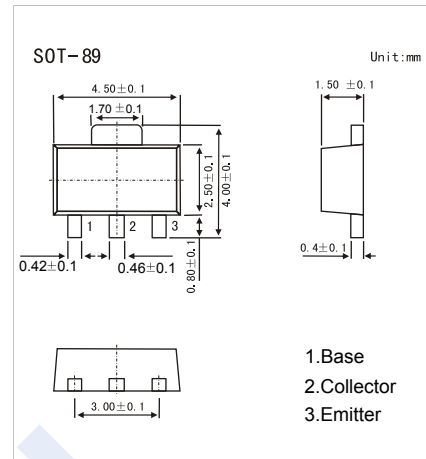


NPN Transistors

KTC4378

■ Features

- High Voltage and High f_T
- High Current
- Complementary to KTA1668

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

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CB0}	80	V
Collector - Emitter Voltage	V_{CE0}	60	
Emitter - Base Voltage	V_{EB0}	5	
Collector Current - Continuous	I_C	1	A
Collector Current - Pulse	I_{CP}	2	
Collector Power Dissipation	P_C	500	mW
		1	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}	$I_C = 100\mu\text{A}$, $I_E = 0$	80			V
Collector- emitter breakdown voltage	V_{CE0}	$I_C = 1\text{mA}$, $I_B = 0$	60			
Emitter - base breakdown voltage	V_{EB0}	$I_E = 100\mu\text{A}$, $I_C = 0$	5			
Collector-base cut-off current	I_{CBO}	$V_{CB} = 80\text{V}$, $I_E = 0$			0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = 5\text{V}$, $I_C = 0$			0.1	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 500\text{mA}$, $I_B = 50\text{mA}$			0.5	V
Base - emitter saturation voltage	$V_{BE(sat)}$	$I_C = 500\text{mA}$, $I_B = 50\text{mA}$			1.2	
DC current gain	h_{FE}	$V_{CE} = 2\text{V}$, $I_C = 50\text{mA}$	100		320	
		$V_{CE} = 2\text{V}$, $I_C = 1\text{A}$	30			
Collector output capacitance	C_{ob}	$V_{CB} = 10\text{V}$, $f = 1\text{MHz}$		12		pF
Transition frequency	f_T	$V_{CE} = 10\text{V}$, $I_C = 50\text{mA}$		150		MHz

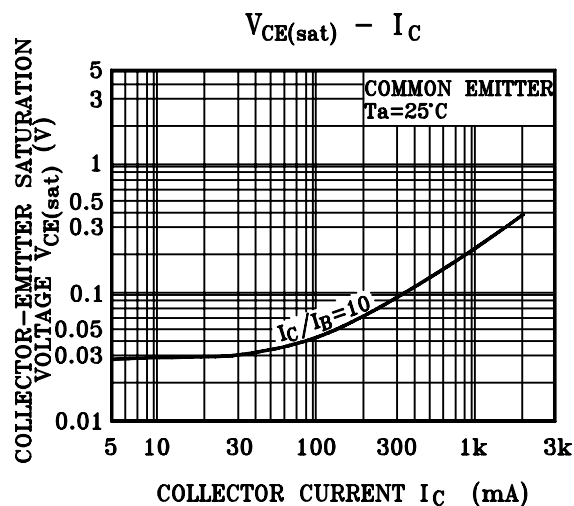
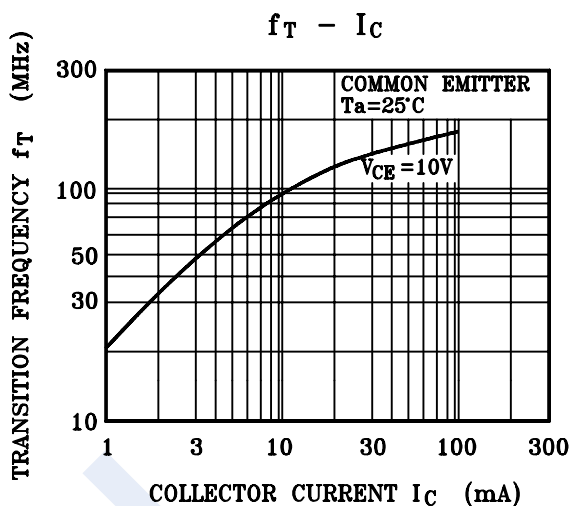
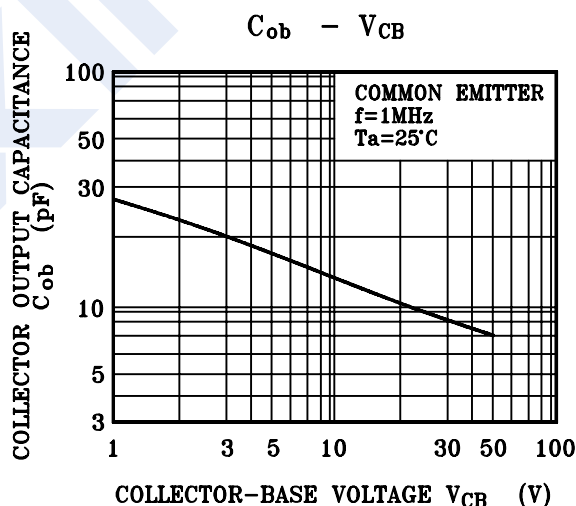
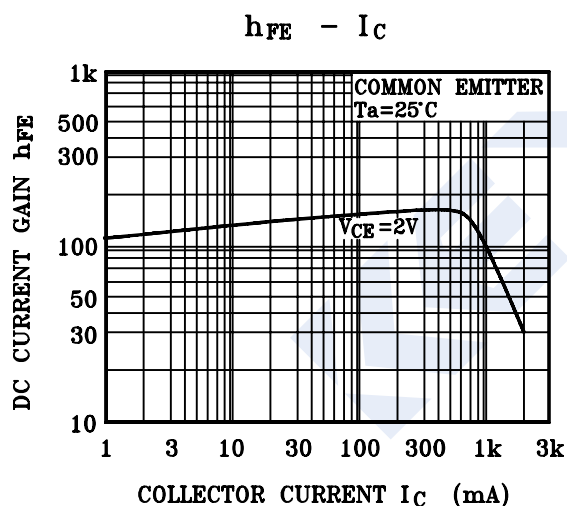
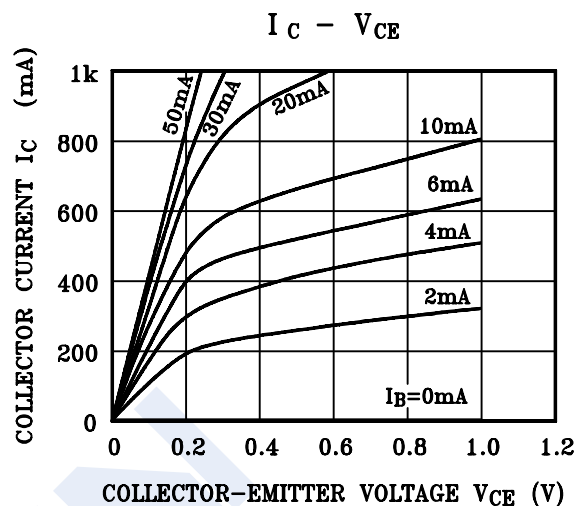
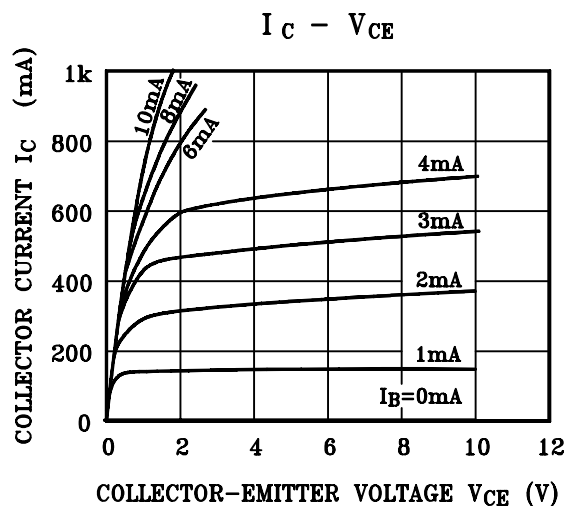
■ Classification of $h_{FE}(1)$

Type	KTC4378-Y	KTC4378-G
Range	100-200	160-320
Marking	TY	YG

NPN Transistors

KTC4378

■ Typical Characteristics



NPN Transistors

KTC4378

■ Typical Characteristics

