

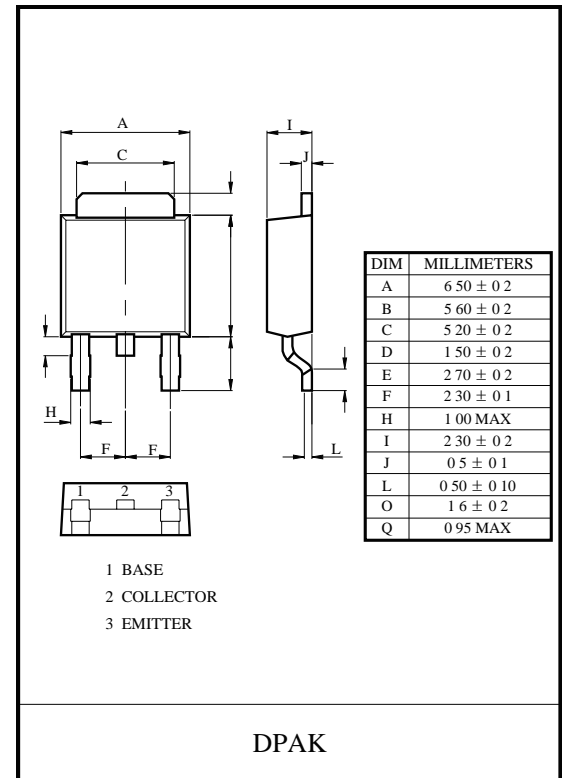
### FTD1760 TRANSISTOR (NPN)

#### FEATURES

- Low  $V_{CE(sat)}$  -  $V_{CE(sat)} = 0.5V$  (Typ.) ( $I_C/I_B = 2A / 0.2A$ )
- Complements the FTB1184.

#### 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	50	V
$V_{EBO}$	Emitter-Base Voltage	5	V
$I_C$	Collector Current -Continuous	3	A
$P_C$	Collector Power Dissipation	1.5	W
$T_J$	Junction Temperature	150	$^\circ C$
$T_{stg}$	Storage Temperature	-55 to +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	$V_{(BR)CBO}$	$I_C=50\mu A, I_E=0$	60			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=1mA, I_B=0$	50			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=50\mu A, I_C=0$	5			V
Collector cut-off current	$I_{CBO}$	$V_{CB}=40V, I_E=0$			1	$\mu A$
Emitter cut-off current	$I_{EBO}$	$V_{EB}=4V, I_C=0$			1	$\mu A$
DC current gain	$h_{FE(1)}$	$V_{CE}=3V, I_C=500mA$	82		390	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=2A, I_B=200mA$			1	V
Transition frequency	$f_T$	$V_{CE}=5V, I_C=500mA, f=30MHz$		90		MHz
Collector output capacitance	$C_{ob}$	$V_{CB}=10V, I_E=0, f=1MHz$		40		pF

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

Rank	P	Q	R
Range	82-180	120-270	180-390

## ● Electrical characteristic curves

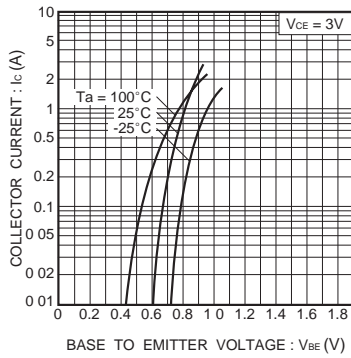


Fig.1 Grounded emitter propagation characteristics

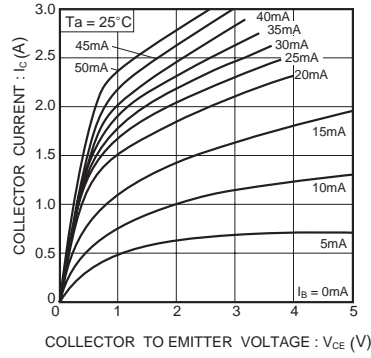


Fig.2 Grounded emitter output characteristics ( I )

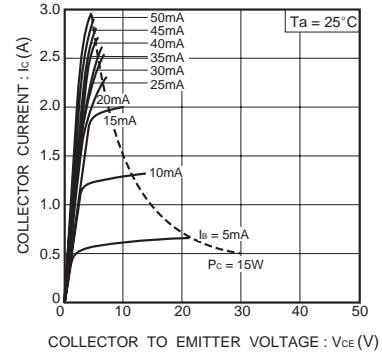


Fig.3 Grounded-emitter output characteristics( II )

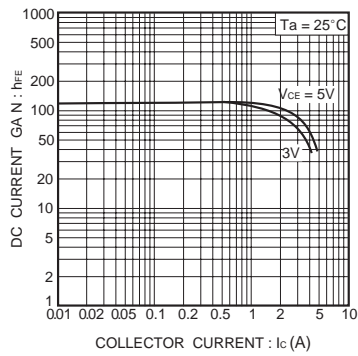


Fig.4 DC current gain vs. collector current( I )

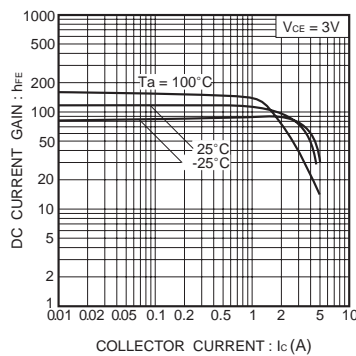


Fig.5 DC current gain vs. collector current( II )

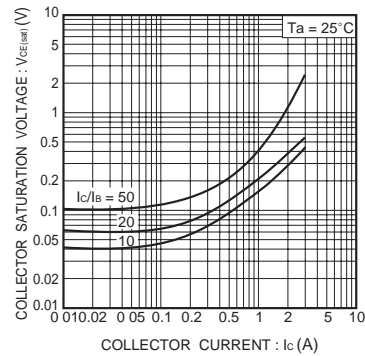


Fig.6 Collector-emitter saturation voltage vs. collector current

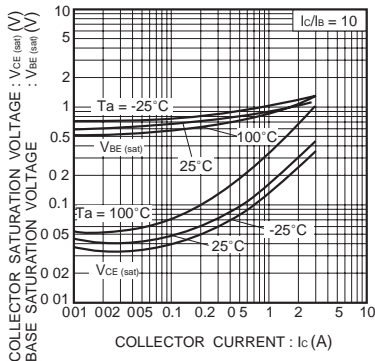


Fig.7 Collector-emitter saturation voltage vs. collector current  
Base-emitter saturation voltage vs. collector current

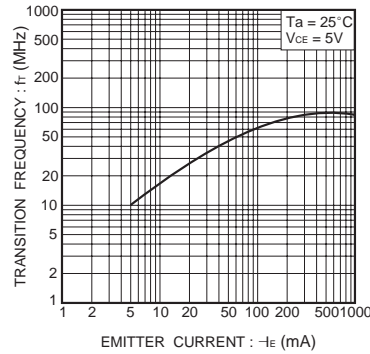


Fig.8 Gain bandwidth product vs. emitter current

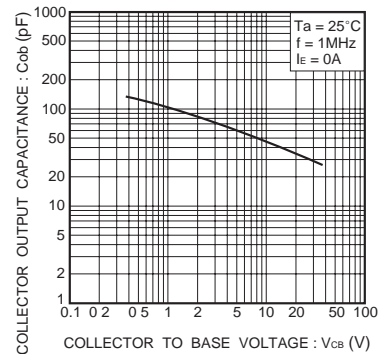


Fig.9 Collector output capacitance vs. collector-base voltage

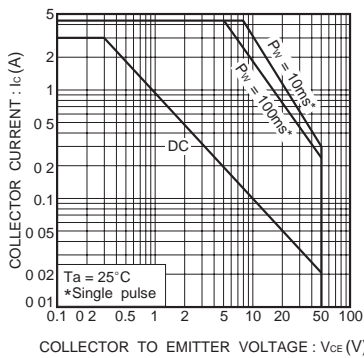


Fig.10 Safe operating area

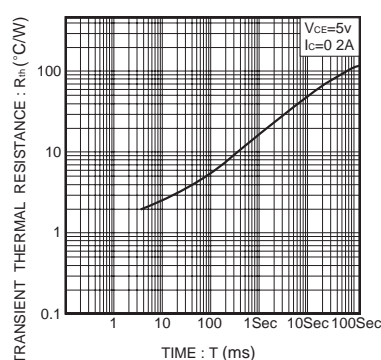


Fig.11 Transient thermal resistance