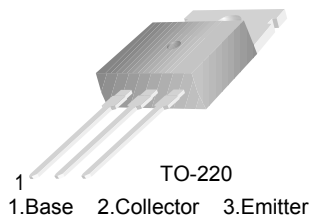


FJP5554

High Voltage Fast Switching Transistor

Features

- Fast Speed Switching
- Wide Safe Operating Area
- Suitable for Electronic Ballast Application



Absolute Maximum Ratings

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	1050	V
V_{CEO}	Collector-Emitter Voltage	400	V
V_{EBO}	Emitter-Base Voltage	15	V
I_C	Collector Current (DC)	4	A
I_{CP}	* Collector Current (Pulse)	8	A
P_C	Collector Dissipation ($T_C = 25^\circ\text{C}$)	70	W
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{STG}	Storage Temperature	-55 ~ 150	$^\circ\text{C}$

* Pulse Test: PW = 300 μs , Duty Cycle = 2% Pulsed

Package Marking and Ordering Information

Device Marking	Device	Package	Reel Size	Tape Width	Quantity
J5554	FJP5554TU	TO-220	-	-	50
J5554	FJP5554	TO-220	-	-	200

Electrical Characteristics $T_C = 25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Conditions	Min.	Typ.	Max	Units
BV_{CBO}	Collector-Base Breakdown Voltage	$I_C = 500\mu\text{A}, I_E = 0$	1050			V
BV_{CEO}	Collector-Emitter Breakdown Voltage	$I_C = 5\text{mA}, I_B = 0$	400			V
BV_{EBO}	Emitter-Base Breakdown Voltage	$I_E = 1\text{mA}, I_C = 0$	15		23	V
I_{CBO}	Collector Cut-off Current	$V_{CB} = 1050\text{V}, I_E = 0$			1	mA
I_{CEO}	Collector Cut-off Current	$V_{CB} = 400\text{V}, I_B = 0$			250	μA
I_{EBO}	Emitter Cut-off Current	$V_{EB} = 15\text{V}, I_C = 0$			1	mA
h_{FE}	DC Current Gain	$V_{CE} = 5\text{V}, I_C = 0.1\text{A}$ $V_{CE} = 3\text{V}, I_C = 0.8\text{A}$	45 20		100 50	
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = 1\text{A}, I_B = 0.2\text{A}$			0.5	V
		$I_C = 3.5\text{A}, I_B = 1.0\text{A}$			1.5	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C = 3.5\text{A}, I_B = 1.0\text{A}$			1.5	V
t_{ON}	Turn On Time	$V_{CC}=125\text{V}, I_C=0.5\text{A}$			1.0	μs
t_{STG}	Storage Time	$I_{B1}=45\text{mA}, I_{B2}=0.5\text{A}$ $R_L=250\Omega$			1.2	μs
t_F	Fall Time				0.3	μs

Typical Performance Characteristics

Figure 1. Static Characteristic

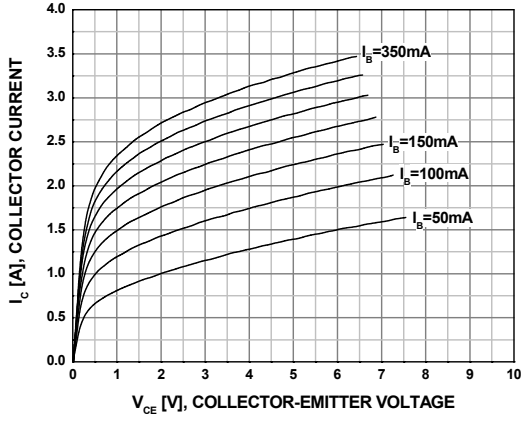


Figure 2. DC Current Gain

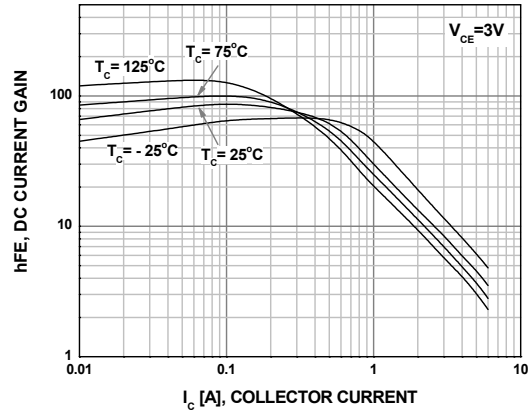


Figure 3. DC Current Gain

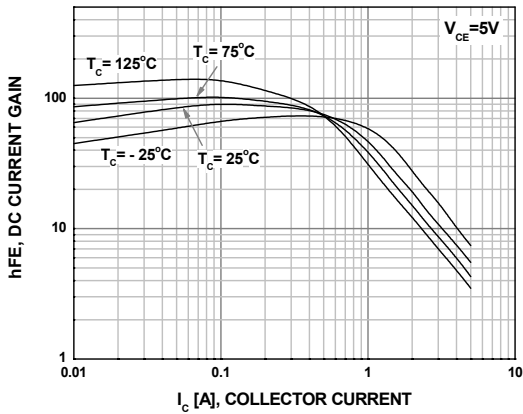


Figure 4. Collector-Emitter Saturation Voltage

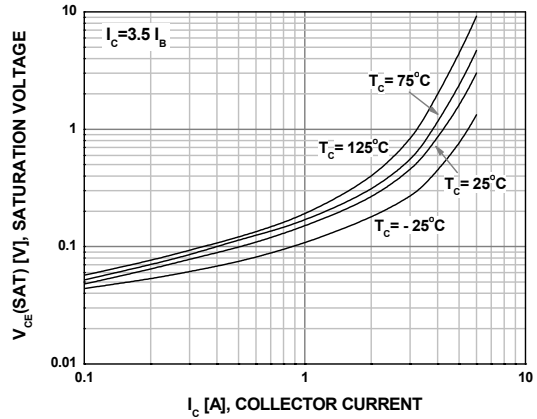


Figure 5. Base-Emitter Saturation Voltage

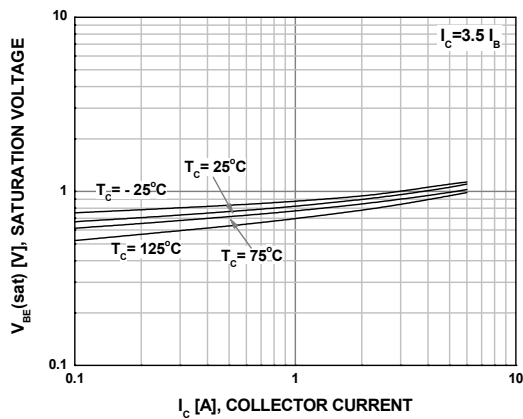
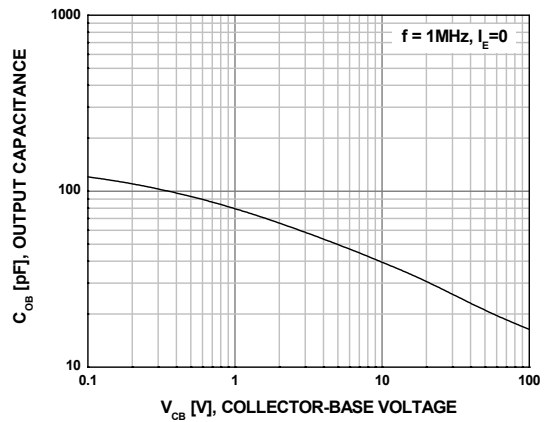


Figure 6. Output Capacitance



Typical Performance Characteristics (Continued)

Figure 7. Reverse Biased Safe Operating Area

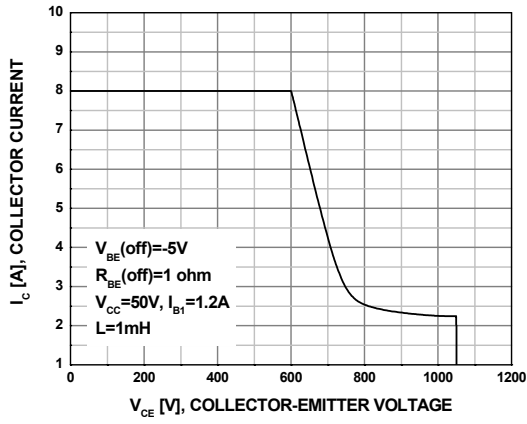


Figure 8. Forward Biased Safe Operating Area

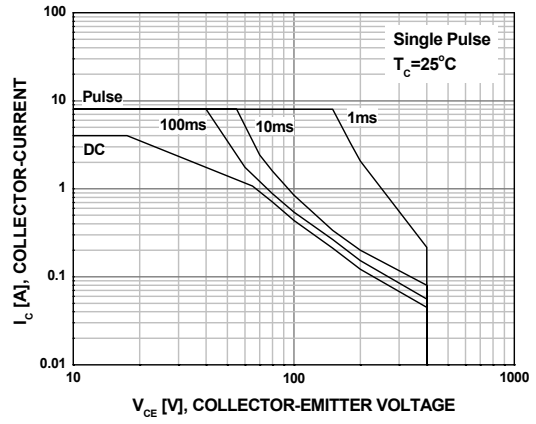
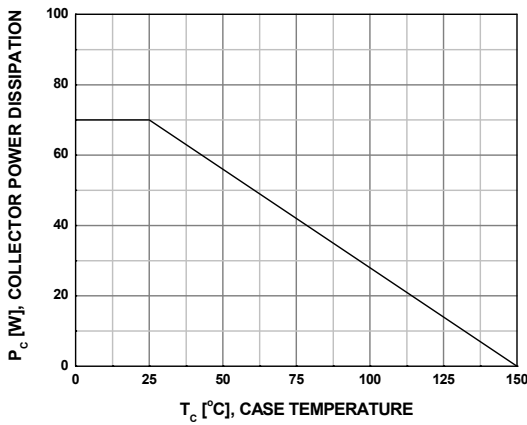


Figure 9. Power Derating Curve



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