

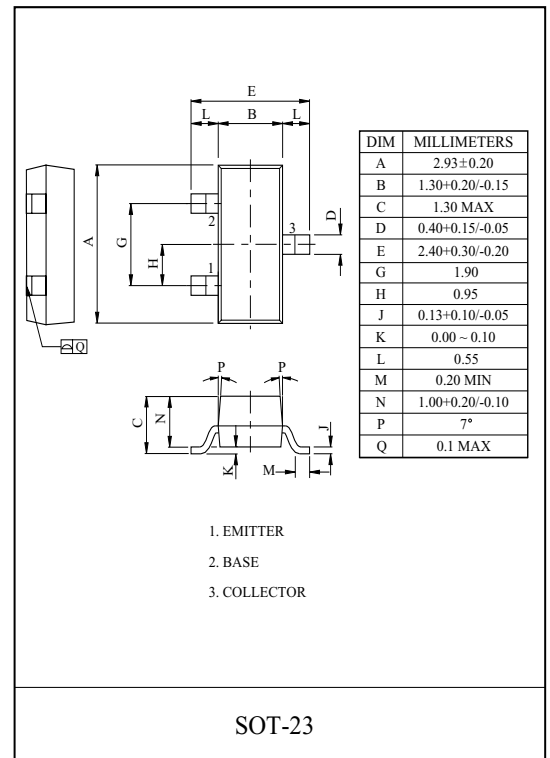
**GENERAL PURPOSE APPLICATION.  
SWITCHING APPLICATION.**

**FEATURES**

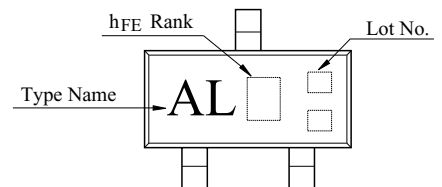
- Excellent  $h_{FE}$  Linearity  
:  $h_{FE}(0.1mA)/h_{FE}(2mA)=0.95(Typ.)$ .
- High  $h_{FE}$  :  $h_{FE}=70 \sim 700$ .
- Low Noise :  $NF=1dB(Typ.)$ ,  $10dB(Max.)$ .
- Complementary to KTA1504S.
- **Suffix U Qualified to AEC-Q101 for Automotive**  
: Automotive and standard product are electrically and thermally the same, except where specified.  
ex) KTC3875S-Y-RTK/PU, KTC3875S-Y-RTK/HU

**MAXIMUM RATING (Ta=25 °C)**

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	$V_{CBO}$	60	V
Collector-Emitter Voltage	$V_{CEO}$	50	V
Emitter-Base Voltage	$V_{EBO}$	5	V
Collector Current	$I_C$	150	mA
Base Current	$I_B$	30	mA
Collector Power Dissipation	$P_C$	150	mW
Junction Temperature	$T_j$	150	
Storage Temperature Range	$T_{stg}$	-55 ~ 150	



**Marking**



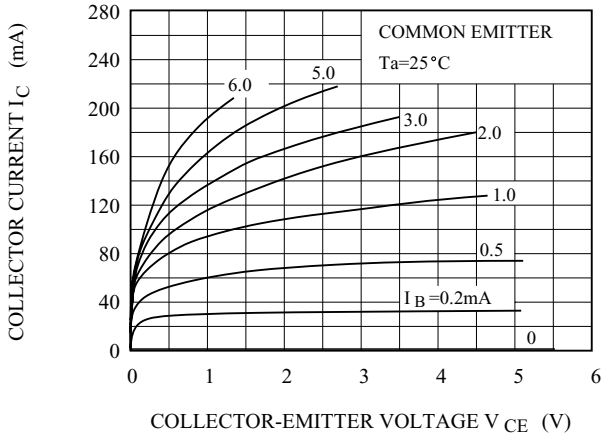
**ELECTRICAL CHARACTERISTICS (Ta=25 °C)**

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	$I_{CBO}$	$V_{CB}=60V, I_E=0$	-	-	0.1	$\mu A$
Emitter Cut-off Current	$I_{EBO}$	$V_{EB}=5V, I_C=0$	-	-	0.1	$\mu A$
DC Current Gain	$h_{FE}(Note)$	$V_{CE}=6V, I_C=2mA$	70	-	700	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=100mA, I_B=10mA$	-	0.1	0.25	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=100mA, I_B=10mA$	-	0.86	1.0	V
Transition Frequency	$f_T$	$V_{CE}=10V, I_C=1mA$	80	-	-	MHz
Collector Output Capacitance	$C_{ob}$	$V_{CB}=10V, I_E=0, f=1MHz$	-	2.0	3.5	pF
Noise Figure	NF	$V_{CE}=6V, I_C=0.1mA$ $f=1kHz, R_g=10k$	-	1.0	10	dB

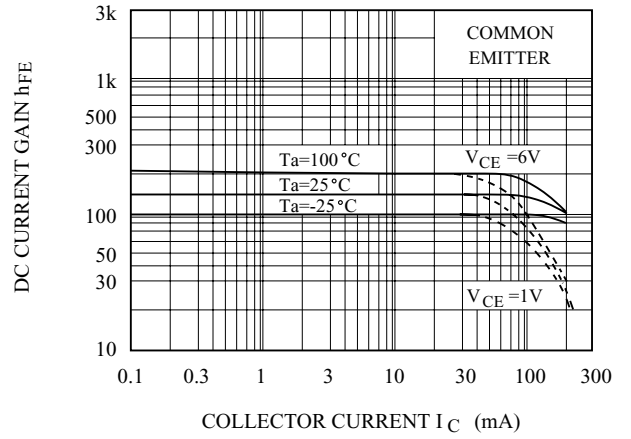
Note :  $h_{FE}$  Classification O:70 140, Y:120 240, GR(G):200 400, BL(L):350 700

# KTC3875S

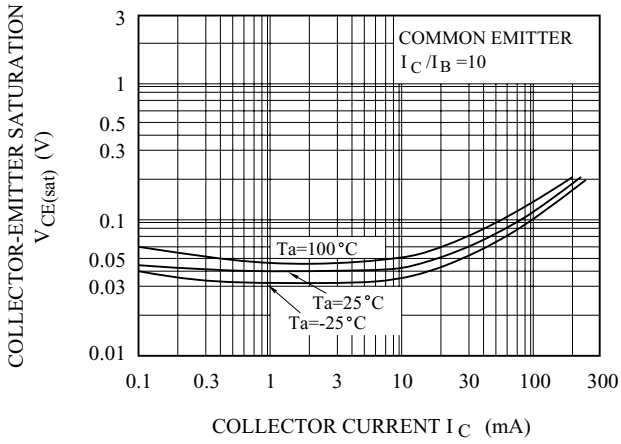
$I_C - V_{CE}$



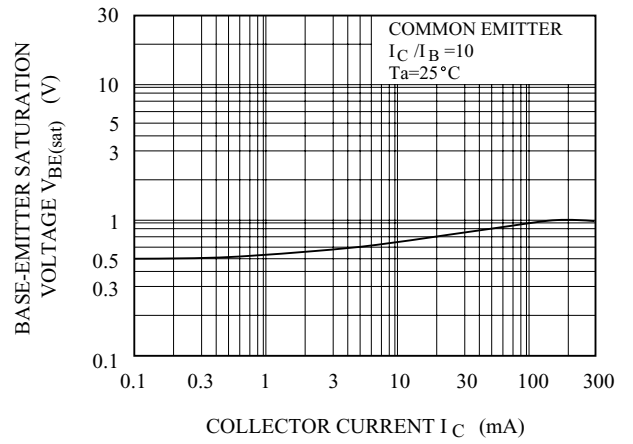
$h_{FE} - I_C$



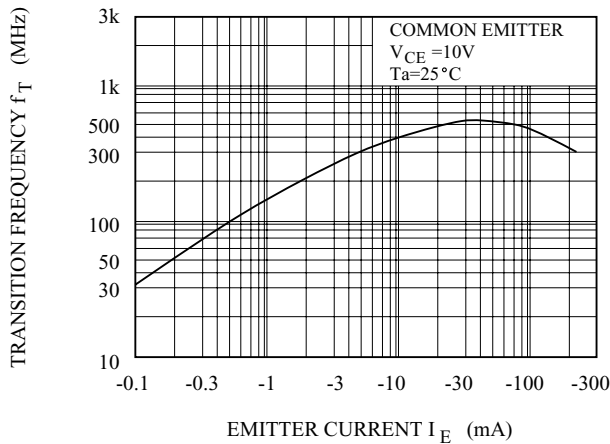
$V_{CE(sat)} - I_C$



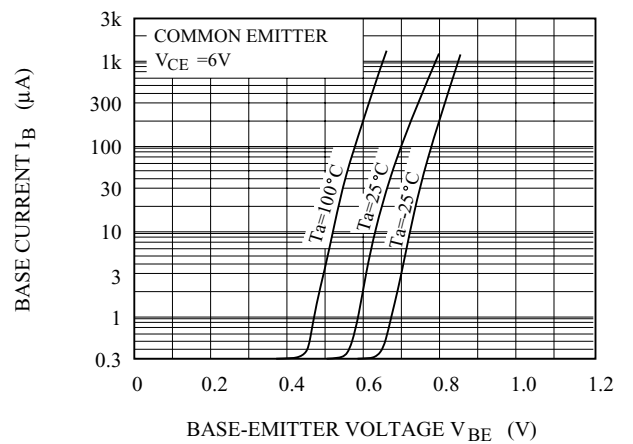
$V_{BE(sat)} - I_C$



$f_T - I_E$

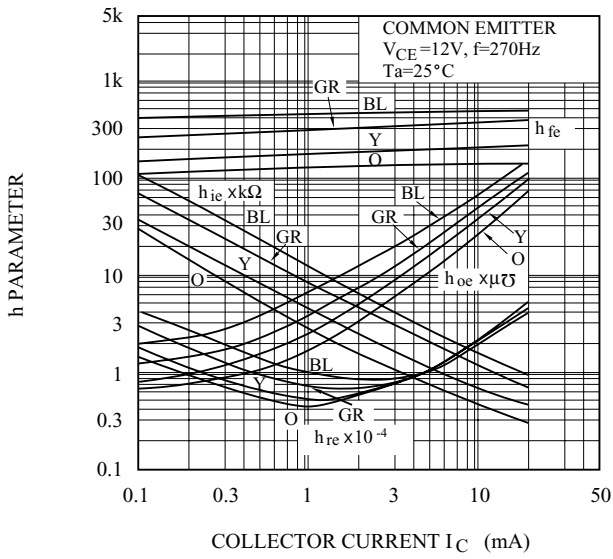


$I_B - V_{BE}$

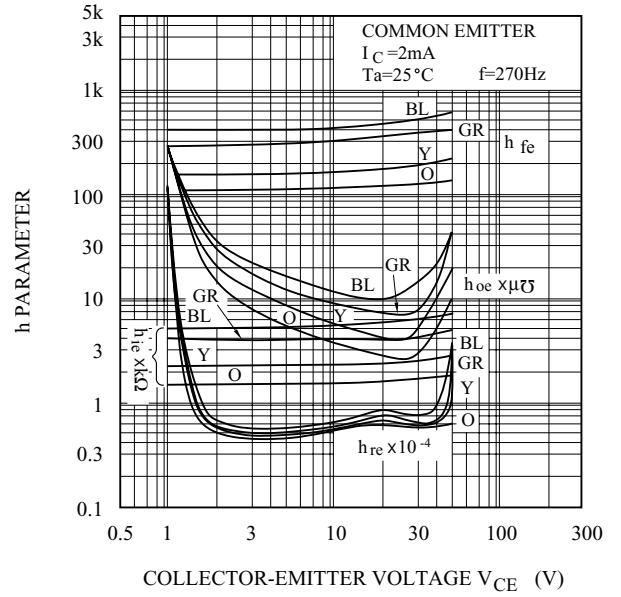


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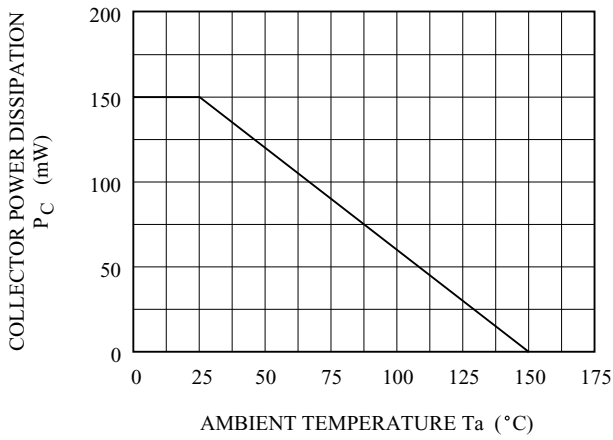
h PARAMETER -  $I_C$



h PARAMETER -  $V_{CE}$



$P_C$  -  $T_a$





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