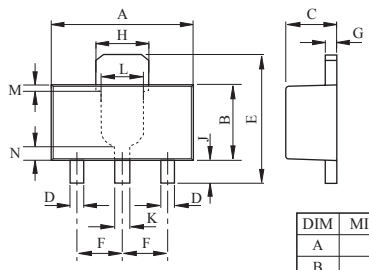
HIGH CURRENT APPLICATION.

FEATURES

- High DC Current Gain
  : h_{FE}=800～3200. (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).



DIM	MILLIMETERS
A	4.70 MAX
B	2.50±0.20
C	1.70 MAX
D	0.45+0.15/-0.10
E	4.25 MAX
F	1.50±0.10
G	0.40 TYP
H	1.75 MAX
J	0.75 MIN
K	0.5+0.10/-0.05
L	1.40 ± 0.10
M	0.19 ± 0.10
N	0.47 ± 0.10

1. BASE
2. COLLECTOR (HEAT SINK)
3. EMITTER

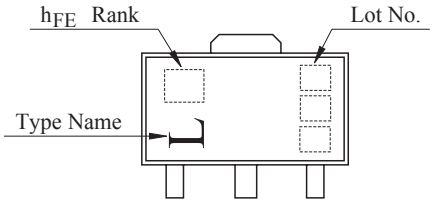
SOT-89

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}	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	℃
Storage Temperature Range	T_{stg}	-55～150	℃

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

Marking

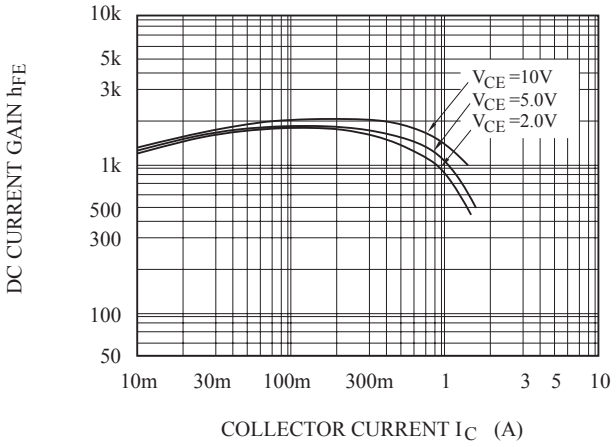


ELECTRICAL CHARACTERISTICS (Ta=25℃)

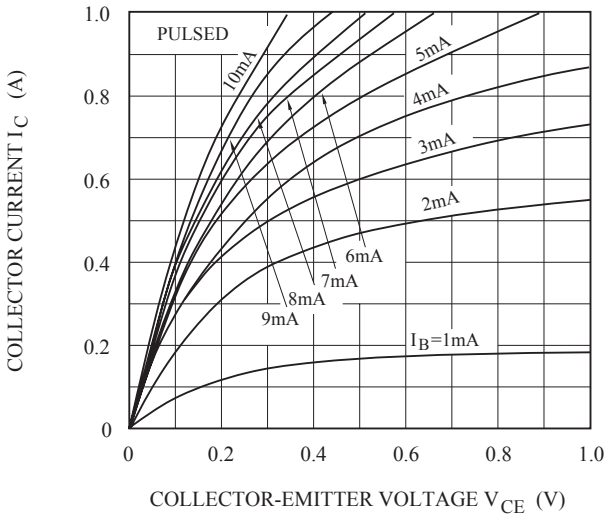
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I_{CBO}	V_{CB}=60V, I_E=0	-	-	100	nA
Emitter Cut-off Current	I_{EBO}	V_{EB}=8V, I_C=0	-	-	100	nA
DC Current Gain	h_{FE}(1) Note	V_{CE}=5.0V, I_C=300mA	800	1500	3200	
	h_{FE}(2)	V_{CE}=5.0V, I_C=1.0A	400	-	-	
Collector-Emitter 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	-	630	700	mV

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

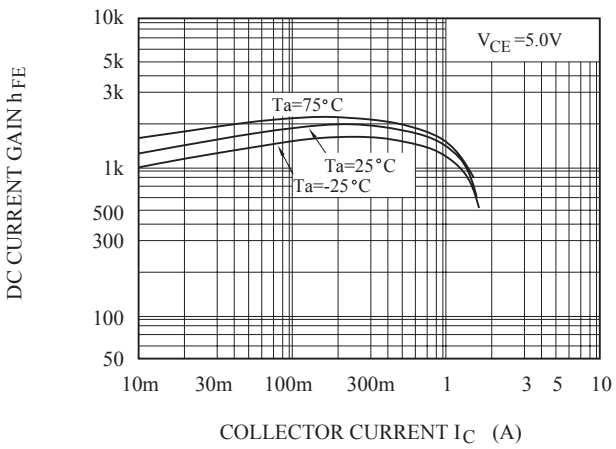
h_{FE} - I_C



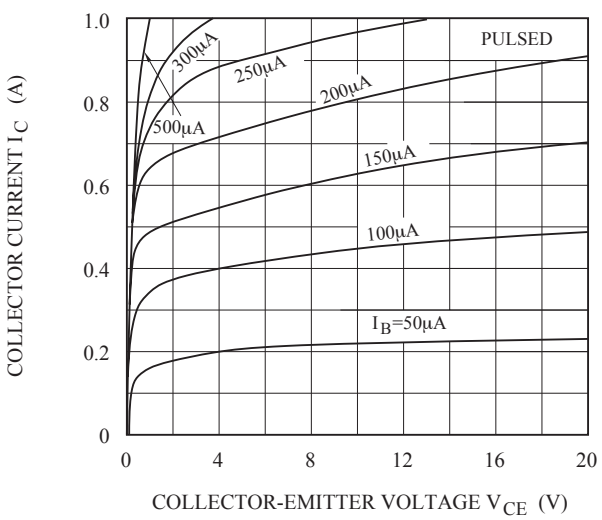
I_C - V_{CE}



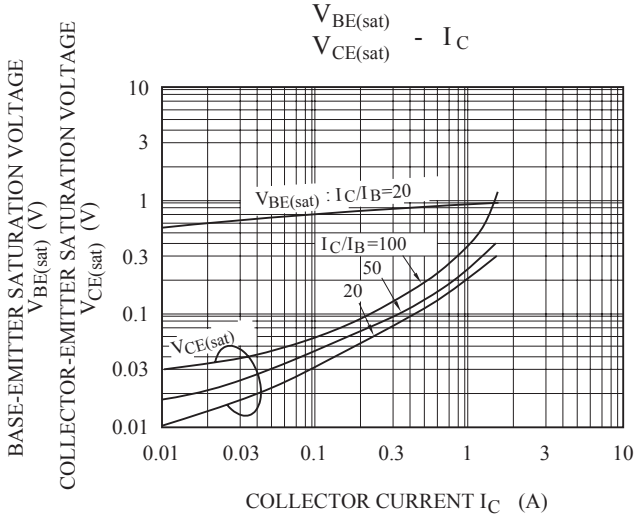
h_{FE} - I_C



I_C - V_{CE}



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



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2. When you intend to use these products with equipment or device which require an extremely high of reliability and special applications (such as automobile, air travel aerospace, transportation equipment, life support, system and safety devices) in which special quality and reliability and the failure or malfunction of products may directly jeopardize or harm the human body or damage to property and any application other than the standard application intended, please be sure to consult with our sales representative in advance.

3. On designing your application, please use product within the ranges guaranteed by KEC for maximum rating, operating supply voltage range, heat radiation characteristics and other characteristics. User shall be responsible for failure or damage when used beyond the guaranteed ranges.

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