

## 3DD3853 TRANSISTOR (NPN)

### FEATURES

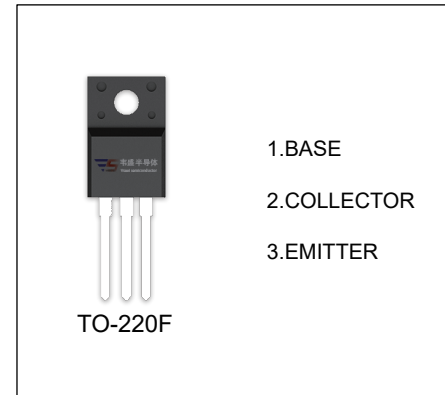
- High Current Gain
- Saturation Voltage Low
- Power Dissipation

$P_{CW} : 2 \text{ W (} T_a=25 \text{ .)}$

$25 \text{ W (} T_c=25 \text{.)}$

### MAXIMUM RATINGS ( $T_a=25^\circ\text{C}$ 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
$T_J, T_{stg}$	Operation Junction and Storage Temperature Range	-55-150	$^\circ\text{C}$



### ELECTRICAL CHARACTERISTICS ( $T_a=25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=1\text{mA}, I_E=0$	60			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=10\text{mA}, I_B=0$	60			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=100\mu\text{A}, I_C=0$	7			V
Collector cut-off current	$I_{CBO}$	$V_{CB}=60\text{V}, I_E=0$			100	$\mu\text{A}$
Emitter cut-off current	$I_{EBO}$	$V_{EB}=7\text{V}, I_C=0$			100	$\mu\text{A}$
DC current gain	$h_{FE}^*$	$V_{CE}=5\text{V}, I_C=500\text{mA}$	60		300	
Collector-emitter saturation voltage	$V_{CE(sat)}^*$	$I_C=3\text{A}, I_B=300\text{mA}$			1.0	V
Transition frequency	$f_T$	$V_{CE}=5\text{V}, I_C=500\text{mA}$	5			MHz

\*Pulse test:  $t_p \leq 300\mu\text{S}, \delta \leq 0.02$ .

### CLASSIFICATION OF $h_{FE}$

Rank	O	Y	GR
Range	60-120	100-200	150-300