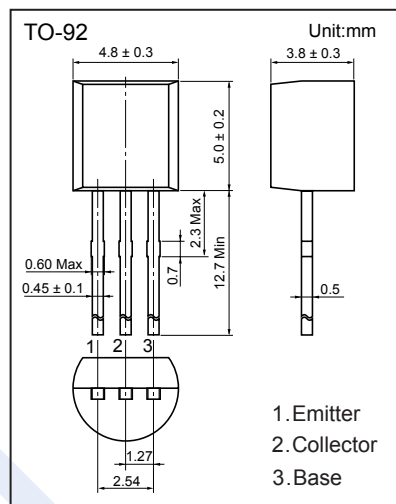


NPN Transistors

KTC3198

■ Features

- Excellent hFE Linearity
- Low Noise
- Complementary to KTA1266

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

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CB0}	60	V
Collector - Emitter Voltage	V_{CE0}	50	
Emitter - Base Voltage	V_{EB0}	5	
Collector Current - Continuous	I_C	150	mA
Base Current	I_B	50	
Collector Power Dissipation	P_C	625	mW
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}	$I_C = 100\mu\text{A}$, $I_E = 0$	60			V
Collector- emitter breakdown voltage	V_{CE0}	$I_C = 1\text{ mA}$, $I_B = 0$	50			
Emitter - base breakdown voltage	V_{EB0}	$I_E = 100\mu\text{A}$, $I_C = 0$	5			
Collector-base cut-off current	I_{CBO}	$V_{CB} = 60\text{ V}$, $I_E = 0$			0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = 5\text{ V}$, $I_C = 0$			0.1	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 100\text{ mA}$, $I_B = 10\text{ mA}$			0.25	V
Base - emitter saturation voltage	$V_{BE(sat)}$	$I_C = 100\text{ mA}$, $I_B = 10\text{ mA}$			1	
DC current gain	h_{FE}	$V_{CE} = 6\text{ V}$, $I_C = 2\text{ mA}$	70		700	
		$V_{CE} = 6\text{ V}$, $I_C = 150\text{ mA}$	25			
Base intrinsic resistance	$r_{bb'}$	$V_{CB} = 10\text{ V}$, $I_C = -1\text{ mA}$, $f = 30\text{ MHz}$		50		Ω
Noise Figure	NF	$V_{CE} = 6\text{ V}$, $I_C = 0.1\text{ mA}$, $R_g = 10\text{ K}\Omega$, $f = 3\text{ MHz}$			10	dB
Collector output capacitance	C_{ob}	$V_{CB} = 10\text{ V}$, $I_E = 0$, $f = 1\text{ MHz}$			3.5	pF
Transition frequency	f_T	$V_{CE} = 10\text{ V}$, $I_E = -1\text{ mA}$	80			MHz

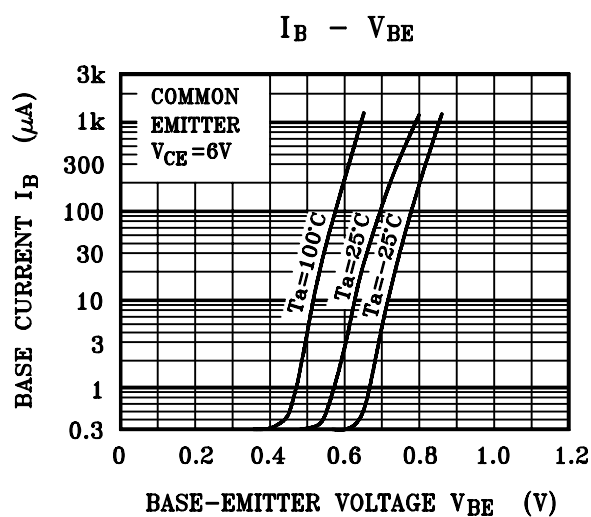
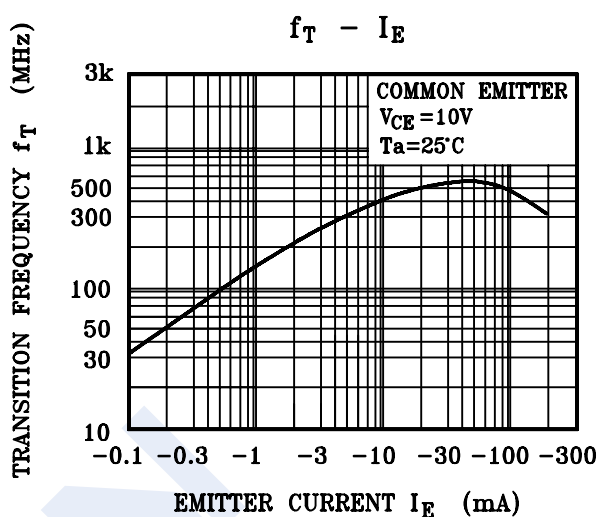
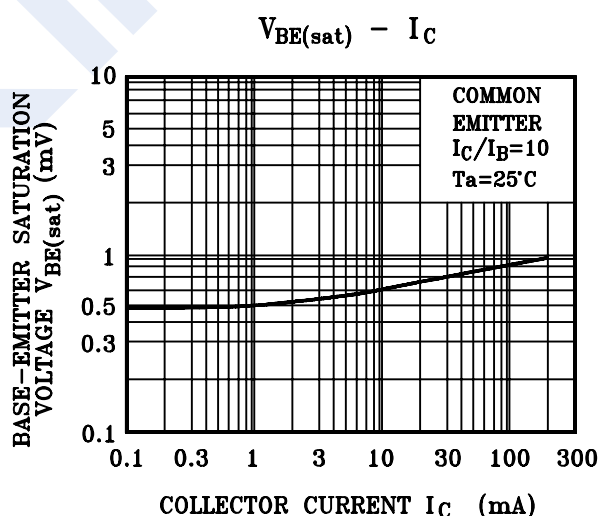
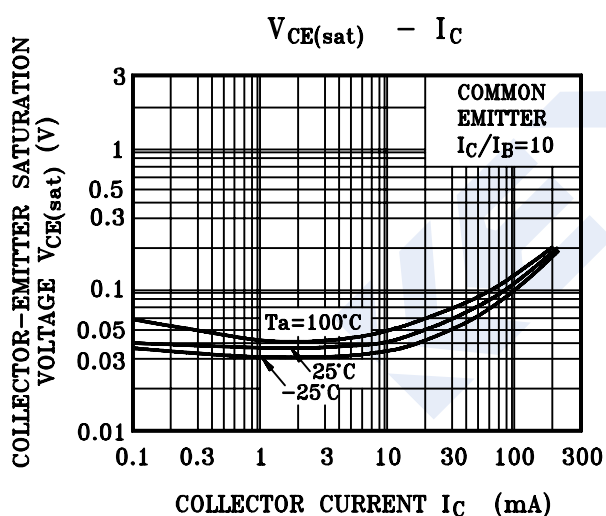
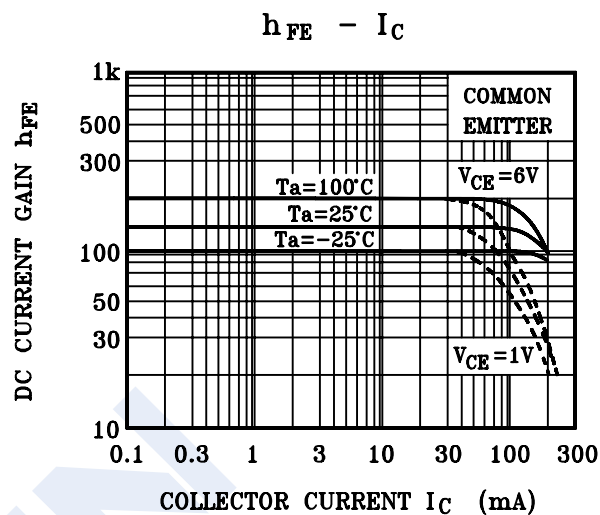
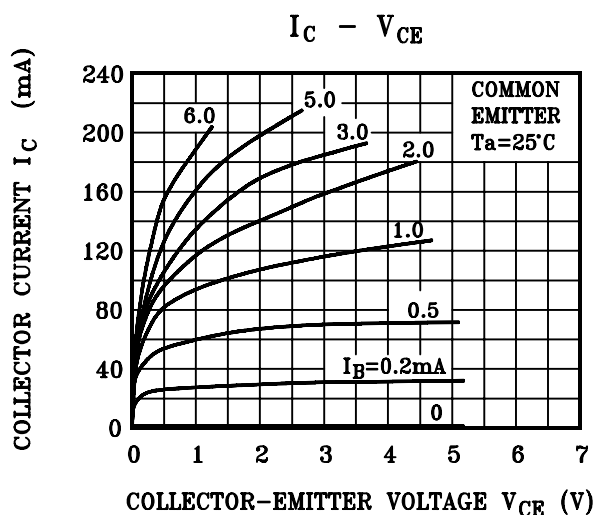
■ Classification of $h_{fe}(1)$

Type	KTC3198-O	KTC3198-Y	KTC3198-GR	KTC3198-BL
Range	70-140	120-240	200-400	300-700

NPN Transistors

KTC3198

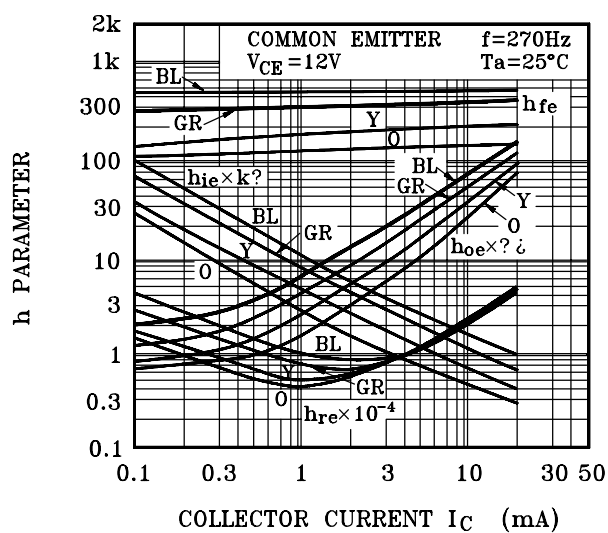
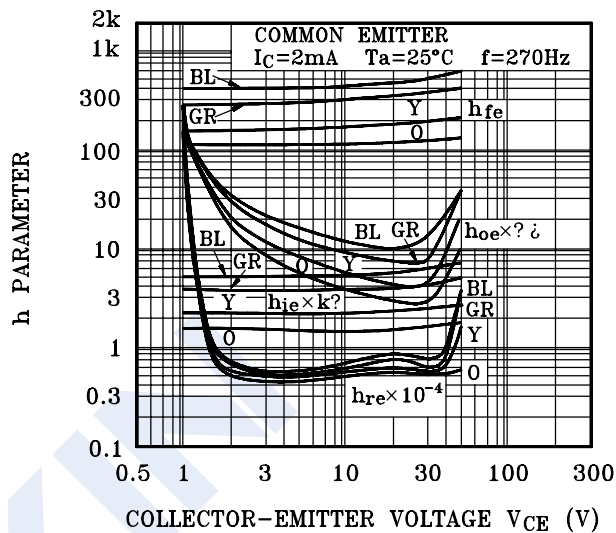
■ Typical Characteristics



NPN Transistors

KTC3198

■ Typical Characteristics

h PARAMETER - I_C h PARAMETER - V_{CE}  P_C - T_a 