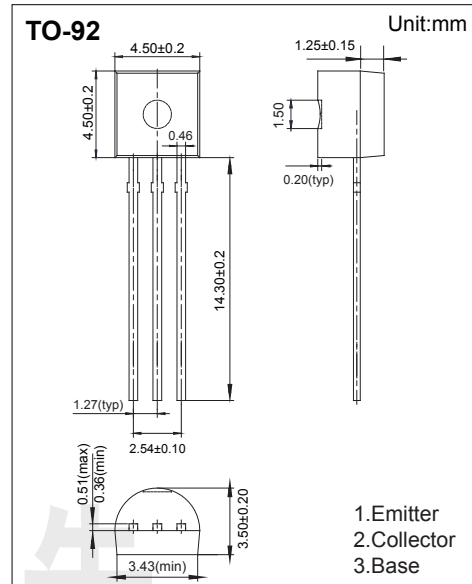


NPN Transistors D965

■ Features

- Audio Amplifier
- Flash Unit of Camera
- Switching Circuit



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

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CB0}	42	V
Collector - Emitter Voltage	V_{CE0}	22	
Emitter - Base Voltage	V_{EB0}	6	
Collector Current - Continuous	I_C	5	A
Collector Power Dissipation	P_C	750	mW
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature	T_{stg}	-55 to 150	

■ Electrical Characteristics $T_a = 25^\circ\text{C}$

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V_{CB0}	$I_C = 100 \mu\text{A}, I_E = 0$	42			V
Collector- emitter breakdown voltage	V_{CE0}	$I_C = 1 \text{ mA}, I_B = 0$	22			
Emitter - base breakdown voltage	V_{EB0}	$I_E = 10 \mu\text{A}, I_C = 0$	6			
Collector cut-off current	I_{CBO}	$V_{CB} = 30 \text{ V}, I_E = 0$			0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = 6 \text{ V}, I_C = 0$			0.1	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 3 \text{ A}, I_B = 100 \text{ mA}$			0.35	V
Base - emitter saturation voltage	$V_{BE(sat)}$	$I_C = 3 \text{ A}, I_B = 100 \text{ mA}$			1.2	
DC current gain	$h_{FE(1)}$	$V_{CE} = 2 \text{ V}, I_C = 0.15 \text{ mA}$	150			
	$h_{FE(2)}$	$V_{CE} = 2 \text{ V}, I_C = 2 \text{ A}$	340		2000	
	$h_{FE(3)}$	$V_{CE} = 10 \text{ V}, I_C = 30 \text{ mA}$	150			
Transition frequency	f_T	$V_{CE} = 6 \text{ V}, I_C = 50 \text{ mA}, f = 30 \text{ MHz}$		150		MHz

■ Classification of $h_{FE(2)}$

Rank	R	T	V
Range	340-600	560-950	900-2000

Transistor

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Typical Characteristics

