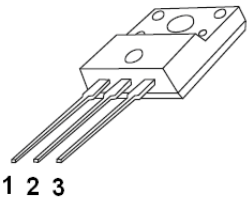
TO-220F Plastic-Encapsulate Transistors

KTD2058 TRANSISTOR (NPN)

TO-220F



1 2 3

1. **BASE**
2. **COLLECTOTR**
3. **EMITTER**

FEATURES

Low Collector Saturation Voltage

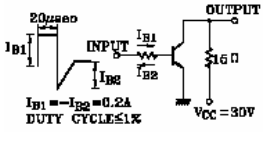
- **$V_{CE(SAT)}$ = 1. 0V(MAX) .**

MAXIMUM RATINGS*(T_A=25℃ unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	60	V
V_{CEO}	Collector-Emitter Voltage	60	V
V_{EBO}	Emitter-Base Voltage	7	V
I_C	Collector Current -Continuous	3	A
P_C	Collector Power Dissipation	2	W
T_j	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-55~+150	℃

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

ELECTRICALCHARACTERISTICS(Ta=25℃ unless otherwise specified)

Parameter		Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage		$V_{(BR)CBO}$	Ic=100μA, I_E=0	60			V
Collector-emitter breakdown voltage		$V_{(BR)CEO}$	Ic=50mA, I_B=0	60			V
Emitter-base breakdown voltage		$V_{(BR)EBO}$	I_E=100 μA, I_C=0	7			V
Collector cut-off current		I_{CBO}	V_{CB}=60V, I_E=0			100	μA
Emitter cut-off current		I_{EBO}	V_{EB}=7V, I_C=0			100	μA
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