

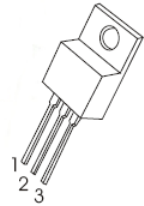
DONGGUAN ZHONGGUI ELECTRONICS CO., LTD

# TO-220-3L Plastic-Encapsulate Transistors

**KTD2058** TRANSISTOR (NPN)

TO-220-3L

- 1. BASE
- 2. COLLECTOR
- 3. EMITTER



## FEATURES

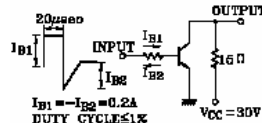
- Low Collector Saturation Voltage :  $V_{CE(SAT)} = 1.0V(MAX)$

## MAXIMUM RATINGS ( $T_a=25^{\circ}C$ 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	$^{\circ}C$
$T_{stg}$	Storage Temperature Range	-55-150	$^{\circ}C$

## ELECTRICAL CHARACTERISTICS ( $T_a=25^{\circ}C$ 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	$h_{FE}$	$V_{CE}=5V, I_C=0.5A$	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		$\mu s$
	Storage Time	$t_{stg}$		1.3		
	Fall Time	$t_f$		0.65		



## CLASSIFICATION OF $h_{FE}$

Rank	O	Y
Range	60-120 100-	200