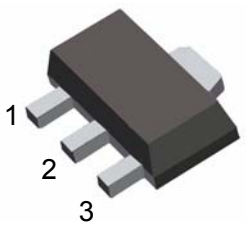
JIANGSU CHANGJIANG ELECTRONICS TECHNOLOGY CO., LTD

SOT-89 Plastic-Encapsulate Transistors

KTC4378 TRANSISTOR (NPN)

SOT-89

1. BASE
2. COLLECTOR
3. EMITTER



FEATURES

High voltage

MAXIMUM RATINGS (T_A=25℃ unless otherwise noted)

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	80	V
V_{CEO}	Collector-Emitter Voltage	60	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current -Continuous	1	A
P_C	Collector Dissipation	0.5	W
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature	-55-150	℃

ELECTRICAL CHARACTERISTICS (Tamb=25℃ unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C=1mA,I_E=0	80			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C=10mA,I_B=0	60			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=1mA,I_C=0	5			V
Collector cut-off current	I_{CBO}	V_{CB}=50V,I_E=0			0.1	μA
Emitter cut-off current	I_{EBO}	V_{EB}=4V,I_C=0			0.1	μA
DC current gain	$h_{FE(1)}$	V_{CE}=2V,I_C=0.05A	100		320	
	$h_{FE(2)}$	V_{CE}=2V,I_C=1A	30			
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=500mA,I_B=50mA			0.5	V
Base-emitter saturation voltage	$V_{BE(sat)}$	I_C=500mA,I_B=50mA			1.2	V
Transition frequency	f_T	V_{CE}=10V,I_C=50mA		150		MHz
Collector output capacitance	C_{ob}	V_{CB}=10V,I_E=0,f=1MHz		12		pF

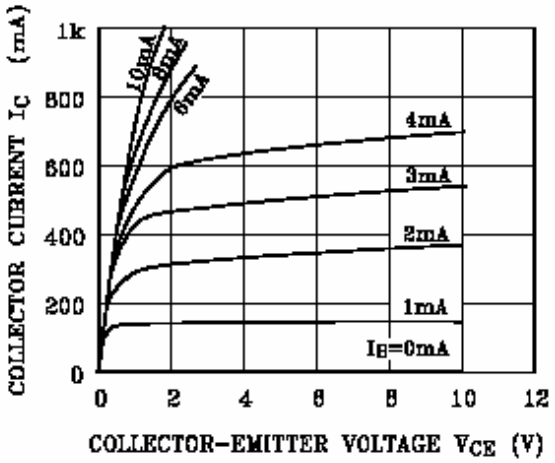
CLASSIFICATION OF $h_{FE(1)}$

Rank	Y	GR
Range	100-200	160-320
Marking	TY	TGR

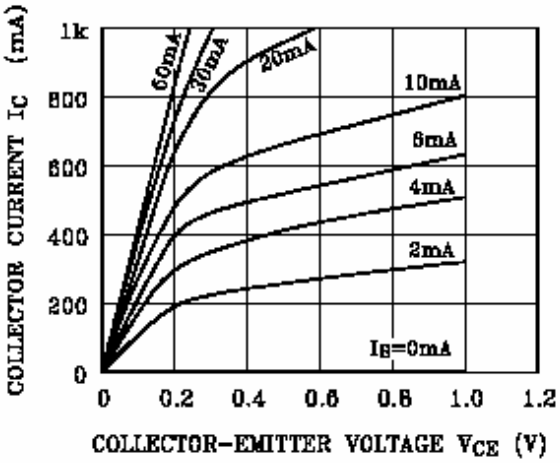
Typical Characteristics

KTC4378

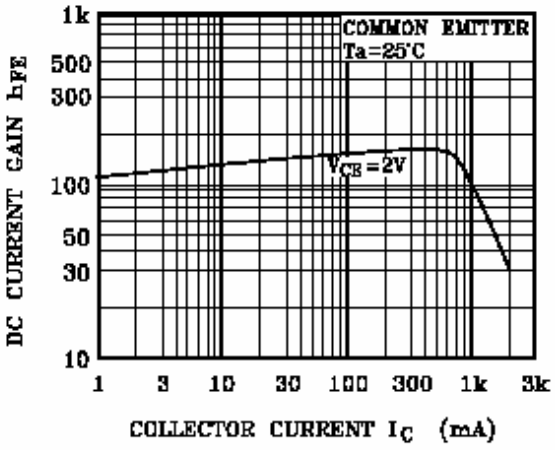
$I_C - V_{CE}$



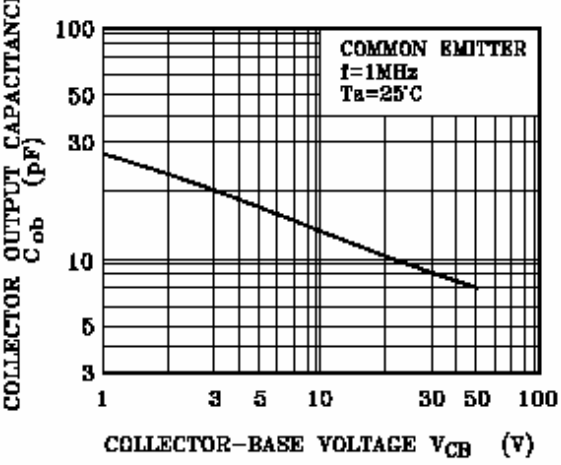
$I_C - V_{CE}$



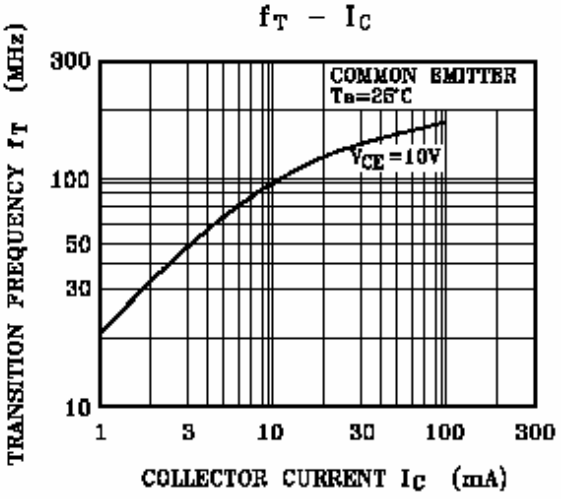
$h_{FE} - I_C$



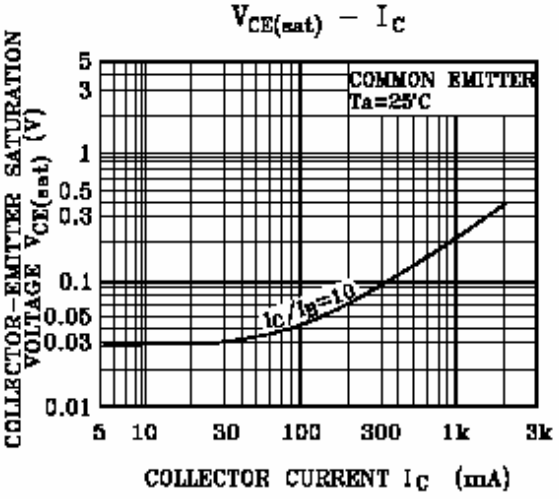
$C_{ob} - V_{CB}$



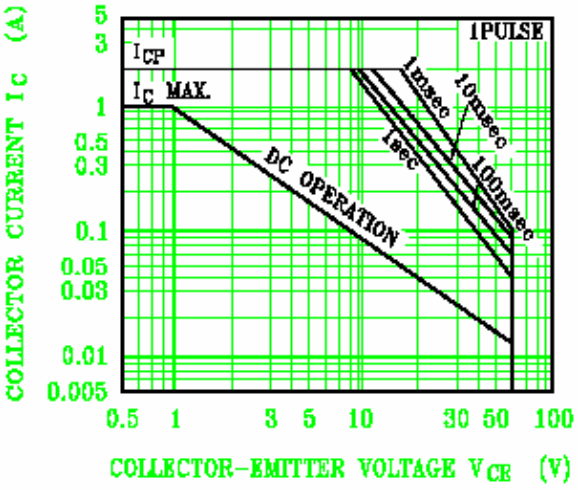
$f_T - I_C$



$V_{CE(sat)} - I_C$



SAFE OPERATING AREA



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