

HIGH CURRENT APPLICATION.

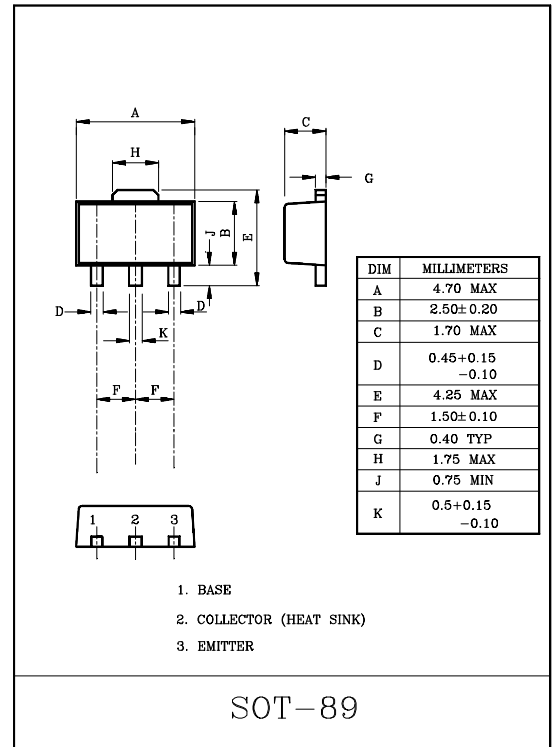
FEATURES

- High DC Current Gain
: $h_{FE}=800\sim 3200$. ($V_{CE}=5.0V$, $I_C=300mA$).
- Wide Area of Safe Operation.
- Low Collector Saturation Voltage
: $V_{CE(sat)}=0.17V$ ($I_C=500mA$, $I_B=5.0mA$).

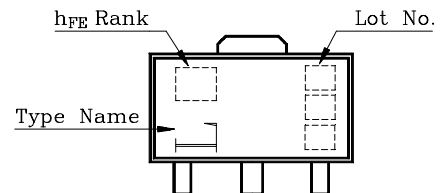
MAXIMUM RATINGS ($T_a=25^\circ C$)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	60	V
Collector-Emitter Voltage	V_{CEO}	50	V
Emitter-Base Voltage	V_{EBO}	8	V
Collector Current	I_C	1.0	A
Collector Power Dissipation	P_C	500	mW
	P_C^*	1	W
Junction Temperature	T_j	150	$^\circ C$
Storage Temperature Range	T_{stg}	-55~150	$^\circ C$

P_C^* : KTD1003 Mounted on Ceramic Substrate (250mm²x0.8t)



Marking

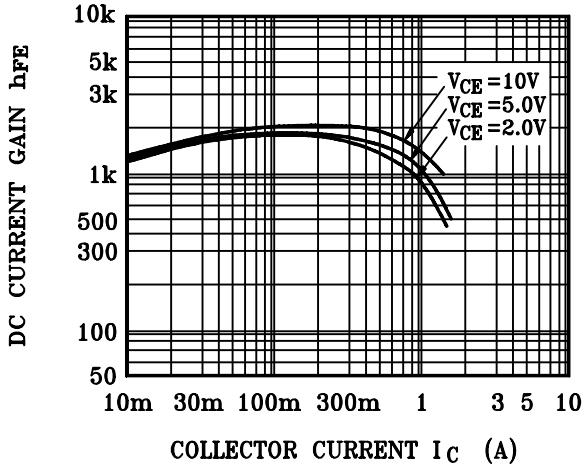


ELECTRICAL CHARACTERISTICS ($T_a=25^\circ C$)

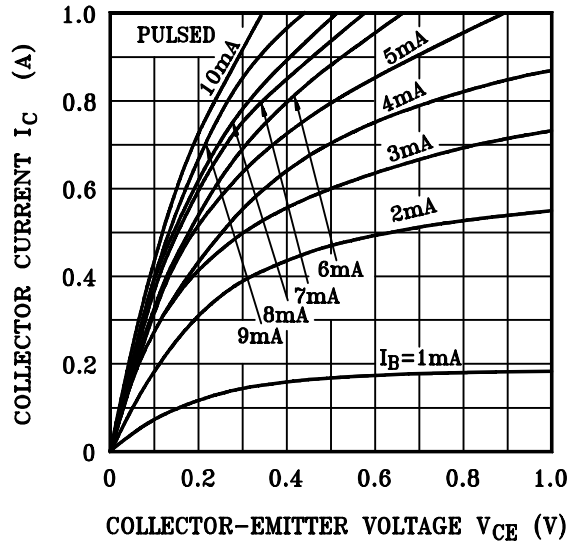
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I_{CBO}	$V_{CB}=60V$, $I_E=0$	-	-	100	nA
Emitter Cut-off Current	I_{EBO}	$V_{EB}=8V$, $I_C=0$	-	-	100	nA
DC Current Gain	$h_{FE(1)}$ Note	$V_{CE}=5.0V$, $I_C=300mA$	800	1500	3200	
	$h_{FE(2)}$	$V_{CE}=5.0V$, $I_C=1.0A$	400	-	-	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=500mA$, $I_B=5.0mA$	-	0.17	0.30	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=500mA$, $I_B=5.0mA$	-	0.80	1.2	V
Collector Output Capacitance	C_{ob}	$V_{CB}=10V$, $I_E=0$, $f=1.0MHz$	-	18	30	pF
Transition Frequency	f_T	$V_{CE}=10V$, $I_C=500mA$, $f=100MHz$	150	250	-	MHz
Base-Emitter Voltage	V_{BE}	$V_{CE}=5V$, $I_C=100mA$	600	630	700	mV

Note : h_{FE} Classification A:800~1600, B:1200~2400, C:2000~3200

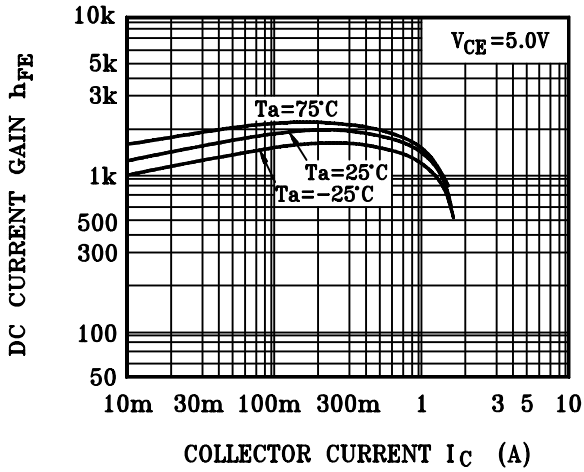
$h_{FE} - I_C$



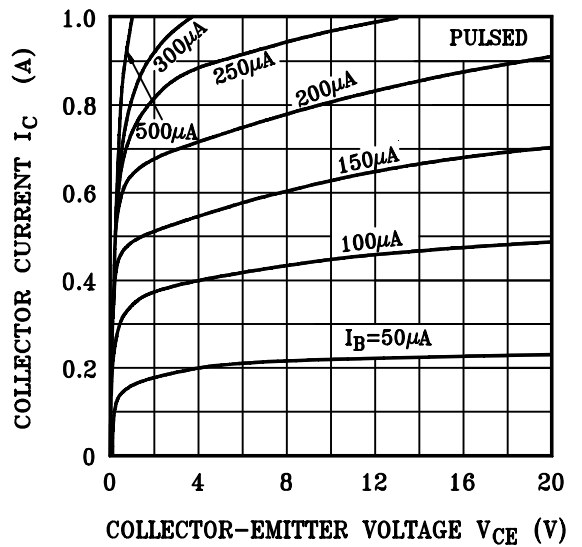
$I_C - V_{CE}$



$h_{FE} - I_C$



$I_C - V_{CE}$



$V_{BE(sat)} - I_C$
 $V_{CE(sat)} - I_C$

