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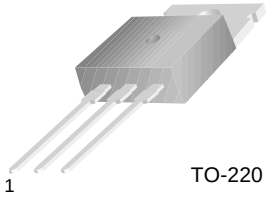
SEMICONDUCTOR®

FJP5555

High Voltage Switch Mode Application

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



TO-220

1.Base 2.Collector 3.Emitter

NPN Silicon Transistor

Absolute Maximum Ratings T_C=25°C unless otherwise noted

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	1050	V
V_{CEO}	Collector-Emitter Voltage	400	V
V_{EBO}	Emitter-Base Voltage	14	V
I_C	Collector Current (DC)	5	A
I_{CP}	Collector Current (Pulse)	10	A
P_C	Collector Dissipation	75	W
T_J	Junction Temperature	150	°C
T_{STG}	Storage Temperature	- 55 ~ 150	°C

Electrical Characteristics T_C=25°C unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
BV_{CBO}	Collector-Base Breakdown Voltage	I_C=500μA, 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=500μA, I_C=0	14			V
h_{FE}	* DC Current Gain	V_{CE}=5V, I_C=10mA	10			
		V_{CE}=3V, I_C=0.8A	20		40	
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			1.2	V
C_{ob}	Output Capacitance	V_{CB}=10V, f=1MHz		45		pF
t_{ON}	Turn On Time	V_{CC}=125V, I_C=0.5A I_{B1}=45mA, I_{B2}=0.5A R_L=250Ω			1.0	μs
t_{STG}	Storage Time				1.2	μs
t_F	Fall Time				0.3	μs
t_{ON}	Turn On Time	V_{CC}=250V, I_C=2.5A I_{B1}=0.5A, I_{B2}=1.0A R_L=100Ω			2.0	μs
t_{STG}	Storage Time				2.5	μs
t_F	Fall Time				0.3	μs

* Pulse test: PW≤300μs, Duty Cycle≤2%

Typical Characteristics

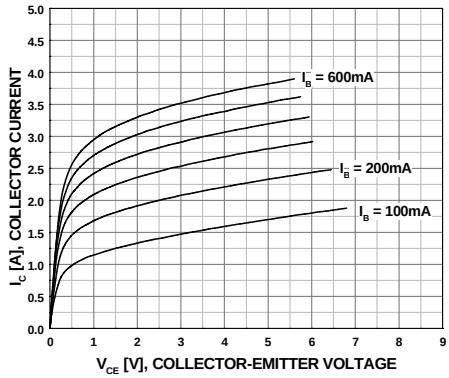


Figure 1. Static Characteristics

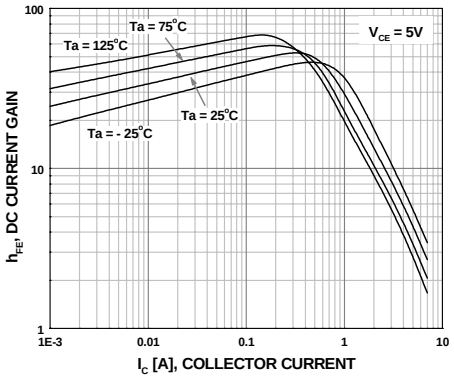


Figure 2. DC Current Gain

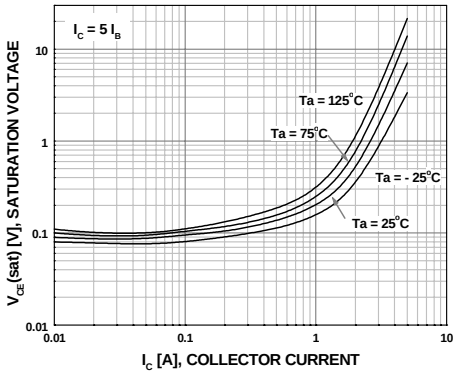


Figure 3. Saturation Voltage

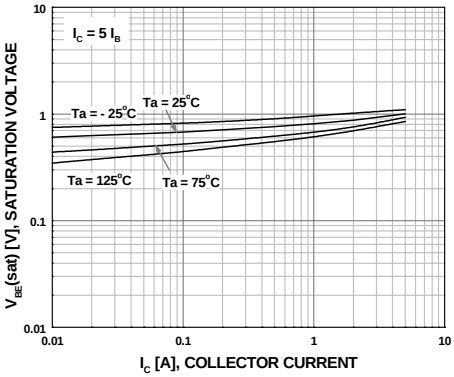


Figure 4. Saturation Voltage

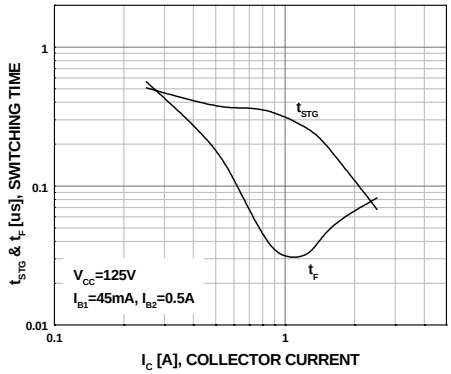


Figure 5. Resistive Load Switching

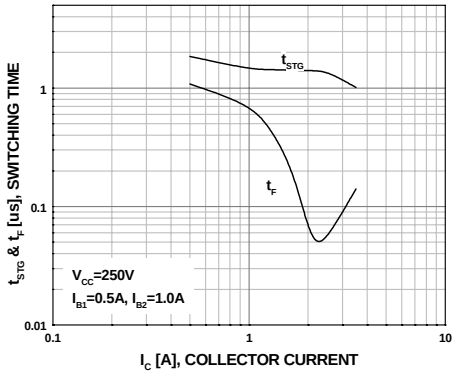


Figure 6. Resistive Load Switching

Typical Characteristics (Continued)

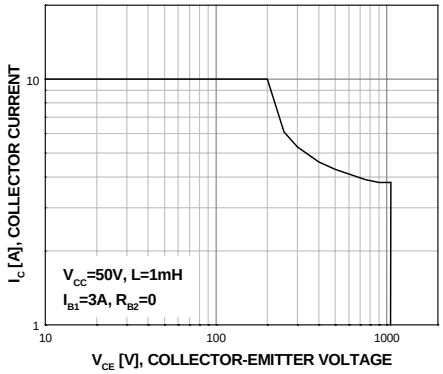


Figure 7. Reverse Biased Safe Operating Area

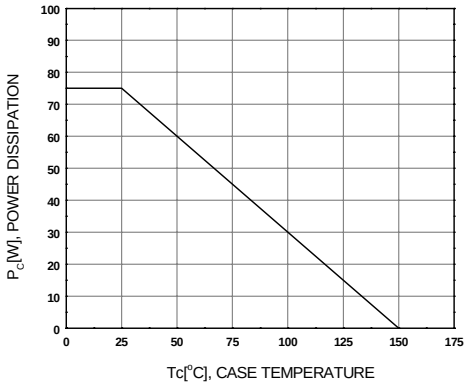


Figure 8. Power Derating

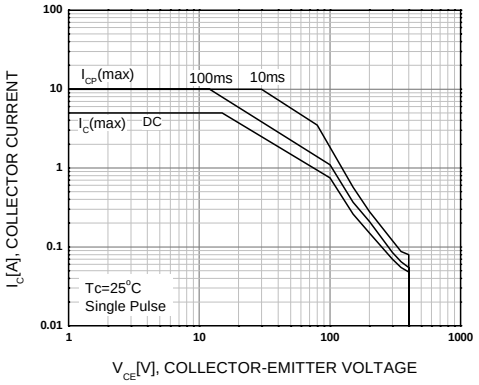
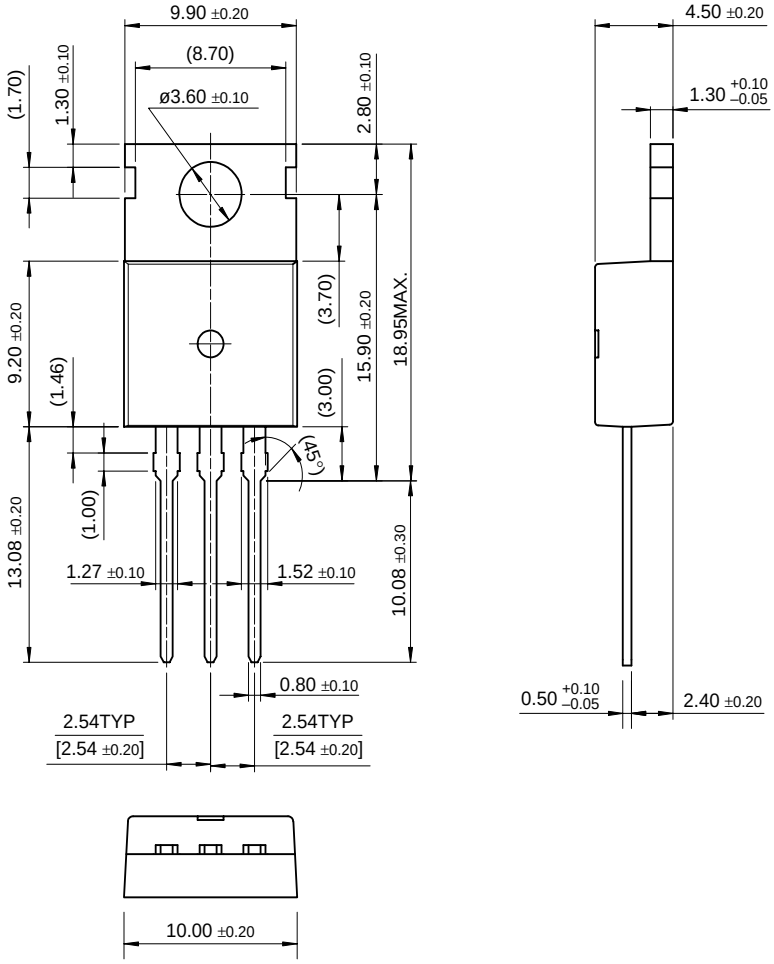


Figure 9. Forward Biased Safe Operating Area

Package Dimensions

TO-220



Dimensions in Millimeters

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