

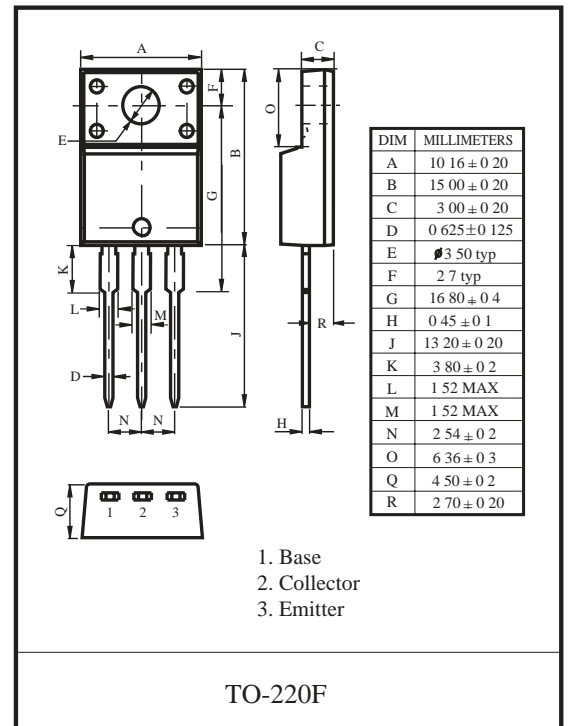
### FTD2058F TRANSISTOR (NPN)

#### FEATURES

- Low  $V_{CE(sat)}$ :  $V_{CE(sat)} = -1.0V(\text{Max.})(I_C/I_B = -2A/-0.2A)$
- Complementary to FTB1366F

#### 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
$P_C$	Collector power dissipation	2	W
$T_J$	Junction temperature	150	$^\circ\text{C}$
$T_{stg}$	Storage Temperature	-55-150	$^\circ\text{C}$



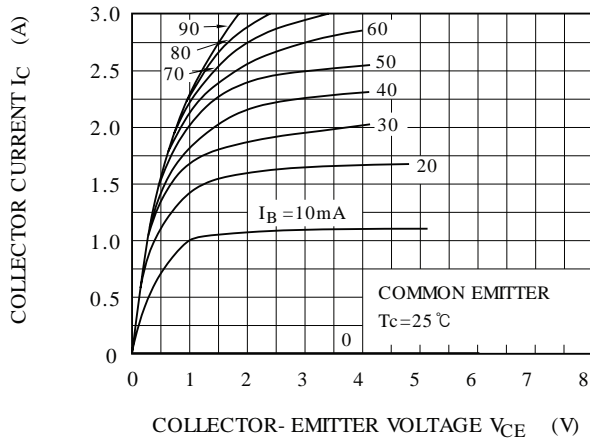
#### ELECTRICAL CHARACTERISTICS ( $T_a = 25^\circ\text{C}$ unless otherwise specified)

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

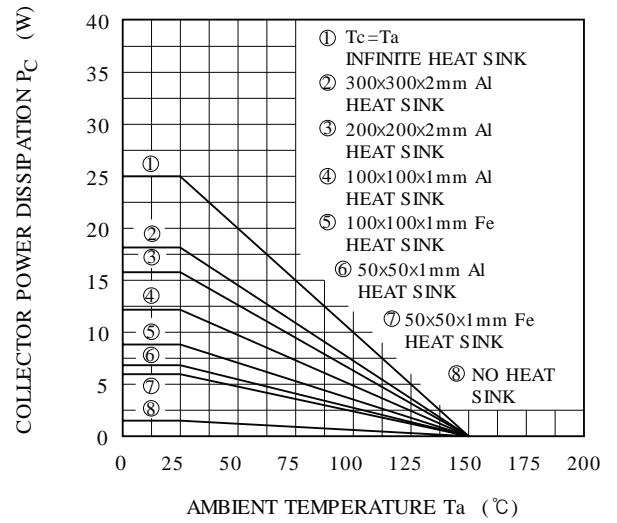
#### CLASSIFICATION of $h_{FE(1)}$

Rank	O	Y
Range	60-120	100-200

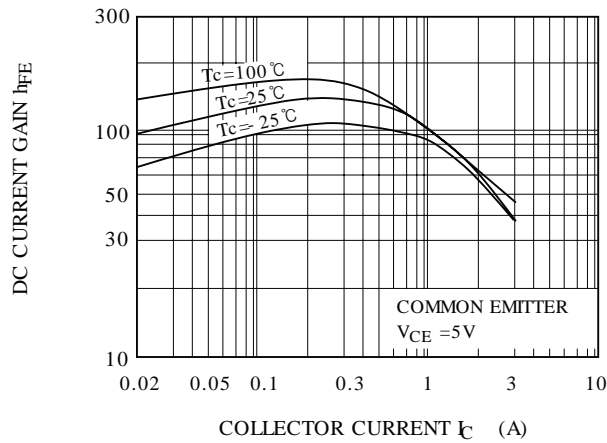
$I_C - V_{CE}$



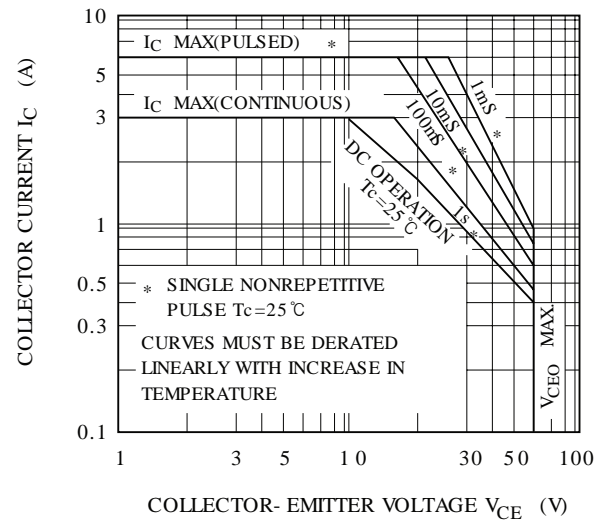
$P_c - T_a$



$h_{FE} - I_C$



SAFE OPERATING AREA



$V_{CE(sat)} - I_C$

