

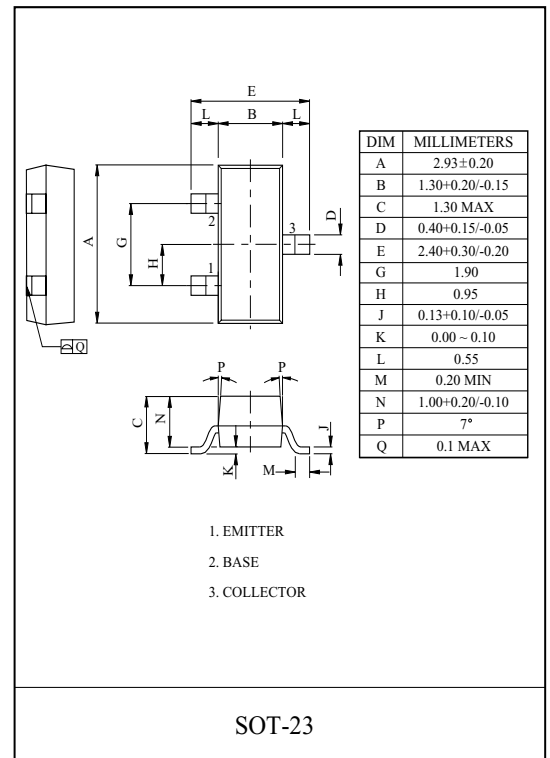
**GENERAL PURPOSE APPLICATION.
SWITCHING APPLICATION.**

FEATURES

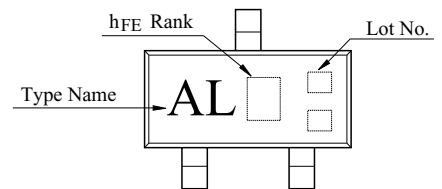
- Excellent h_{FE} Linearity
: $h_{FE}(0.1mA)/h_{FE}(2mA)=0.95(Typ.)$.
- High h_{FE} : $h_{FE}=70 \sim 700$.
- Low Noise : $NF=1dB(Typ.)$, $10dB(Max.)$.
- Complementary to KTA1504S.
- **Suffix U Qualified to AEC-Q101 for Automotive**
: Automotive and standard product are electrically and thermally the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

MAXIMUM RATING (Ta=25)

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



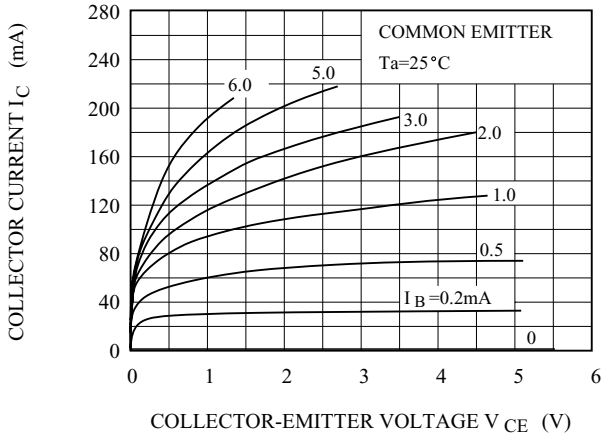
ELECTRICAL CHARACTERISTICS (Ta=25)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I_{CBO}	$V_{CB}=60V, I_E=0$	-	-	0.1	μA
Emitter Cut-off Current	I_{EBO}	$V_{EB}=5V, I_C=0$	-	-	0.1	μA
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

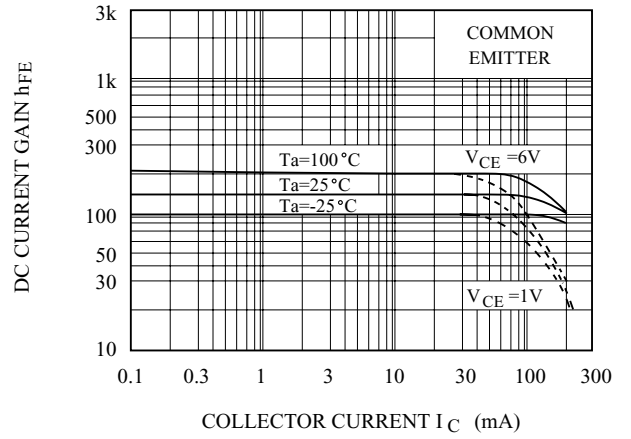
Note : h_{FE} Classification O:70 140, Y:120 240, GR(G):200 400, BL(L):350 700

KTC3875S

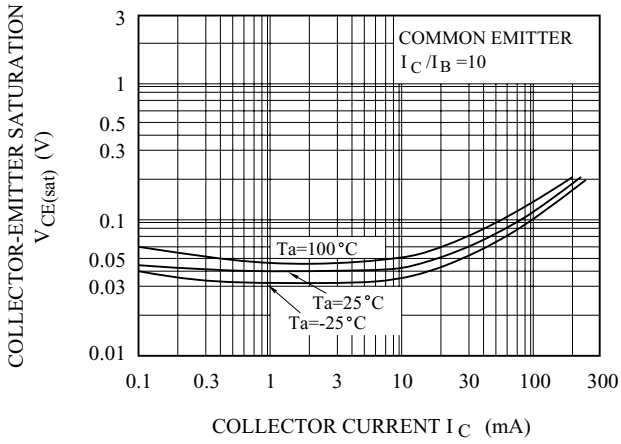
$I_C - V_{CE}$



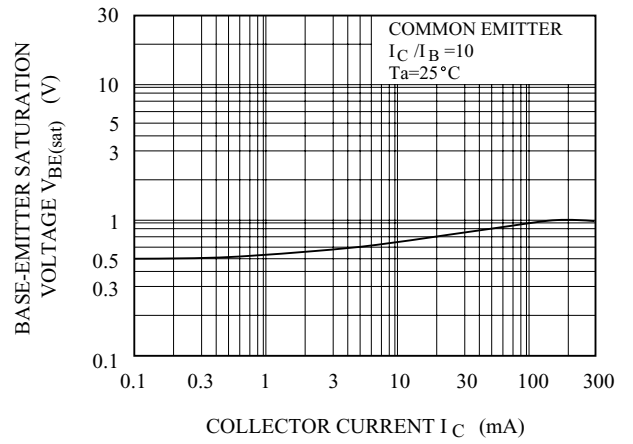
$h_{FE} - I_C$



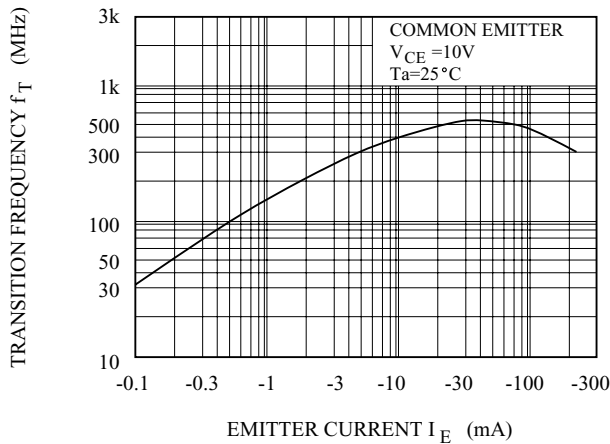
$V_{CE(sat)} - I_C$



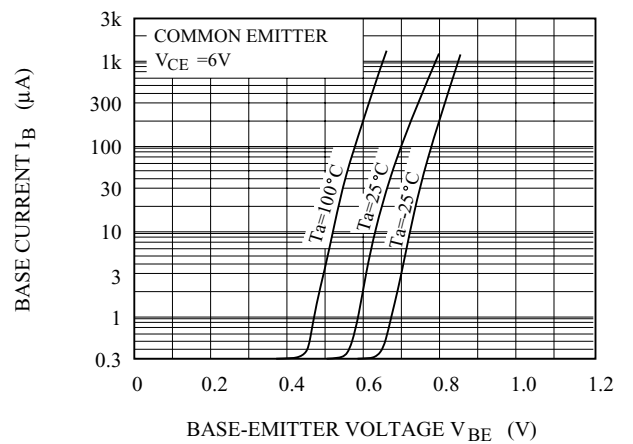
$V_{BE(sat)} - I_C$



$f_T - I_E$

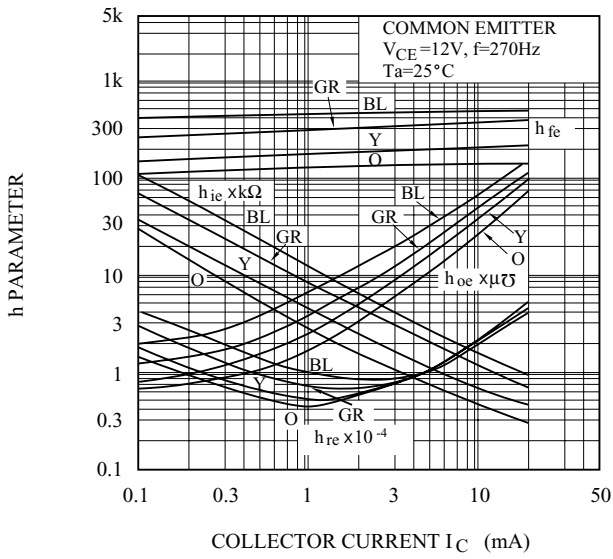


$I_B - V_{BE}$

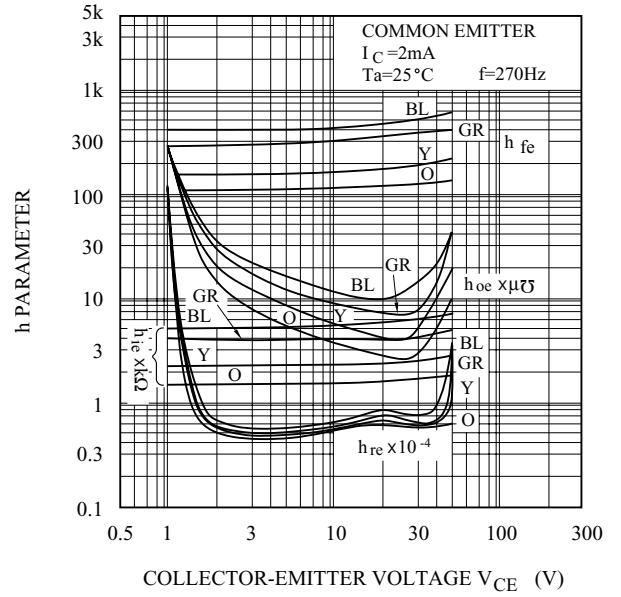


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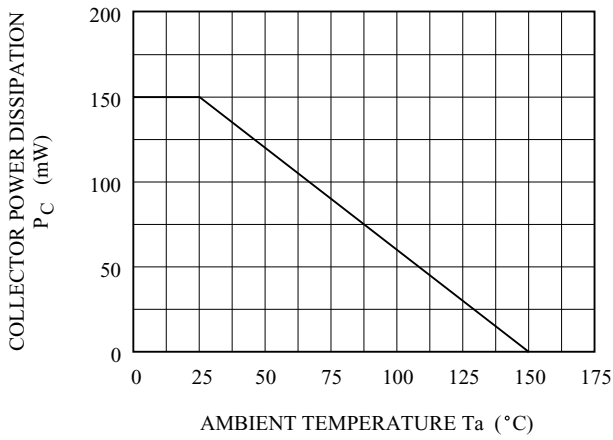
h PARAMETER - I_C



h PARAMETER - V_{CE}



P_C - T_a



KTC3875S

REVISION HISTORY

REV. NO	DESCRIPTION OF REVISION	DATE OF REVISION	REVIEWER
0	New Technical Data Sheet	1995. 11. 01	Y. Han
1	Marking Lot No. change	1998. 6. 15	K.W. Nam
2	Product name change, according to name system of SOT-23	2001. 2. 24	J.S.Kim
3	Add $V_{BE(sat)}$ characteristic.	2004. 12. 3	H.C. Eom
4	Add qualified to AEC-Q101 for Automotive	2015. 4. 09	J.W. Park

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