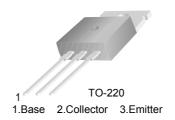


FJP5554

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	А
I _{CP}	* Collector Current (Pulse)	8	А
P _C	Collector Dissipation (T _C = 25°C)	70	W
T _J	Junction Temperature	150	°C
T _{STG}	Storage Temperature	-55 ~ 150	°C

^{*} Pulse Test: PW = 300μs, 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°C unless otherwise noted

Symbol	Parameter	Conditions	Min.	Тур.	Max	Units
BV _{CBO}	Collector-Base Breakdown Voltage	$I_C = 500 \mu A, I_E = 0$	1050			V
BV _{CEO}	Collector-Emitter Breakdown Voltage	I _C = 5mA, I _B = 0	400			V
BV _{EBO}	Emitter-Base Breakdown Voltage	I _E = 1mA, I _C = 0	15		23	V
I _{CBO}	Collector Cut-off Current	V _{CB} = 1050V, I _E = 0			1	mA
I _{CEO}	Collector Cut-off Current	V _{CB} = 400V, I _B = 0			250	μΑ
I _{EBO}	Emitter Cut-off Current	V _{EB} = 15V, I _C = 0			1	mA
h _{FE}	DC Current Gain	V _{CE} = 5V, I _C = 0.1A V _{CE} = 3V, I _C = 0.8A	45 20		100 50	
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = 1A, I _B = 0.2A			0.5	V
		I _C = 3.5A, I _B = 1.0A			1.5	V
V _{BE(sat)}	Base-Emitter Saturation Voltage	I _C = 3.5A, I _B = 1.0A			1.5	V
t _{ON}	Turn On Time	V _{CC} =125V, I _C =0.5A I _{B1} =45mA, I _{B2} =0.5A			1.0	μS
t _{STG}	Storage Time				1.2	μS
t _F	Fall Time	$R_L=250\Omega$			0.3	μS

Typical Performance Characteristics

Figure 1. Static Characterstic

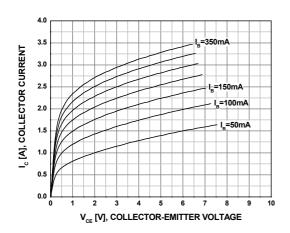


Figure 2. DC Current Gain

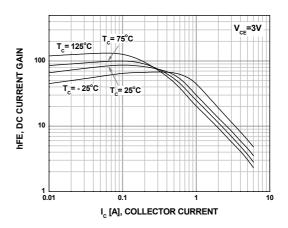


Figure 3. DC Current Gain

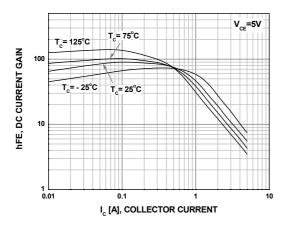


Figure 4. Collector-Emitter Saturation Voltage

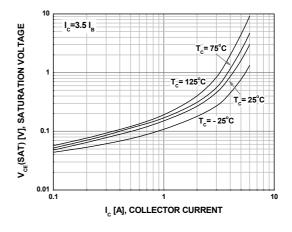


Figure 5. Base-Emitter Saturation Voltage

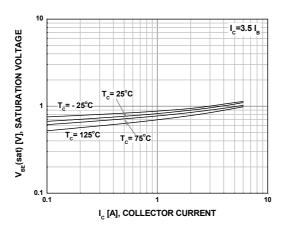
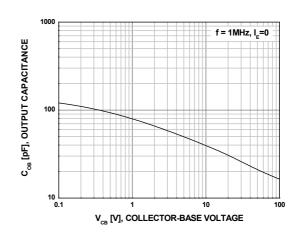
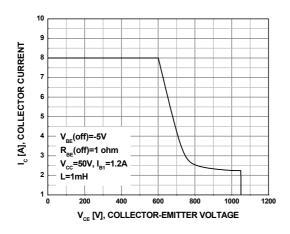


Figure 6. Output Capacitance



Typical Performance Characteristics (Continued)

Figure 7. Reverse Biased Safe Operating Area Figure 8. Forward Biased Safe Operating Area

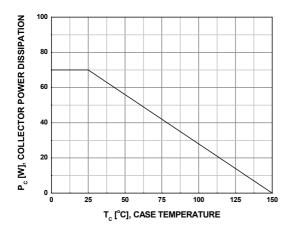


Single Pulse
T_C=25°C

Pulse
100
Pulse
100ms
10ms
11ms
DC

0.01
0.01
0.01
0.00
V_{CE} [V], COLLECTOR-EMITTER VOLTAGE

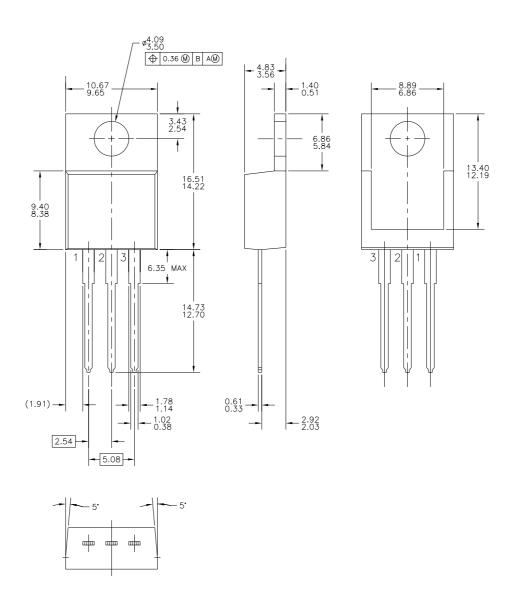
Figure 9. Power Derating Curve



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Mechanical Dimensions

TO-220



Dimensions in Millimeters

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