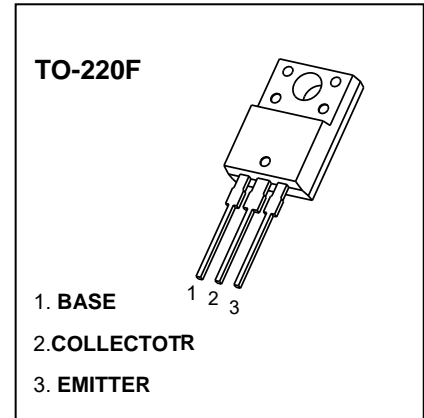


**KTD2058** TRANSISTOR (NPN)

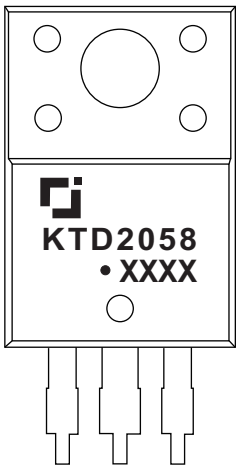
**FEATURES**

**Low Collector Saturation Voltage**

$V_{CE(SAT)} = 1.0V(MAX)$  .

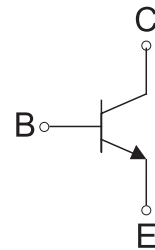


**MARKING**



KTD2058=Device code  
Solid dot=Green mold compound device,  
if none, the normal device  
XXXX=Code

**Equivalent Circuit**



**MAXIMUM RATINGS\*(T<sub>A</sub>=25°C unless otherwise noted)**

Symbol	Parameter	Value	Unit
V <sub>CB0</sub>	Collector-Base Voltage	60	V
V <sub>CEO</sub>	Collector-Emitter Voltage	60	V
V <sub>EBO</sub>	Emitter-Base Voltage	7	V
I <sub>C</sub>	Collector Current -Continuous	3	A
P <sub>C</sub>	Collector Power Dissipation	2	W
T <sub>J</sub> , T <sub>stg</sub>	Operation Junction and Storage Temperature Range	-55~+150	°C

\*These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

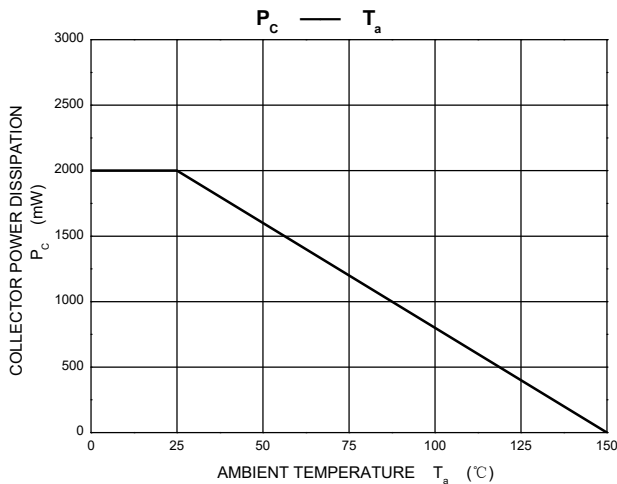
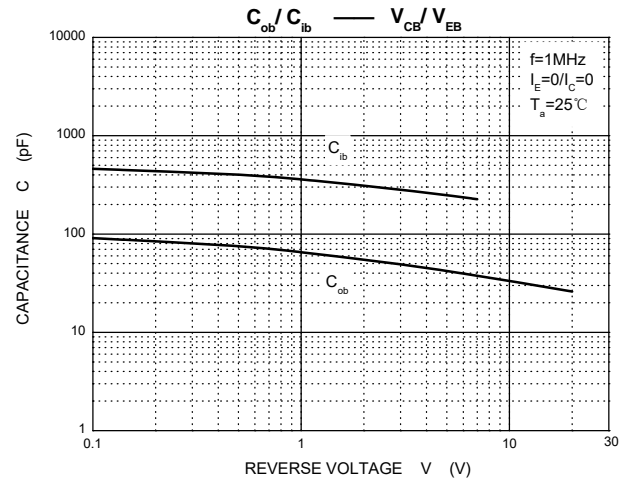
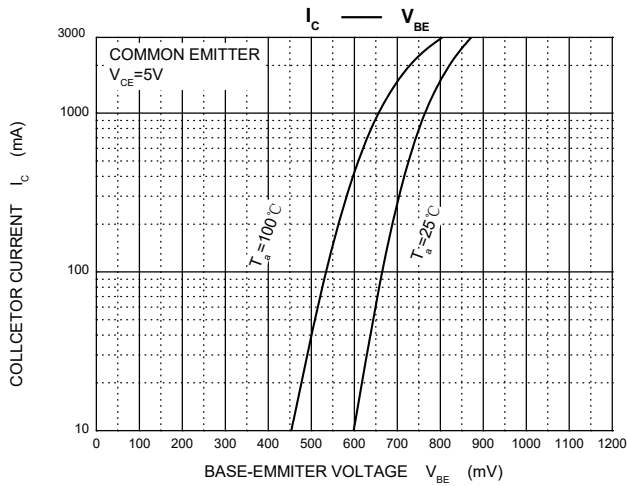
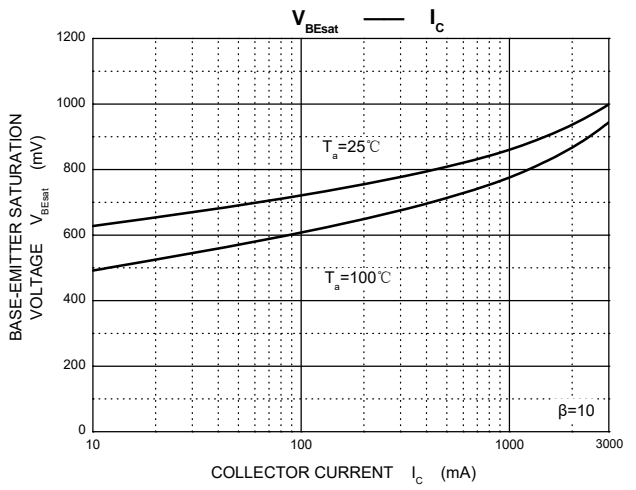
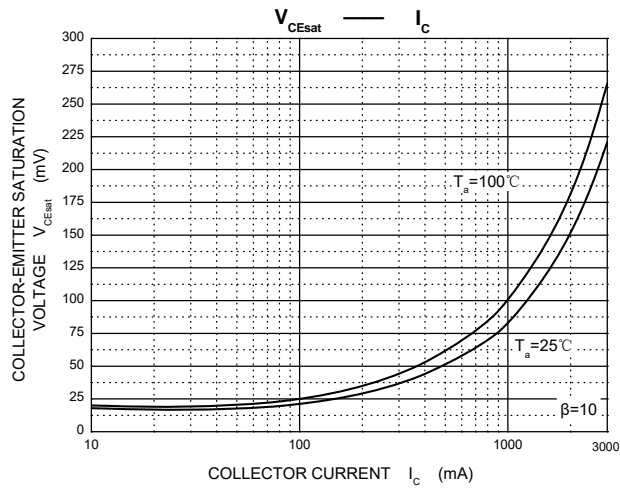
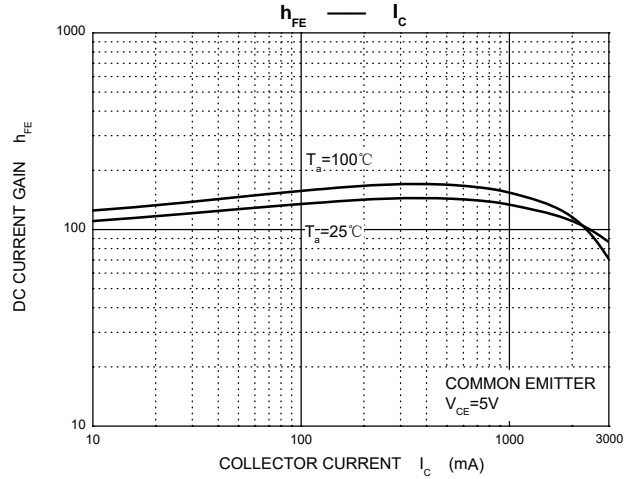
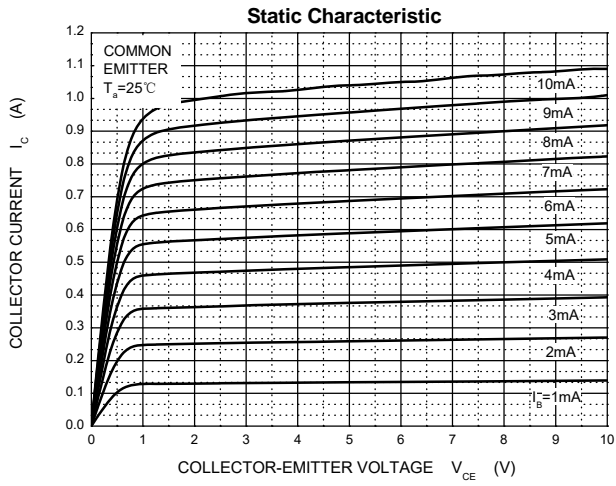
**ELECTRICAL CHARACTERISTICS (Ta=25°C unless otherwise specified)**

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=100\mu A, I_E=0$	60			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=50mA, I_B=0$	60			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=100\mu A, I_C=0$	7			V
Collector cut-off current	$I_{CBO}$	$V_{CB}=60V, I_E=0$			100	$\mu A$
Emitter cut-off current	$I_{EBO}$	$V_{EB}=7V, I_C=0$			100	$\mu A$
DC current gain	$h_{FE(1)}$	$V_{CE}=5V, I_C=0.5A$	60		200	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=2A, I_B=0.2A$			1	V
Base-emitter voltage	$V_{BE(on)}$	$V_{CE}=5V, I_C=0.5A$			1	V
Transition frequency	$f_T$	$V_{CE}=5V, I_C=0.5A$		3		MHz
Collector output capacitance	$C_{ob}$	$V_{CB}=10V, I_E=0, f=1MHz$		35		pF
Switching time	Turn-on Time	$t_{on}$		0.65		us
	Storage Time	$t_{stg}$		1.3		
	Fall Time	$t_f$		0.65		

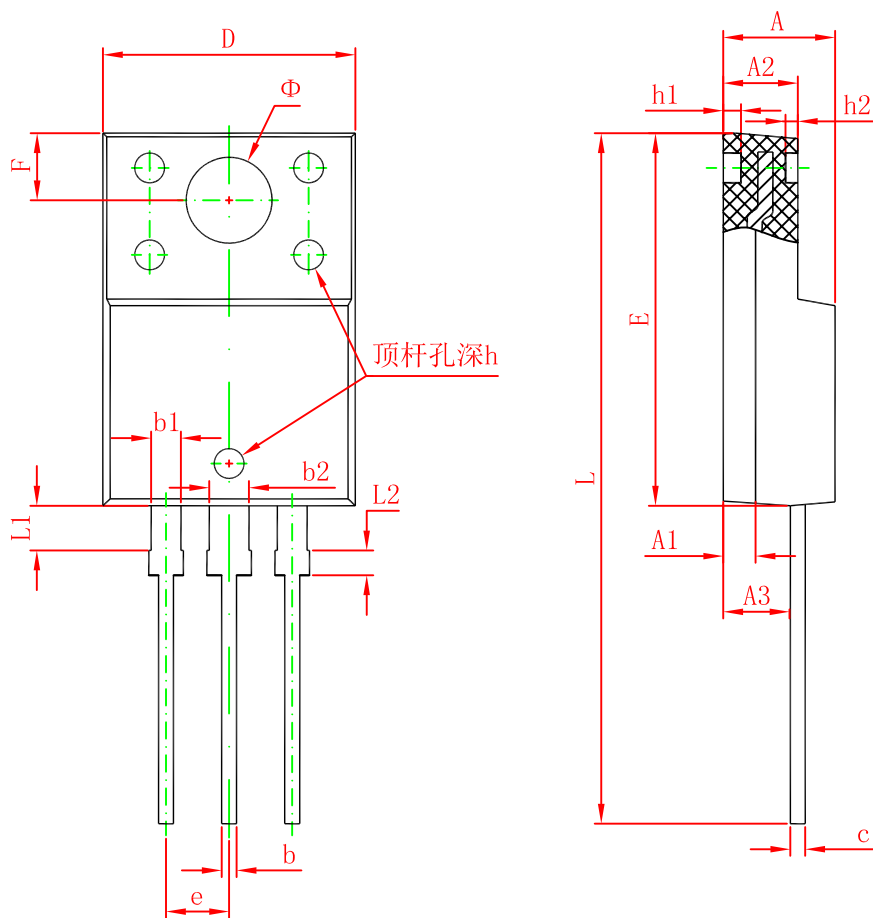
**CLASSIFICATION of  $h_{FE(1)}$**

Rank	O	Y
Range	60-120	100-200

# Typical Characteristics



# TO-220F Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	4.300	4.700	0.169	0.185
A1	1.300 REF.		0.051 REF.	
A2	2.800	3.200	0.110	0.126
A3	2.500	2.900	0.098	0.114
b	0.500	0.750	0.020	0.030
b1	1.100	1.350	0.043	0.053
b2	1.500	1.750	0.059	0.069
c	0.500	0.750	0.020	0.030
D	9.960	10.360	0.392	0.408
E	14.800	15.200	0.583	0.598
e	2.540 TYP.		0.100 TYP.	
F	2.700 REF.		0.106 REF.	
Φ	3.500 REF.		0.138 REF.	
h	0.000	0.300	0.000	0.012
h1	0.800 REF.		0.031 REF.	
h2	0.500 REF.		0.020 REF.	
L	28.000	28.400	1.102	1.118
L1	1.700	1.900	0.067	0.075
L2	0.900	1.100	0.035	0.043

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