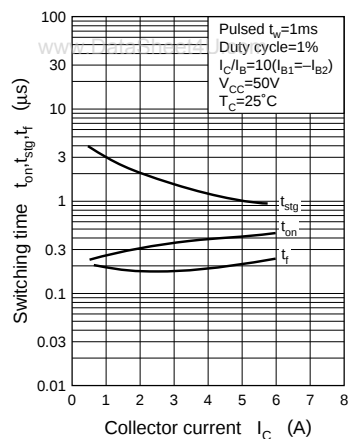
Parameter		Symbol	Ratings	Unit
Collector to base voltage	2SD1257	V_{CBO}	130	V
	2SD1257A		150	
Collector to emitter voltage	2SD1257	V_{CEO}	80	V
	2SD1257A		100	
Emitter to base voltage		V_{EBO}	7	V
Peak collector current		I_{CP}	15	A
Collector current		I_C	7	A
Collector power dissipation	$T_C=25^{\circ}\text{C}$	P_C	40	W
	$T_a=25^{\circ}\text{C}$		1.3	
Junction temperature		T_j	150	$^{\circ}\text{C}$
Storage temperature		T_{stg}	-55 to +150	$^{\circ}\text{C}$



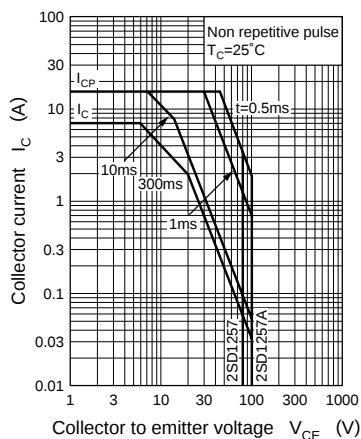
Parameter		Symbol	Conditions	min	typ	max	Unit
Collector cutoff current		I_{CBO}	$V_{CB} = 100V, I_E = 0$			10	μA
Emitter cutoff current		I_{EBO}	$V_{EB} = 5V, I_C = 0$			50	μA
Collector to emitter voltage	2SD1257	V_{CEO}	$I_C = 10mA, I_B = 0$	80			V
	2SD1257A			100			
Forward current transfer ratio		h_{FE1}	$V_{CE} = 2V, I_C = 0.1A$	45			
		h_{FE2}^*	$V_{CE} = 2V, I_C = 3A$	60		260	
Collector to emitter saturation voltage		$V_{CE(sat)}$	$I_C = 5A, I_B = 0.25A$			0.5	V
Base to emitter saturation voltage		$V_{BE(sat)}$	$I_C = 5A, I_B = 0.25A$			1.5	V
Transition frequency		f_T	$V_{CE} = 10V, I_C = 0.5A, f = 10MHz$		30		MHz
Turn-on time		t_{on}	$I_C = 3A, I_{B1} = 0.3A, I_{B2} = -0.3A, V_{CC} = 50V$		0.5		μs
Storage time		t_{stg}			1.5		μs
Fall time		t_f			0.1		μs

Rank	R	Q	P
h_{FE2}	60 to 120	90 to 180	130 to 260



$t_{on}, t_{stg}, t_f - I_C$ 

Area of safe operation (ASO)

 $R_{th(t)} - t$ 