

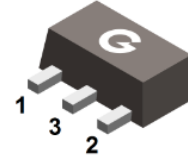
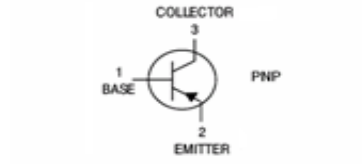
Features

- Epitaxial planar die construction
- Complimentary to PXT2222A
- Ultra-small surface mount package

HF

Mechanical Data

- Case: SOT-89
- Molding compound: UL flammability classification rating 94V-0
- Terminals: Tin-plated; solderability per MIL-STD-202, Method 208



SOT-89

Ordering Information

Part Number	Package	Shipping Quantity	Marking Code
PXT2907A	SOT-89	1000 pcs / Tape & Reel	P2F

Maximum Ratings

 (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Value	Unit
Collector-Base Breakdown Voltage	V_{CBO}	-60	V
Collector-Emitter Breakdown Voltage	V_{CEO}	-60	V
Emitter-Base Breakdown Voltage	V_{EBO}	-5	V
Collector Current (Continuous)	I_C	-0.6	A
Collector Current (Peak)	I_{CM}	-0.8	A
Base Current (Continuous)	I_B	-0.15	A
Base Current (Peak)	I_{BM}	-0.2	A

Thermal Characteristics

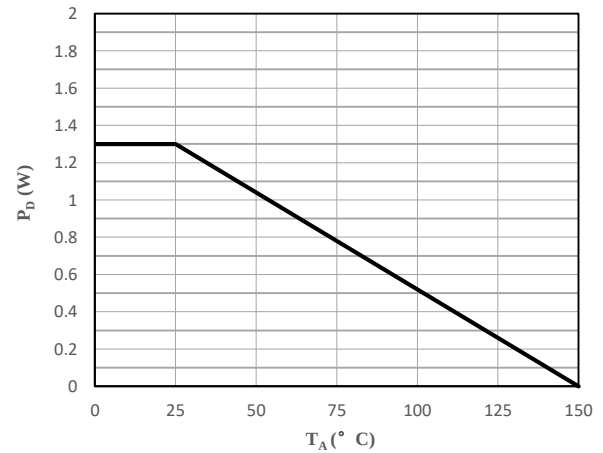
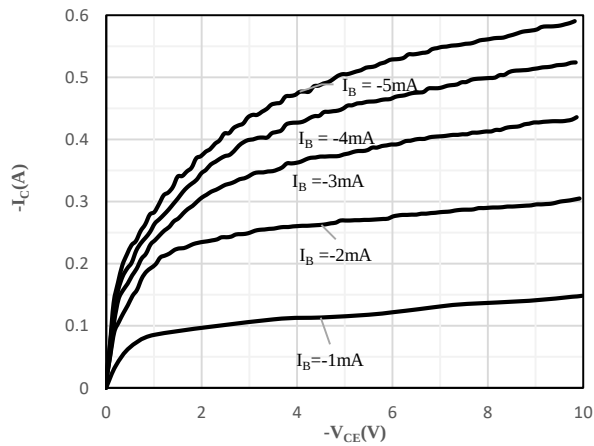
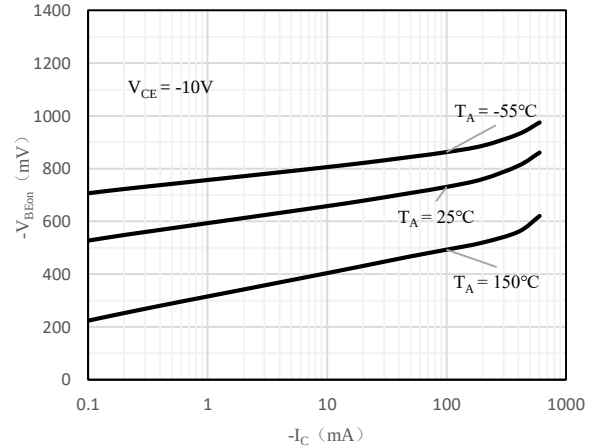
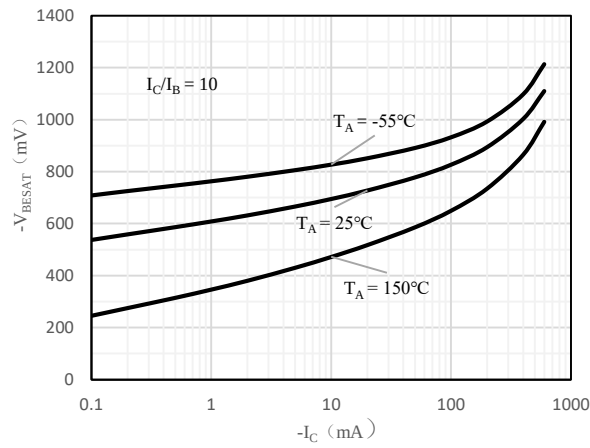
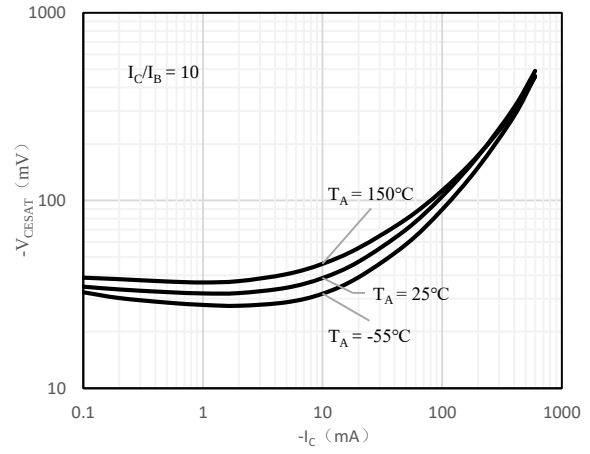
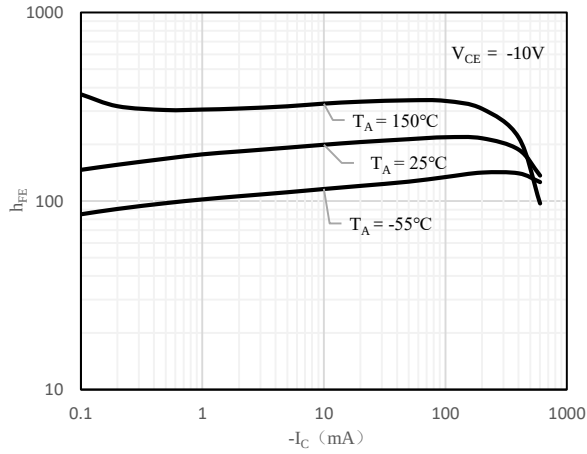
Parameter	Symbol	Value	Unit
Power Dissipation	P_D	1.3	W
Thermal Resistance (Junction-to-Ambient) ^{*1}	$R_{\theta JA}$	100	$^\circ\text{C/W}$
Thermal Resistance (Junction-to-Case) ^{*1}	$R_{\theta JC}$	45	$^\circ\text{C/W}$
Thermal Resistance (Junction-to-Lead) ^{*1}	$R_{\theta JL}$	10	$^\circ\text{C/W}$
Ambient Temperature	T_A	-55 ~ +150	$^\circ\text{C}$
Operating junction Temperature	T_J	-65 ~ +150	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-65 ~ +150	$^\circ\text{C}$

Note 1: The data tested by surface mounted on a 1 inch² FR-4 board with 2OZ copper

Electrical Characteristics (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C = -10\mu\text{A}, I_E = 0$	-60	-	-	V
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = -10\text{mA}, I_B = 0$	-60	-	-	V
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E = -10\mu\text{A}, I_C = 0$	-5	-	-	V
Collector Cut-off Current	I_{CBO}	$V_{CB} = -50\text{V}, I_E = 0$	-	-	-10	nA
Emitter Cut-off Current	I_{EBO}	$V_{EB} = -5\text{V}, I_C = 0$	-	-	-50	nA
DC Current Gain	h_{FE}	$V_{CE} = -1\text{V}, I_C = -0.1\text{mA}$	75	-	-	-
		$V_{CE} = -1\text{V}, I_C = -1\text{mA}$	100	-	-	-
		$V_{CE} = -1\text{V}, I_C = -10\text{mA}$	100	-	-	-
		$V_{CE} = -2\text{V}, I_C = -150\text{mA}$	100	-	300	-
		$V_{CE} = -10\text{V}, I_C = -500\text{mA}$	50	-	-	-
Collector-emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = -500\text{mA}, I_B = -50\text{mA}$	-	-	-1.6	V
		$I_C = -150\text{mA}, I_B = -15\text{mA}$	-	-	-0.4	V
Base-emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = -500\text{mA}, I_B = -50\text{mA}$	-	-	-2.6	V
		$I_C = -150\text{mA}, I_B = -15\text{mA}$	-	-	-1.3	V
Transition Frequency	f_T	$I_C = -20\text{mA}, V_{CE} = -10\text{V}$ $f = 100\text{MHz}$	200	-	-	MHz
Collector Output Capacitance	C_{OBO}	$V_{CB} = -10\text{V}, I_E = 0, f = 1\text{MHz}$	-	-	8	pF
Input Capacitance	C_{IBO}	$V_{EB} = -0.5\text{V}, I_C = 0, f = 1\text{MHz}$	-	-	35	pF
Delay Time	t_d	$I_C = -150\text{mA}$ $I_{B(on)} = -15\text{mA}$ $I_{B(off)} = -15\text{mA}$	-	-	12	ns
Rise Time	t_r		-	-	30	ns
Storage Time	t_s		-	-	300	ns
Fall Time	t_f		-	-	65	ns

Ratings and Characteristics Curves (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)



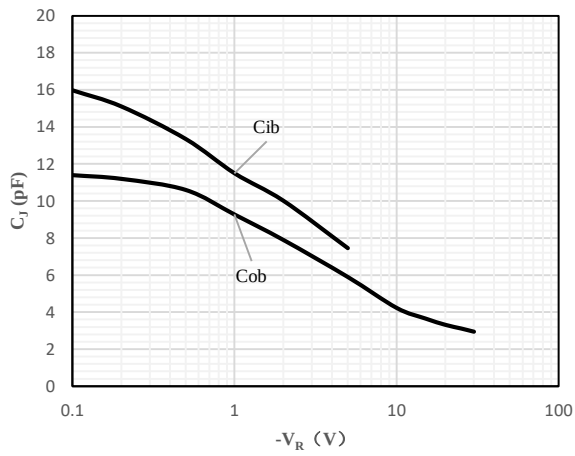
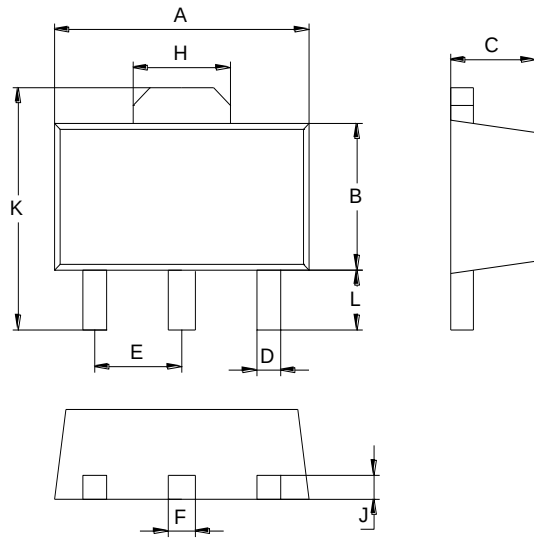


Fig 7 C_j vs. V_R

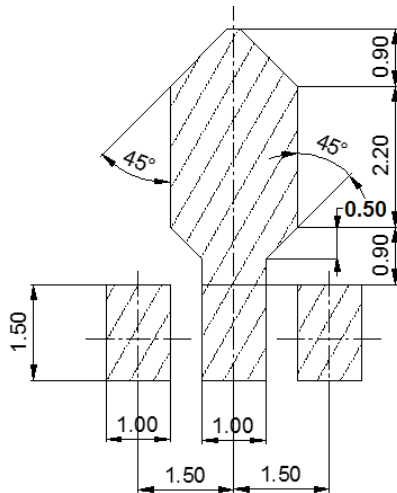
Package Outline Dimensions (Unit: mm)



SOT-89		
Dimension	Min.	Max.
A	4.30	4.70
B	2.25	2.65
C	1.30	1.70
D	0.30	0.50
E	1.40	1.60
F	0.38	0.58
H	1.60	1.80
J	0.30	0.50
L	0.90	1.10
K	3.95	4.35

Mounting Pad Layout (Unit: mm)

SOT-89



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