

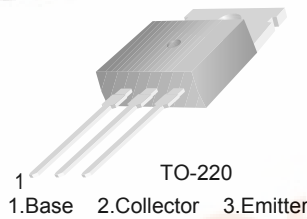


FJP5554

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

FJP5554 High Voltage Fast Switching Transistor



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	$V_{CC} = 125\text{V}, I_C = 0.5\text{A}$ $I_{B1} = 45\text{mA}, I_{B2} = 0.5\text{A}$ $R_L = 250\Omega$			1.0	μs
t_{STG}	Storage Time				1.2	μs
t_F	Fall Time				0.3	μs

Typical Performance Characteristics

Figure 1. Static Characteristic

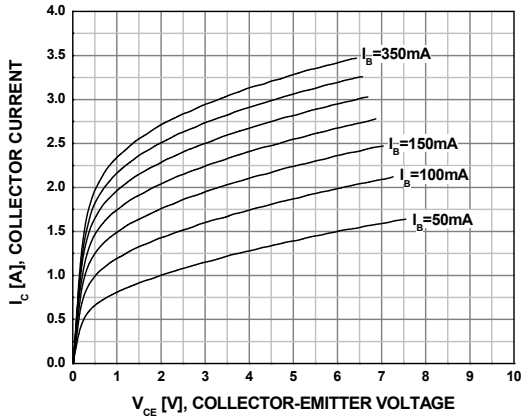


Figure 2. DC Current Gain

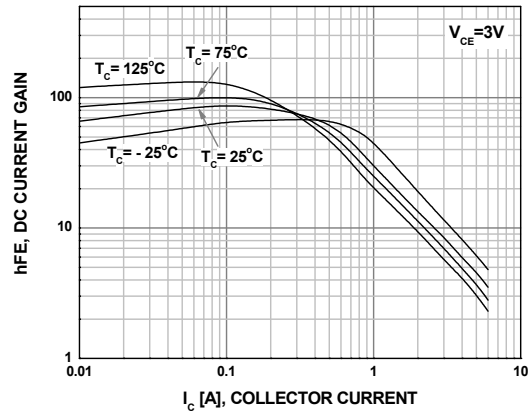


Figure 3. DC Current Gain

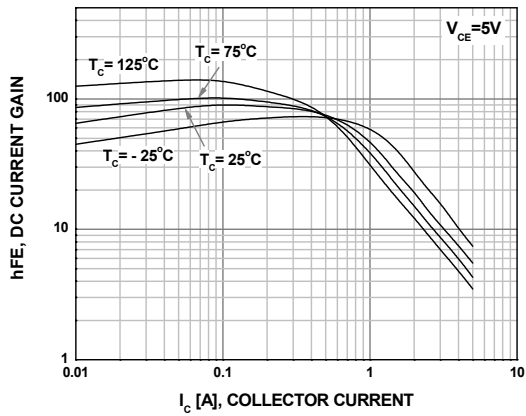


Figure 4. Collector-Emitter Saturation Voltage

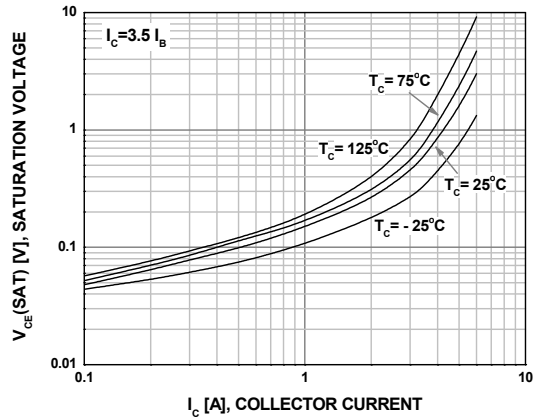


Figure 5. Base-Emitter Saturation Voltage

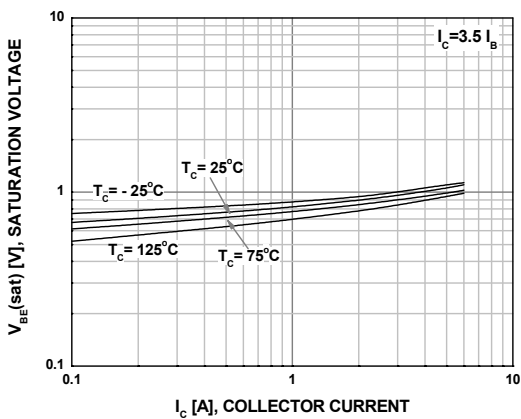
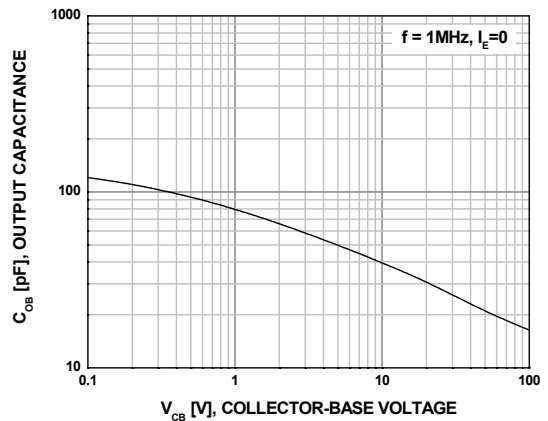


Figure 6. Output Capacitance



Typical Performance Characteristics (Continued)

Figure 7. Reverse Biased Safe Operating Area

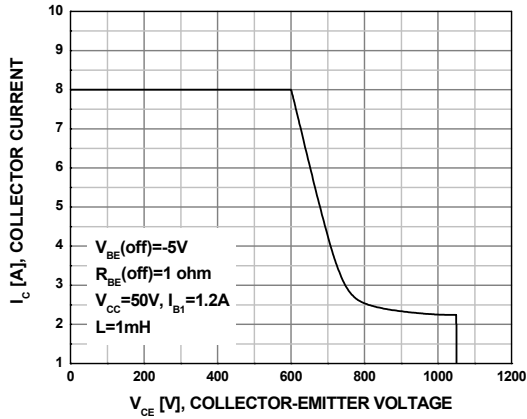


Figure 8. Forward Biased Safe Operating Area

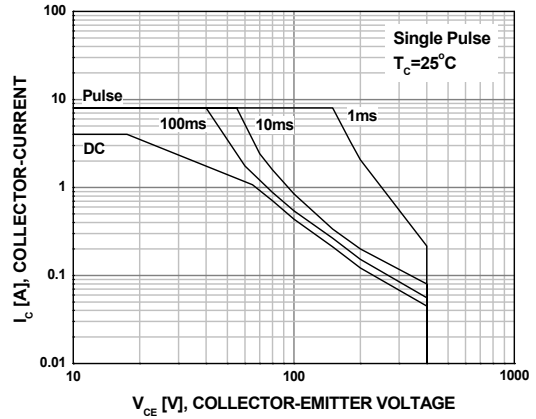
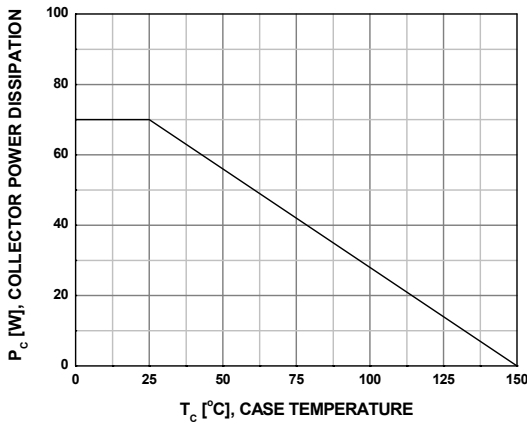
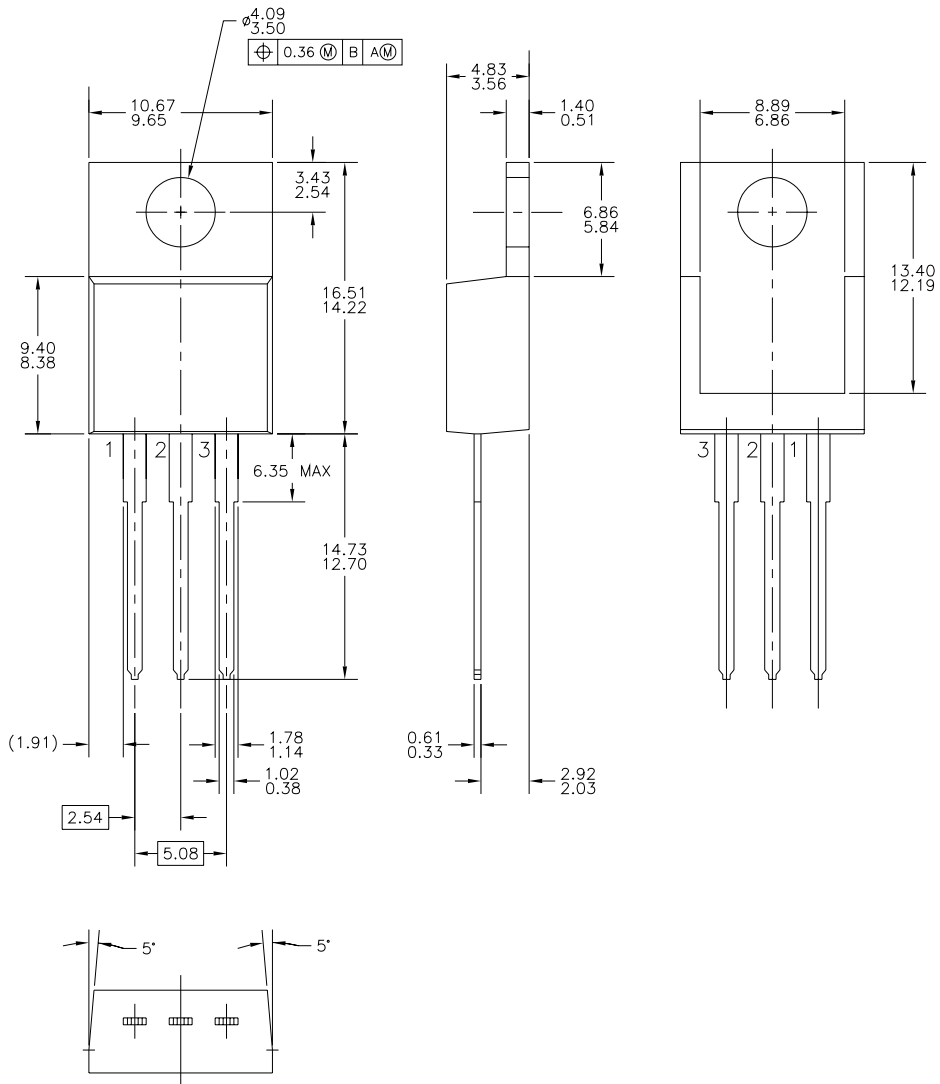


Figure 9. Power Derating Curve



Mechanical Dimensions

TO-220



Dimensions in Millimeters

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FACT Quiet Series™		OPTOPLANAR™	SPM™	
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		PowerEdge™	SuperSOT™-6	

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