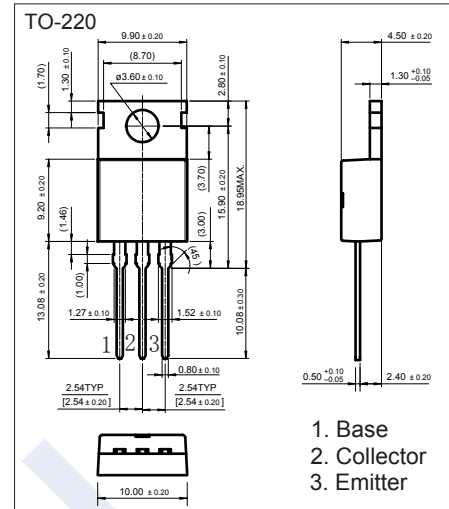


NPN Transistors

KTC2018

■ Features

- Low Collector Emitter Saturation Voltage.
- High Breakdown Voltage
- Complementary to KTA1038



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

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CB0}	100	V
Collector - Emitter Voltage	V_{CE0}	100	
Emitter - Base Voltage	V_{EB0}	5	
Collector Current - Continuous	I_C	5	A
Base Current	I_B	0.5	
Collector Power Dissipation $T_c = 25^\circ\text{C}$	P_C	40	W
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55 to 150	

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V_{CB0}	$I_C = 10\text{ mA}, I_E = 0$	100			V
Collector- emitter breakdown voltage	V_{CE0}	$I_C = 50\text{ mA}, I_B = 0$	100			
Emitter - base breakdown voltage	V_{EB0}	$I_E = 10\text{ mA}, I_C = 0$	5			
Collector-base cut-off current	I_{CB0}	$V_{CB} = 100\text{ V}, I_E = 0$			1	μA
Emitter cut-off current	I_{EB0}	$V_{EB} = 5\text{ V}, I_C = 0$			1	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 4\text{ A}, I_B = 400\text{ mA}$			2	V
Base - emitter saturation voltage	$V_{BE(sat)}$	$I_C = 4\text{ A}, I_B = 400\text{ mA}$			1.2	
Base - emitter voltage	V_{BE}	$V_{CE} = 5\text{ V}, I_C = 1\text{ A}$			1.5	
DC current gain	h_{FE}	$V_{CE} = 5\text{ V}, I_C = 1\text{ A}$	70		240	
		$V_{CE} = 5\text{ V}, I_C = 4\text{ A}$	20			
Collector output capacitance	C_{ob}	$V_{CB} = 10\text{ V}, I_E = 0, f = 1\text{ MHz}$		40		pF
Transition frequency	f_T	$V_{CE} = 5\text{ V}, I_C = 1\text{ A}$		30		MHz

■ Classification of h_{FE} (1)

Type	KTC2018-O	KTC2018-Y
Range	70-140	120-240

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■ Typical Characteristics

