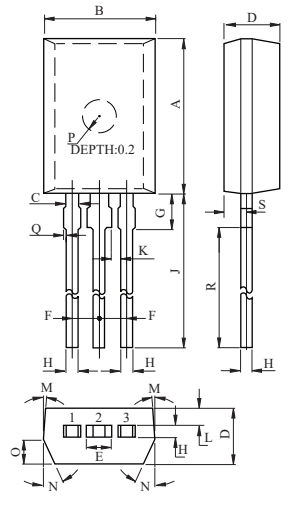
KTD1028

EPITAXIAL PLANAR NPN TRANSISTOR

HIGH CURRENT APPLICATION.

FEATURES

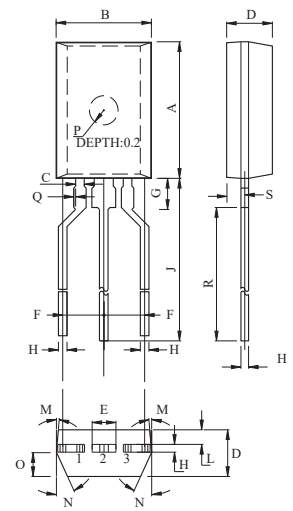
- High DC Current Gain
  : h_{FE}=800 ~ 3200 (V_{CE}=5.0V, I_C=300mA).
- Wide Area of Safe Operation.
- Low Collector Saturation Voltage.
  : $V_{CE(sat)}$=0.17V (I_C=500mA, I_B=5.0mA).



DIM	MILLIMETERS
A	7.20 MAX
B	5.20 MAX
C	0.60 MAX
D	2.60 MAX
E	1.15 MAX
F	1.27
G	1.70 MAX
H	0.55 MAX
J	14.00±0.50
K	0.35 MIN
L	0.75±0.10
M	4°
N	25°
O	1.25
P	Φ1.50
Q	0.10 MAX
R	12.50±0.50
S	1.00

1. EMITTER
2. COLLECTOR
3. BASE

TO-92L



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TO-92L AT TAPING TYPE

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	DC	I_C	1.0	A
	Pulse*	I_{CP}	2.0	
Base Current		I_B	200	mA
Collector Power Dissipation		P_C	1	W
Junction Temperature		T_j	150	℃
Storage Temperature Range		T_{stg}	-55 ~ 150	℃

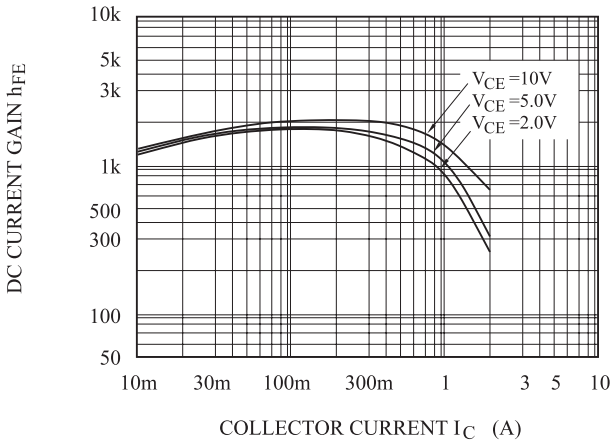
*PW ≤ 10ms Duty Cycle ≤ 50%

ELECTRICAL CHARACTERISTICS (Ta=25℃)

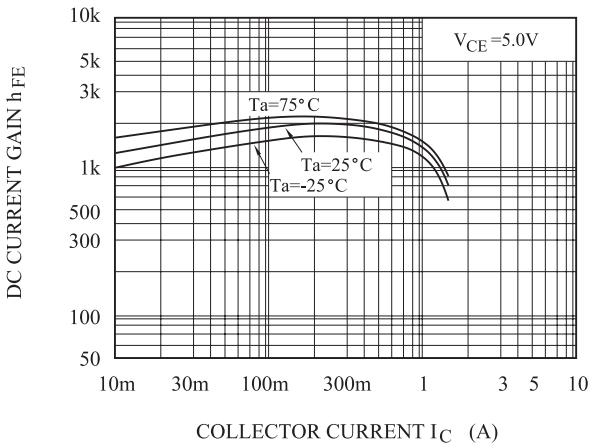
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I_{CBO}	V_{CB}=60V, I_E=0	-	-	100	nA
Emitter Cut-off Current	I_{EBO}	V_{EB}=8V, I_C=0	-	-	100	nA
DC Current Gain	h_{FE}(1) (Note)	V_{CE}=5.0V, I_C=300mA	800	1500	3200	
	h_{FE}(2)	V_{CE}=5.0V, I_C=1.0A	400	-	-	
Collector-Emitter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

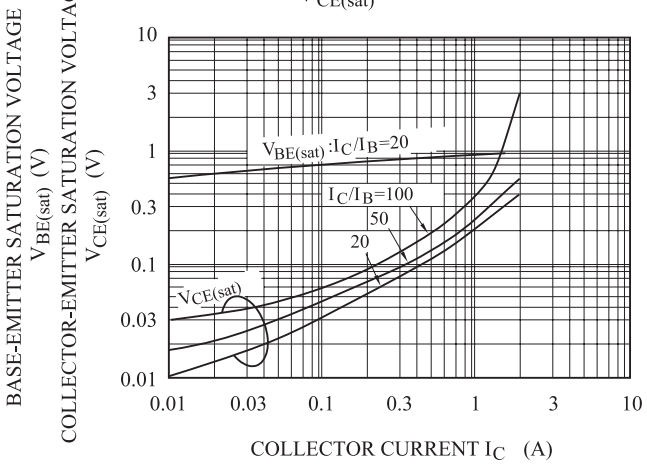
h_{FE} - I_C



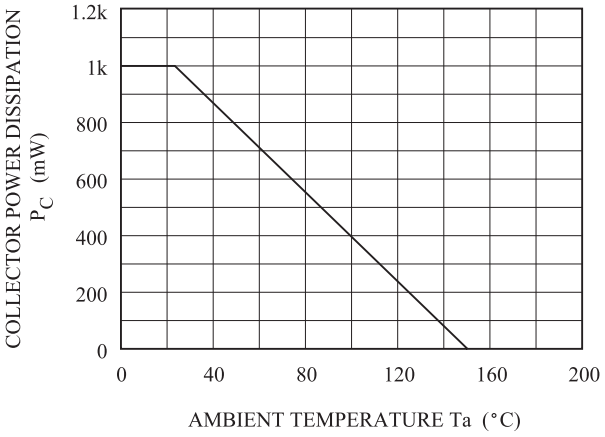
h_{FE} - I_C



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



P_C - Ta



I_C - V_{CE}