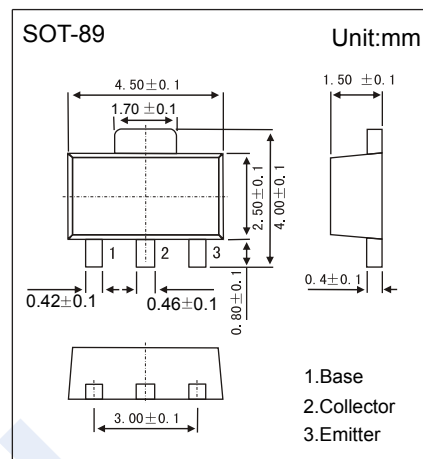


NPN Transistors

2SD1421

■ Features

- Collector Current Capability $I_C=1.5A$
- Collector Emitter Voltage $V_{CEO}=160V$
- Low frequency power amplifier

■ Absolute Maximum Ratings $T_a = 25^\circ C$

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CBO}	180	V
Collector - Emitter Voltage	V_{CEO}	160	
Emitter - Base Voltage	V_{EBO}	5	
Collector Current - Continuous	I_C	1.5	A
Collector Current - Pulse (Note.1)	I_{CP}	3	
Collector Power Dissipation	P_C	1	W
Junction Temperature	T_J	150	$^\circ C$
Storage Temperature Range	T_{stg}	-55 to 150	

Note.1: $P_w \leq 10$ ms, Duty cycle $\leq 20\%$

■ Electrical Characteristics $T_a = 25^\circ C$

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V_{CBO}	$I_C = 1$ mA, $I_E = 0$	180			V
Collector- emitter breakdown voltage	V_{CEO}	$I_C = 10$ mA, $R_{BE} = \infty$	160			
Emitter - base breakdown voltage	V_{EBO}	$I_E = 1$ mA, $I_C = 0$	5			
Collector-base cut-off current	I_{CBO}	$V_{CB} = 160$ V, $I_E = 0$			10	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = 5$ V, $I_C = 0$			0.1	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 500$ mA, $I_B = 50$ mA			1	V
Base - emitter saturation voltage	$V_{BE(sat)}$	$I_C = 500$ mA, $I_B = 50$ mA			1.2	
Base to emitter voltage	V_{BE}	$V_{CE} = 5$ V, $I_C = 150$ mA			0.9	
DC current gain	$h_{FE(1)}$	$V_{CE} = 5$ V, $I_C = 150$ mA	60		200	
	$h_{FE(2)}$	$V_{CE} = 5$ V, $I_C = 500$ mA	30			
Collector output capacitance	C_{ob}	$V_{CB} = 5$ V, $I_E = 0$, $f = 1$ MHz		40		pF
Transition frequency	f_T	$V_{CE} = 5$ V, $I_C = 200$ mA		170		MHz

■ Classification of $h_{FE(1)}$

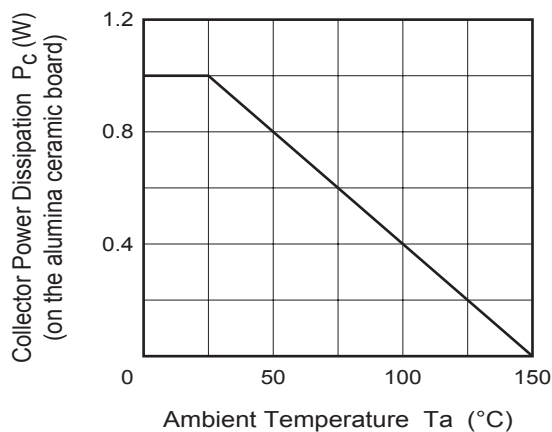
Type	2SD1421-D	2SD1421-E
Range	60-120	100-200
Marking	ED	EE

NPN Transistors

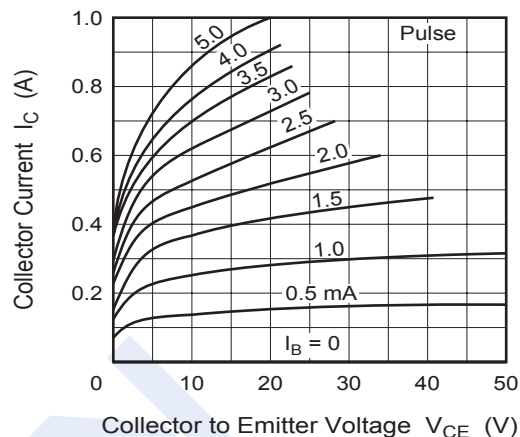
2SD1421

■ Typical Characteristics

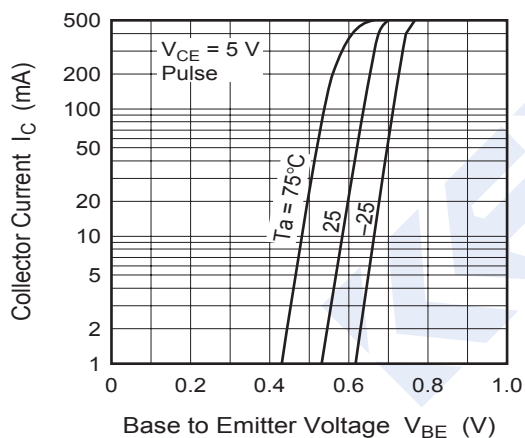
Maximum Collector Dissipation Curve



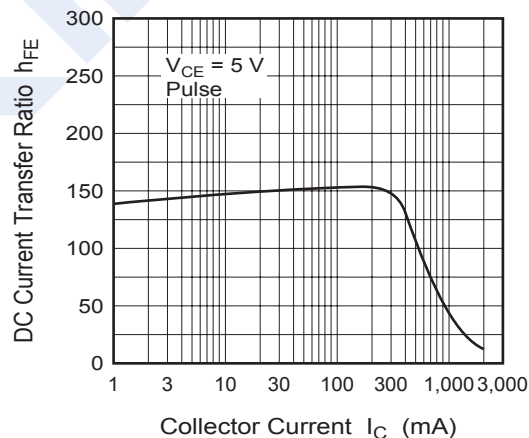
Typical Output Characteristics



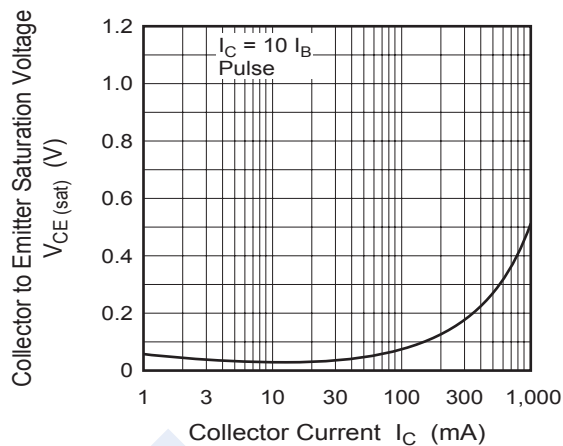
Typical Transfer Characteristics



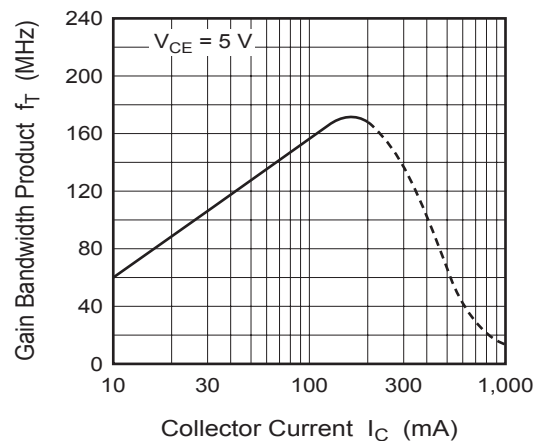
DC Current Transfer Ratio vs. Collector Current



Collector to Emitter Saturation Voltage vs. Collector Current



Gain Bandwidth Product vs. Collector Current



NPN Transistors

2SD1421

■ Typical Characteristics

