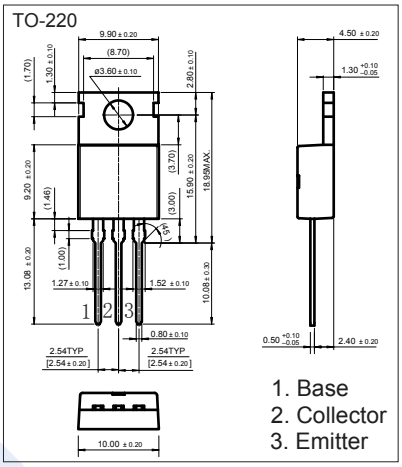
NPN Transistors

KTC2016



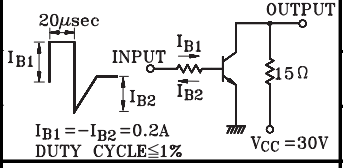
■ Features

- Low Collector Emitter Saturation Voltage.
- Complementary to KTA1036

■ Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CBO}	60	V
Collector - Emitter Voltage	V_{CEO}	60	
Emitter - Base Voltage	V_{EBO}	7	
Collector Current - Continuous	I_C	3	A
Base Current	I_B	0.5	
Collector Power Dissipation Ta = 25℃	P_C	2	W
Tc = 25℃		30	
Junction Temperature	T_J	150	℃
Storage Temperature Range	T_{stg}	-55 to 150	

■ Electrical Characteristics Ta = 25℃

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V_{CBO}	I_C= 100 μA, I_E= 0	60			V
Collector- emitter breakdown voltage	V_{CEO}	I_C= 50 mA, I_B=0	60			
Emitter - base breakdown voltage	V_{EBO}	I_E= 100 μ A, I_C= 0	7			
Collector-base cut-off current	I_{CBO}	V_{CB}= 60 V , I_E= 0			0.1	uA
Emitter cut-off current	I_{EBO}	V_{EB}= 7V , I_C=0			0.1	
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=2 A, I_B=200mA			1	V
Base - emitter saturation voltage	$V_{BE(sat)}$	I_C=2 A, I_B=200mA			1.2	
Base - emitter voltage	V_{BE}	V_{CE}= 5V, I_C= 500mA			1	
DC current gain	h_{FE}	V_{CE}= 5V, I_C= 500mA	100		300	
Turn On Time	t_{on}			0.65		us
Storage Time	t_{stg}			1.3		
Fall Time	t_f			0.65		
Collector output capacitance	C_{ob}	V_{CB}= 10V, I_E= 0,f=1MHz		35		pF
Transition frequency	f_T	V_{CE}= 5V, I_C= 500mA		30		MHz

■ Classification of h_{fe}

Type	KTC2016-Y	KTC2016-G
Range	100-200	150-300

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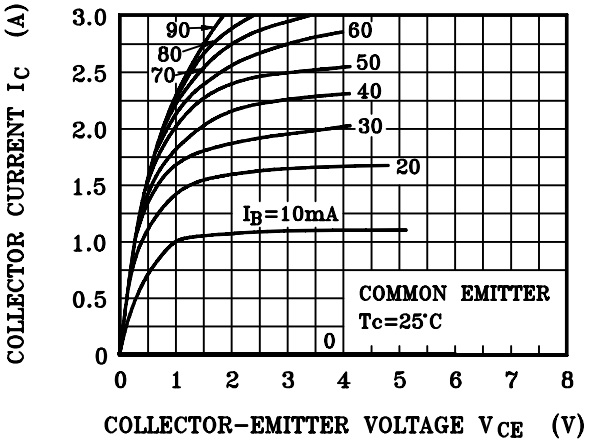
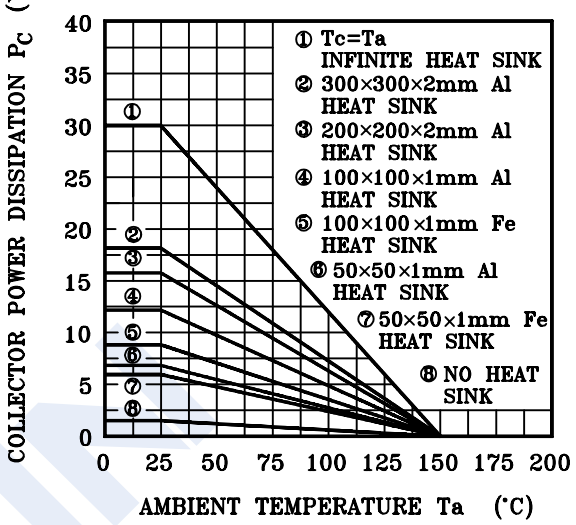
■ Typical Characterisitics

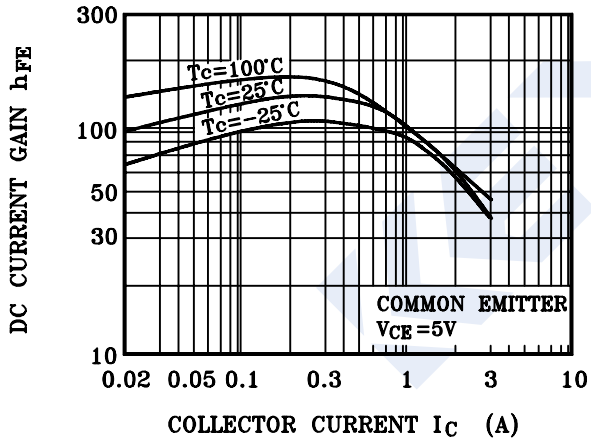
$I_C - V_{CE}$



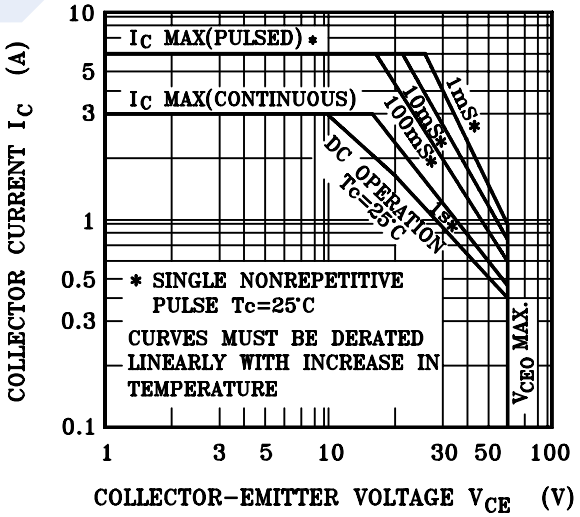
$P_C - Ta$



$h_{FE} - I_C$



SAFE OPERATING AREA



$V_{CE(sat)} - I_C$