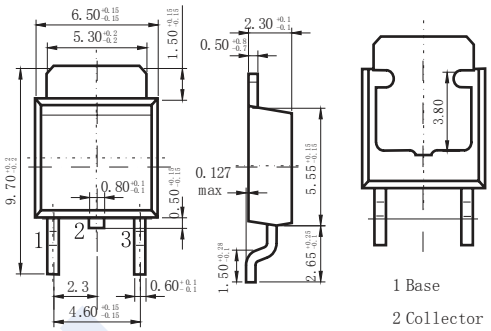
NPN Transistors

2SD1250

TO-252

Unit: mm



■ Features

- High forward current transfer ratio hFE which has satisfactory linearity
- Low collector to emitter saturation voltage $V_{CE(sat)}$
- Complementary to 2SB928

■ Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CBO}	200	V
Collector - Emitter Voltage	V_{CEO}	150	
Emitter - Base Voltage	V_{EBO}	6	
Collector Current - Continuous	I_C	2	A
Collector Current - Pulse	I_{CP}	3	
Collector Power Dissipation Tc = 25℃	P_C	30	W
Ta = 25℃		1.3	
Junction Temperature	T_J	150	℃
Storage Temperature Range	T_{stg}	-55 to 150	

■ Electrical Characteristics Ta = 25℃

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V_{CBO}	I_C= 500 μA, I_E= 0	200			V
Collector- emitter breakdown voltage	V_{CEO}	I_C= 5 mA, I_B= 0	150			
Emitter - base breakdown voltage	V_{EBO}	I_E= 500 μ A, I_C= 0	6			
Collector-base cut-off current	I_{CBO}	V_{CB}= 200 V , I_E= 0			50	uA
Emitter cut-off current	I_{EBO}	V_{EB}= 5V , I_C=0			50	
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=500 mA, I_B=50mA			1	V
Base - emitter saturation voltage	$V_{BE(sat)}$	I_C= 500 mA, I_B= 50mA			1.2	
Base - emitte voltage	V_{BE}	V_{CE}= 10V, I_C= 400mA			1	
DC current gain	$h_{FE(1)}$	V_{CE}= 10V, I_C= 150mA	60		240	
	$h_{FE(2)}$	V_{CE}= 10V, I_C= 400mA	50			
Transition frequency	f_T	V_{CE}= 10V, I_C= 500mA,f=1MHz		20		MHz

■ Classification of $h_{fe(1)}$

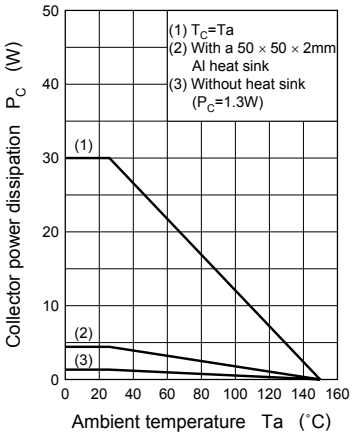
Type	2SD1250-Q	2SD1250-P
Range	60-140	100-240

NPN Transistors

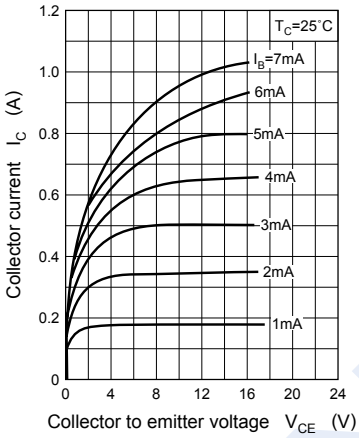
2SD1250

■ Typical Characterisitics

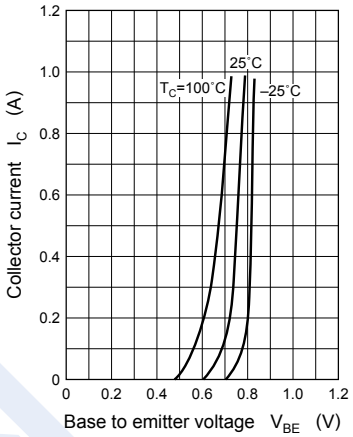
P_C — Ta



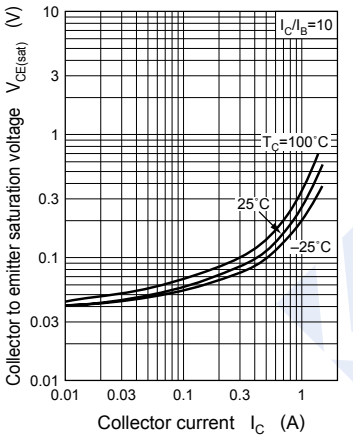
I_C — V_{CE}



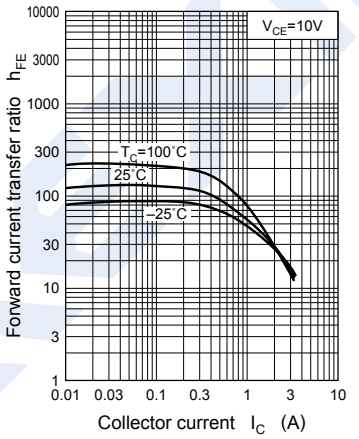
I_C — V_{BE}



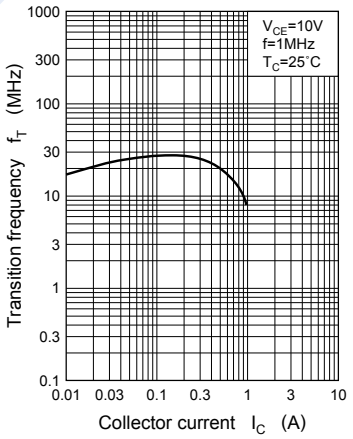
$V_{CE(sat)}$ — I_C



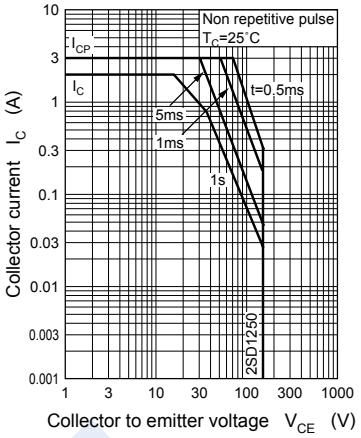
h_{FE} — I_C



f_T — I_C



Area of safe operation (ASO)



$R_{th(t)}$ — t

