



JIANGSU CHANGJIANG ELECTRONICS TECHNOLOGY CO., LTD

SOT-89 Plastic-Encapsulate Transistors

PXT2222A

TRANSISTOR (NPN)

FEATURES

- Epitaxial planar die construction
- Complementary PNP Type available(PXT2907A)

MAXIMUM RATINGS ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

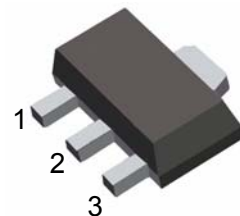
Symbol	Parameter	Value	Units
V_{CB0}	Collector-Base Voltage	75	V
V_{CEO}	Collector-Emitter Voltage	40	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current -Continuous	600	mA
P_C	Collector Power Dissipation	0.5	W
T_J	Junction Temperature	150	$^{\circ}\text{C}$
T_{stg}	Storage Temperature	-55 +150	$^{\circ}\text{C}$

SOT-89

1. BASE

2. COLLECTOR

3. EMITTER



ELECTRICAL CHARACTERISTICS ($T_{amb}=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=10\mu\text{A}, I_E=0$	75		V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=10\text{mA}, I_B=0$	40		V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=10\mu\text{A}, I_C=0$	6		V
Collector cut-off current	I_{CBO}	$V_{CB}=60\text{V}, I_E=0$		0.01	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=5\text{V}, I_C=0$		0.01	μA
DC current gain	$h_{FE(1)}$	$V_{CE}=10\text{V}, I_C=0.1\text{mA}$	35		
	$h_{FE(2)}$	$V_{CE}=10\text{V}, I_C=1\text{mA}$	50		
	$h_{FE(3)}$	$V_{CE}=10\text{V}, I_C=10\text{mA}$	75		
	$h_{FE(4)}$	$V_{CE}=10\text{V}, I_C=150\text{mA}$	100	300	
	$h_{FE(5)}$	$V_{CE}=1\text{V}, I_C=150\text{mA}$	50		
	$h_{FE(6)}$	$V_{CE}=10\text{V}, I_C=500\text{mA}$	40		
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=500\text{mA}, I_B=50\text{mA}$		1	V
	$V_{CE(sat)}$	$I_C=150\text{mA}, I_B=15\text{mA}$		0.3	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=500\text{mA}, I_B=50\text{mA}$		2.0	V
	$V_{BE(sat)}$	$I_C=150\text{mA}, I_B=5\text{mA}$	0.6	1.2	V
Transition frequency	f_T	$V_{CE}=10\text{V}, I_C=20\text{mA}$ $f=100\text{MHz}$	300		MHz
Output Capacitance	C_{ob}	$V_{CB}=10\text{V}, I_E=0, f=1\text{MHz}$		8	pF
Delay time	t_d	$V_{CC}=30\text{V}, I_C=150\text{mA}$		10	nS
Rise time	t_r	$V_{BE(off)}=0.5\text{V}, I_{B1}=15\text{mA}$		25	nS
Storage time	t_s	$V_{CC}=30\text{V}, I_C=150\text{mA}$		225	nS
Fall time	t_f	$I_{B1}=-I_{B2}=15\text{mA}$		60	nS

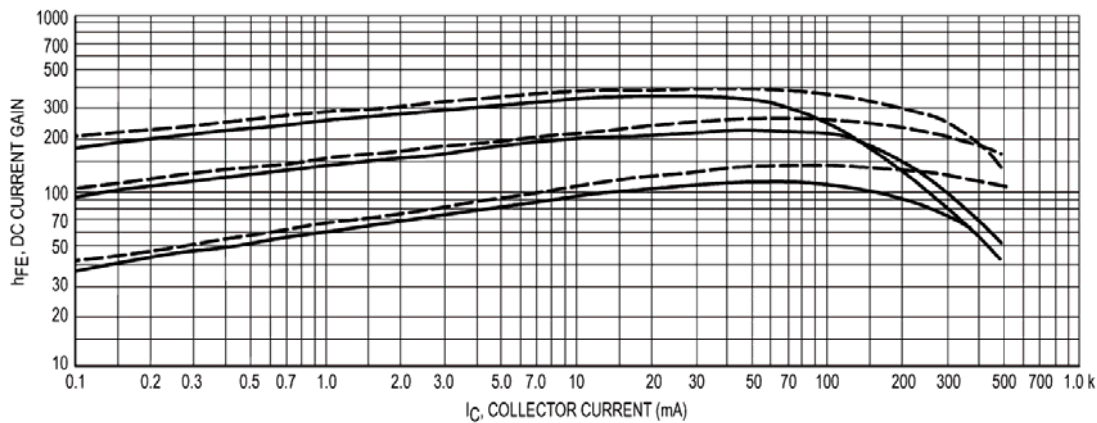


Figure 3. DC Current Gain

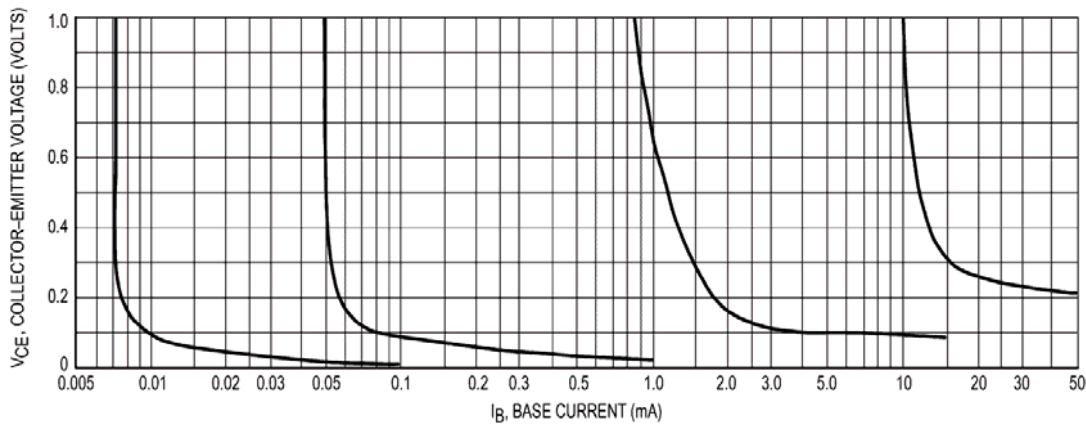


Figure 4. Collector Saturation Region

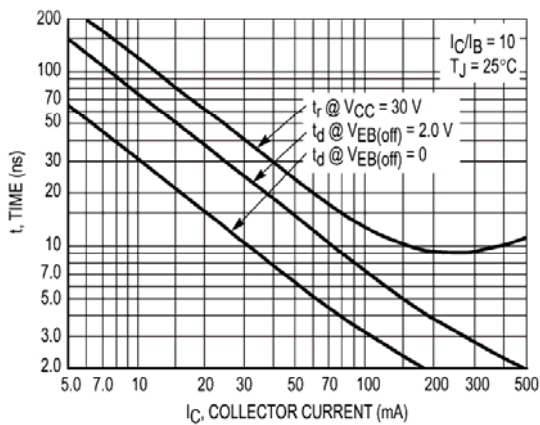


Figure 5. Turn-On Time

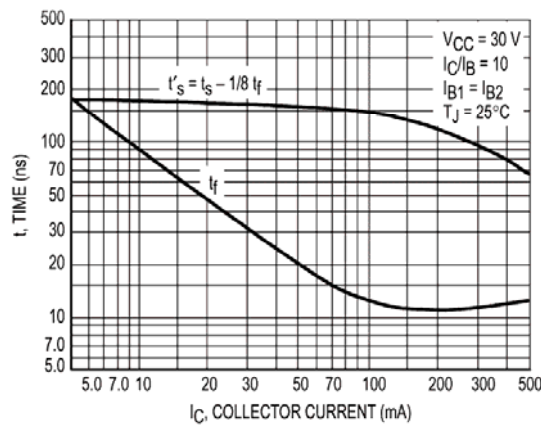


Figure 6. Turn-Off Time

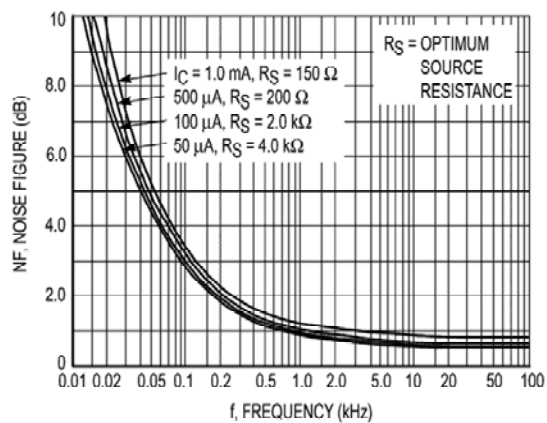


Figure 7. Frequency Effects

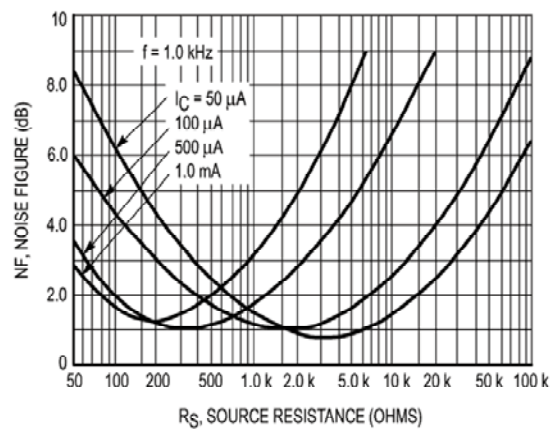


Figure 8. Source Resistance Effects

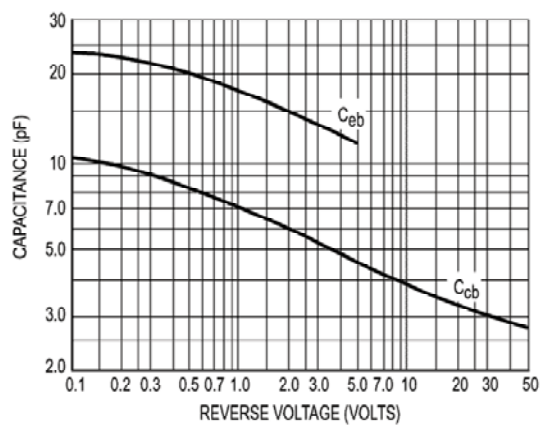


Figure 9. Capacitances

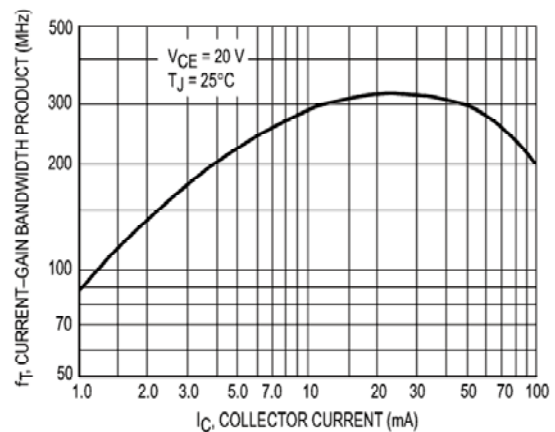


Figure 10. Current-Gain Bandwidth Product

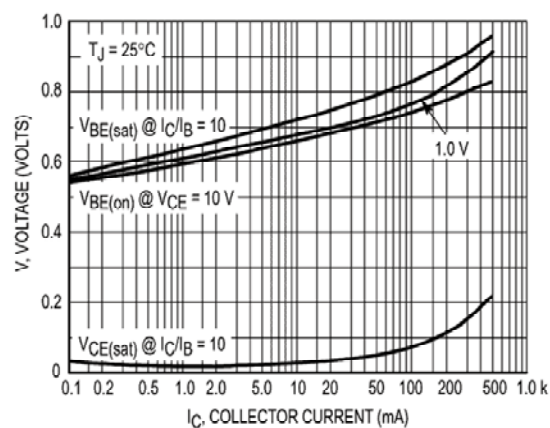


Figure 11. "On" Voltages

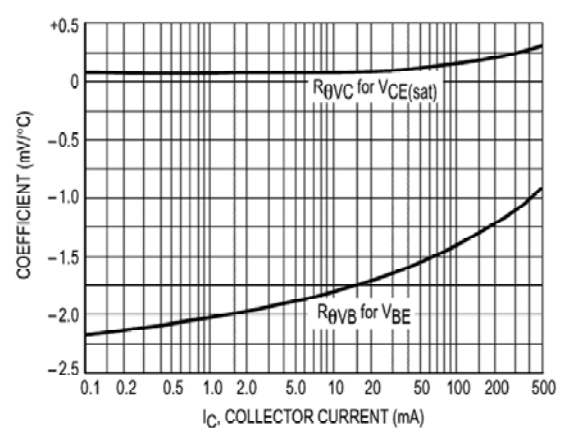


Figure 12. Temperature Coefficients