

**SEMICONDUCTOR
TECHNICAL DATA**

KTC3875

EPITAXIAL PLANAR NPN TRANSISTOR

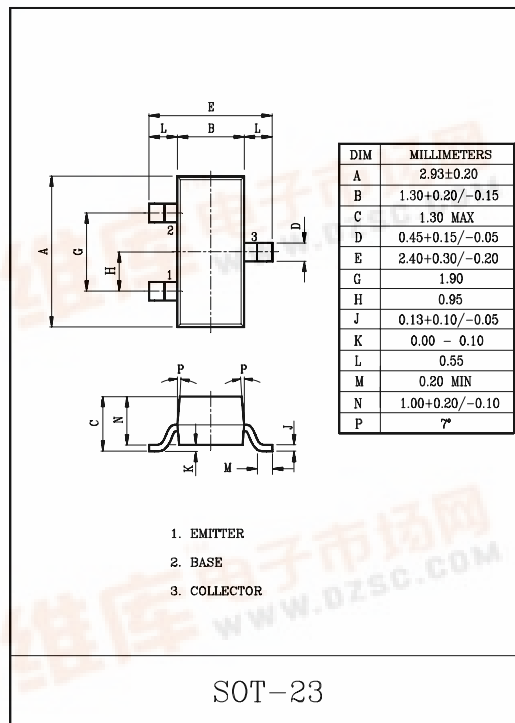
GENERAL PURPOSE APPLICATION.
SWITCHING APPLICATION.

FEAUTRES

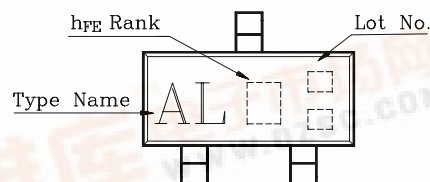
- Excellent h_{FE} Linearity
: $h_{FE}(0.1mA)/h_{FE}(2mA)=0.95(Typ.)$.
- High h_{FE} : $h_{FE}=70\sim 700$.
- Low Noise : $NF=1dB(Typ.)$, $10dB(Max.)$.
- Complementary to KTA1504.

MAXIMUM RATINGS ($T_a=25^{\circ}C$)

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	$^{\circ}C$
Storage Temperature Range	T_{stg}	-55~150	$^{\circ}C$



Marking



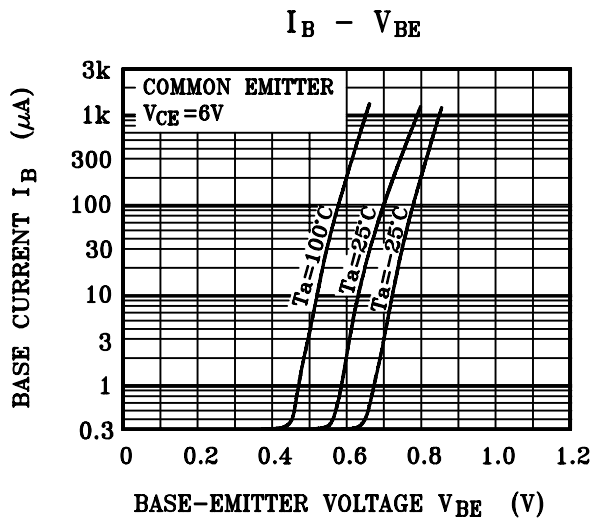
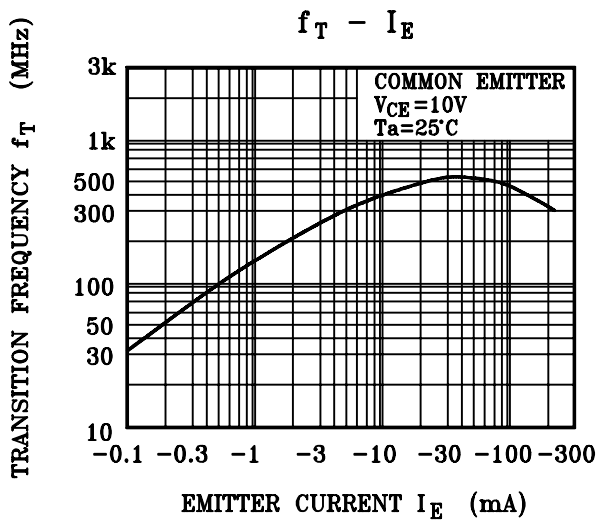
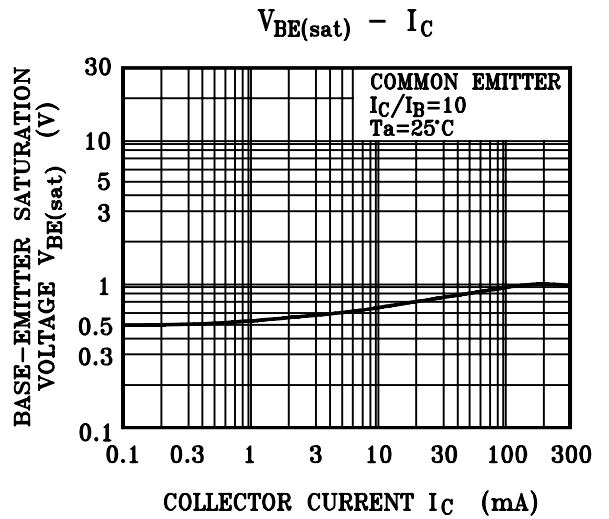
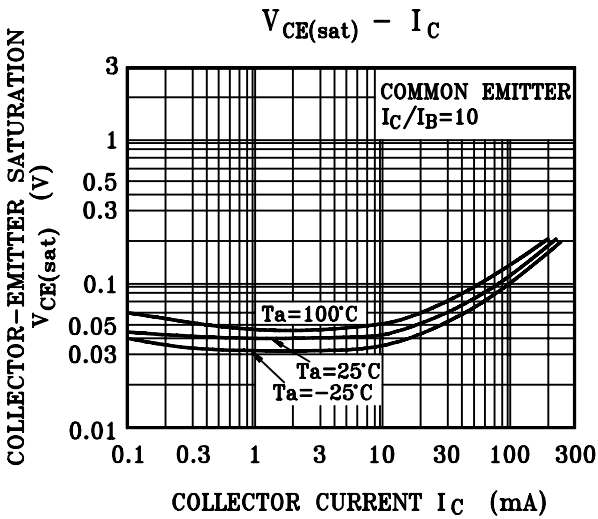
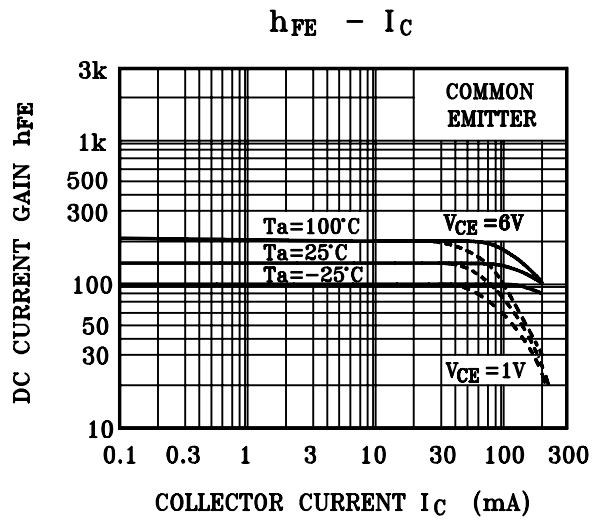
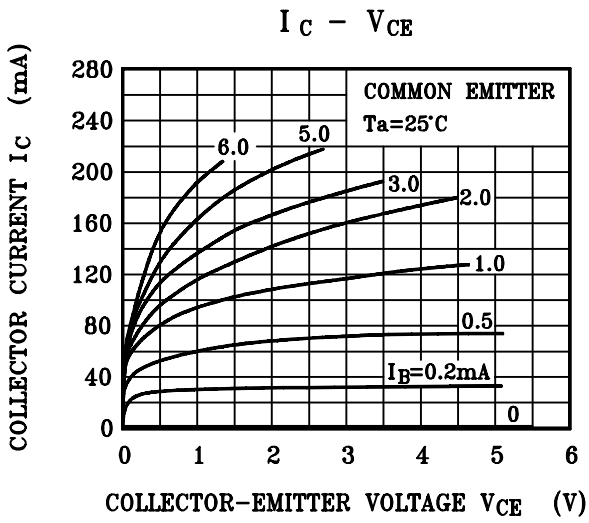
ELECTRICAL CHARACTERISTICS ($T_a=25^{\circ}C$)

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 (Note)	h_{FE}	$V_{CE}=6V, I_C=2mA$	70	-	700	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=100mA, I_B=10mA$	-	0.1	0.25	V
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	$V_{CE}=6V, I_C=0.1mA, f=1kHz, R_g=10k\Omega$	-	1.0	10	dB

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

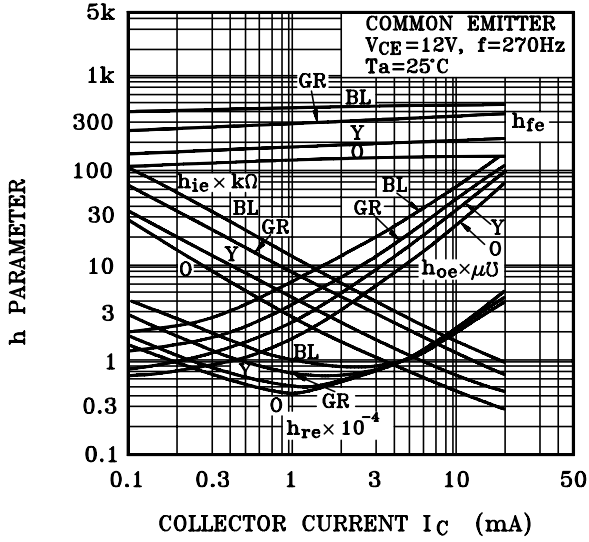


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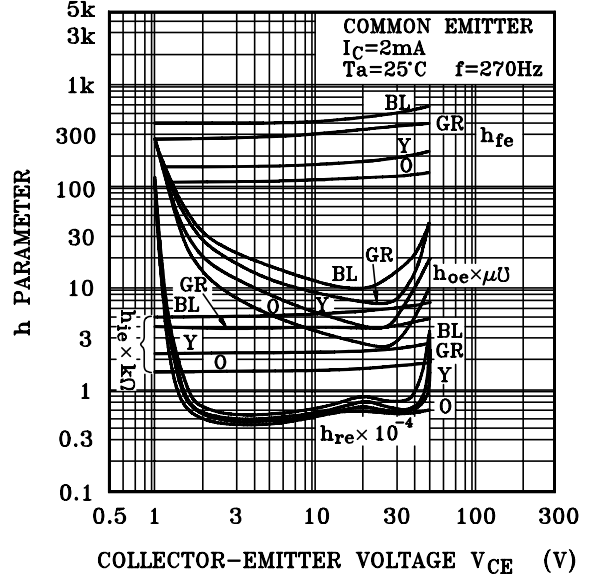


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h PARAMETER - I_C



h PARAMETER - V_{CE}



$P_C - T_a$

