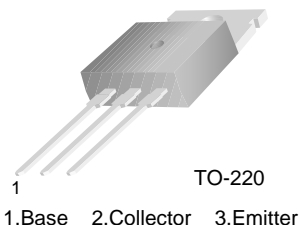


# FJP5555

## High Voltage Switch Mode Application

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



### Absolute Maximum Ratings $T_C=25^\circ\text{C}$ 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
$T_{STG}, T_J$	Storage Junction Temperature Range	- 55 ~ 150	$^\circ\text{C}$

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

Symbol	Parameter	Conditions	Min.	Max	Units
$BV_{CBO}$	Collector-Base Voltage	$I_C=500\mu\text{A}, I_E=0$	1050		V
$BV_{CEO}$	Collector-Emitter Voltage	$I_C=5\text{mA}, I_B=0$	400		V
$BV_{EBO}$	Emitter-Base Voltage	$I_E=500\mu\text{A}, I_C=0$	14		V
$h_{FE}$	DC Current Gain	$V_{CE}=5\text{V}, I_C=10\text{mA}$	10 20	40	
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$V_{CE}=3\text{V}, I_C=0.8\text{A}$		0.5 1.5	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C=1\text{A}, I_B=0.2\text{A}$		1.2	V
$C_{ob}$	Output Capacitance	$I_C=3.5\text{A}, I_B=1.0\text{A}$			pF
$t_{ON}$	Current gain Bandwidth Product	$V_{CC}=125\text{V}, I_C=0.5\text{A}$ $I_{B1}=45\text{mA}, I_{B2}=0.5\text{A}$ $R_L=250\Omega$		1.0	$\mu\text{s}$
$t_{STG}$	Turn On Time			1.2	$\mu\text{s}$
$t_F$	Storage Time			0.3	$\mu\text{s}$
$t_{ON}$	Fall Time	$V_{CC}=250\text{V}, I_C=2.5\text{A}$ $I_{B1}=0.5\text{A}, I_{B2}=1.0\text{A}$ $R_L=100\Omega$		2.0	$\mu\text{s}$
$t_{STG}$	Turn On Time			2.5	$\mu\text{s}$
$t_F$	Storage Time			0.3	$\mu\text{s}$

Symbol	Parameter	Conditions	Min.	Max	Units
EAS	Avalanche Energy	L= 2mH	6		mJ

## Typical Characteristics

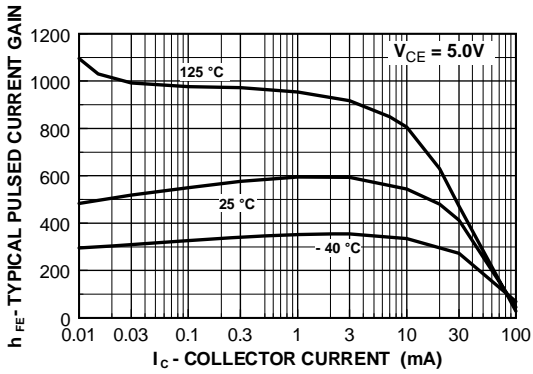


Figure 1. Typical Pulsed Current Gain vs Collector Current

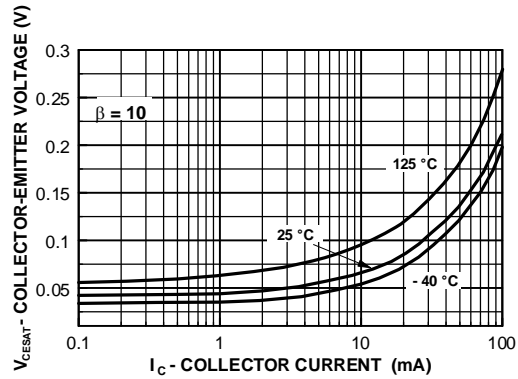


Figure 2. Collector-Emitter Saturation Voltage vs Collector Current

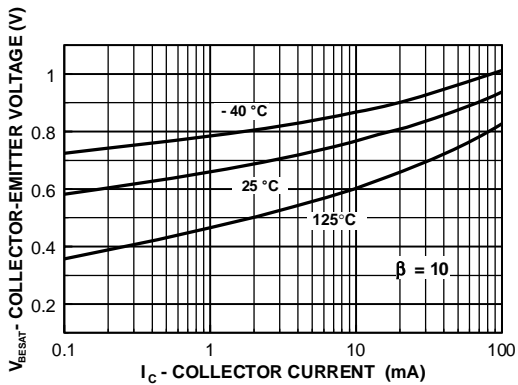


Figure 3. Base-Emitter Saturation Voltage vs Collector Current

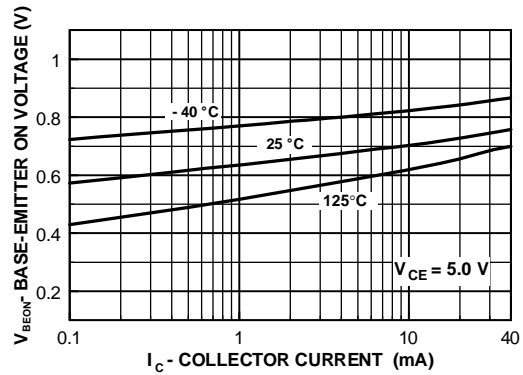


Figure 4. Base-Emitter ON Voltage vs Collector Current

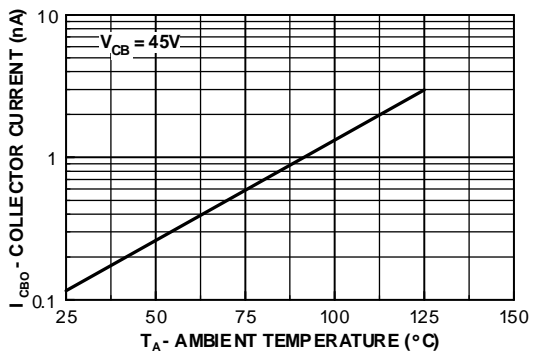


Figure 5. Collector-Cutoff Current vs Ambient Temperature

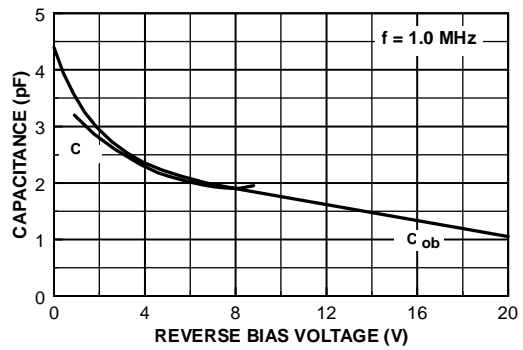


Figure 6. Input and Output Capacitance vs Reverse Bias Voltage

## Typical Characteristics (Continued)

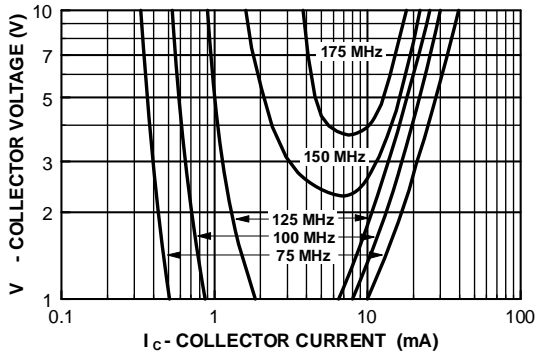


Figure 1. Contours of Constant Gain Bandwidth Product ( $f_T$ )

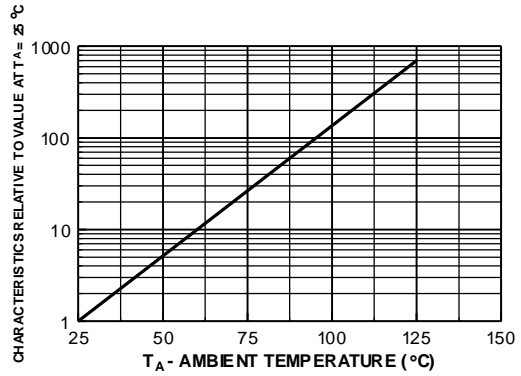


Figure 2. Normalized Collector-Cutoff Current vs Ambient Temperature

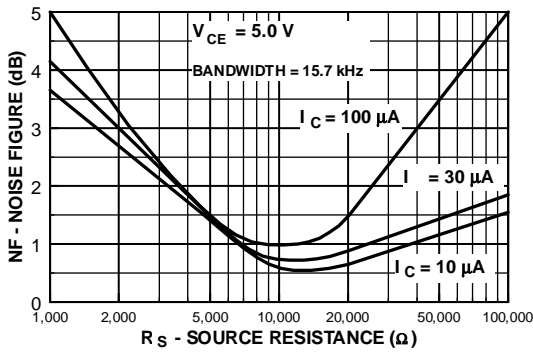


Figure 3. Wideband Noise Frequency vs Source Resistance

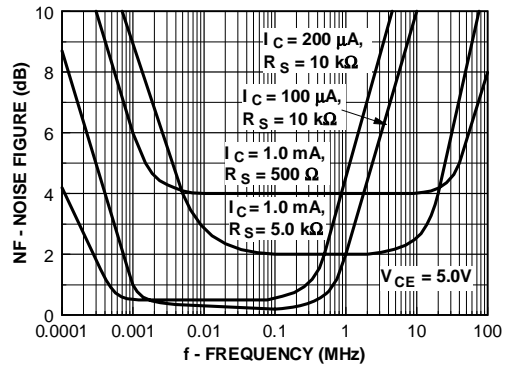


Figure 4. Noise Figure vs Frequency

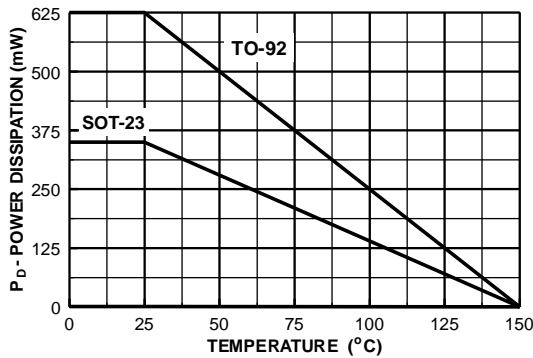


Figure 5. Collector-Cutoff Current vs Ambient Temperature

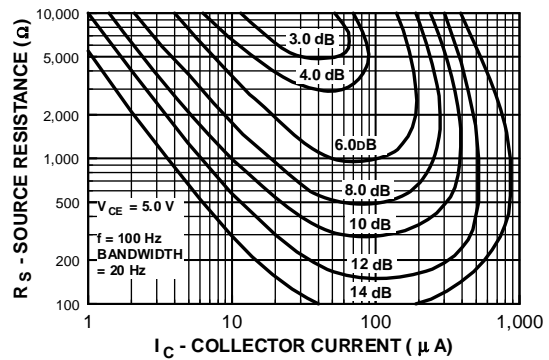


Figure 6. Contours of Constant Narrow Band Noise Figure

## Typical Characteristics (Continued)

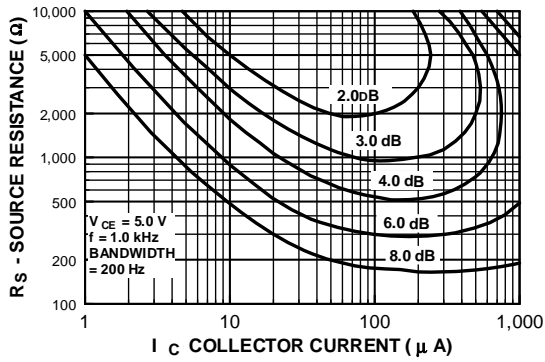


Figure 1. Contours of Constant Narrow Band Noise Figure

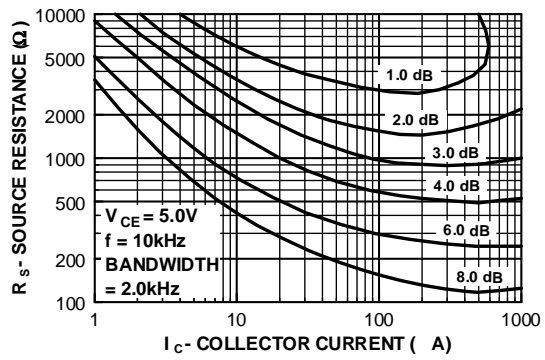


Figure 2. Contours of Constant Narrow Band Noise Figure

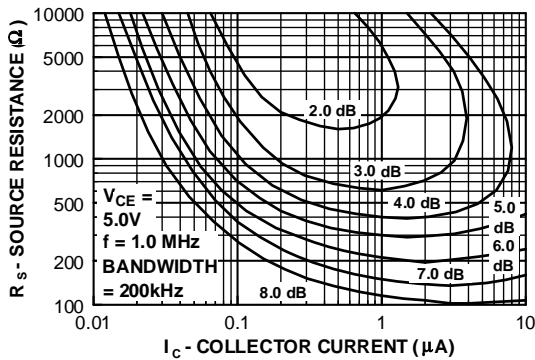


Figure 3. Contours of Constant Narrow Band Noise Figure

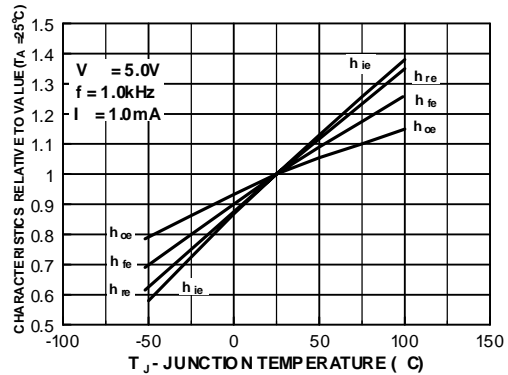


Figure 4. Typical Common Emitter Characteristics

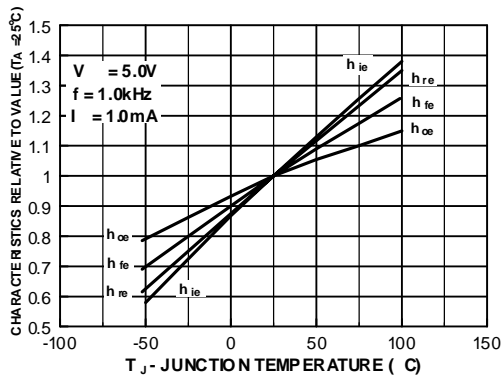


Figure 5. Typical Common Emitter Characteristics

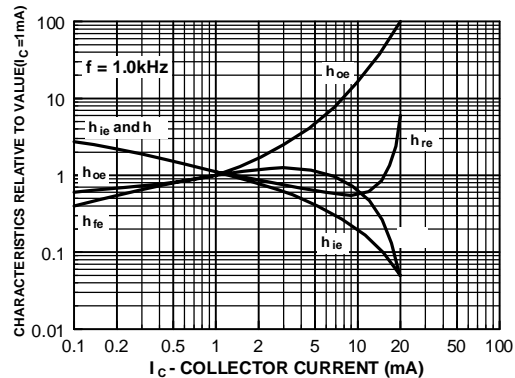



Figure 6. Typical Common Emitter Characteristics



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FRFET®	Power220®	SuperSOT™-6	
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